AGENDA D-4(a)
SEPTEMBER 1990

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director

DATE: September 19, 1990

SUBJECT: Bering Sea/Aleutian Islands Groundfish

ACTION REQUIRED

Final action on Amendment 16a.

BACKGROUND

Amendment 16a addresses herring bycatch and additional crab and halibut bycatch management measures for the Bering Sea/Aleutian Islands management area. Herring bycatch management was severed from the Amendment 21/16 package at the April meeting for further analysis. At that time, the Council requested additional measures for crab and halibut bycatch management to be addressed for initial consideration in June: apportionment of the pollock TAC to pelagic gear and authorization to the Regional Director to take in-season action to close bycatch hotspots. These analyses were reviewed by the Council in June. At that meeting, NOAA General Counsel informed the Council that the Bering Sea bycatch management provisions of Amendment 21/16 might not be approvable by the Secretary because reasonable alternatives to the crab and halibut bycatch caps were not considered. At the same meeting, the SSC requested the Council to task the staff and Plan Teams with unifying the herring, and crab and halibut bycatch simulation models and to perform a sensitivity analysis. The Council approved the analyses for public review provided that this additional work was performed.

The revised Amendment 16a package was completed and made available for public review on August 27. It includes analysis of crab and halibut bycatch caps at 50%, 100%, and 150% of amendment 12a levels, and a unified bycatch model for herring, crab and halibut. A sensitivity analysis of bycatch rates used in the model has been prepared separately and will be available at the meeting.

The document was sent to the Council family and Plan Team for review on August 27 as well. The Plan Team reviewed and discussed the document briefly during its September 4 - 7 meeting. No substantive problems with the analysis were identified; the Team has no recommendation to offer to the Council.

The Council needs to take final action on Amendment 16a at this meeting. The amendment is structured with several options within two alternatives to the status quo. Alternative 2 addresses crab and halibut bycatch, with options to apportion pollock TAC to pelagic gear and to authorize the Regional Director to take in-season action to close bycatch hotspots. Alternative 3 presents several

options for the establishment of herring bycatch caps and areas to be closed if the caps are attained. The executive summary of the amendment document is provided as item D-4(a)(1). Written comments received by September 20 are summarized and attached as item D-4(a)(2). The comment deadline is September 27; written comments received up to that time will be distributed at the meeting.

If the Council adopts options under either or both alternatives to the status quo, the Amendment package will be submitted to the Secretary for review and approval according to the following target timetable:

Council adopts Amendment 16a	September 28
Amendment 16a submitted to the Secretary	October 26
Secretarial decision	February 4
Final Regulations filed	February 18
Final Regulations effective	March 18

EXECUTIVE SUMMARY

Trawl, hook and longline, and pot groundfish fisheries use partially non-selective harvesting techniques in that incidental (bycatch) species, including crab, halibut, and herring are taken in addition to targeted species. A conflict occurs when bycatch in one fishery measurably impacts the level of resource available to another fishery. Bycatch management is an attempt to balance the effects of various fisheries on each other. It is a particularly contentious allocation issue because compared to crab, halibut, or herring fishermen, groundfish fishermen value the use of crab, halibut, or herring very differently.

Amendment 16 was approved by the Council in June and is currently being reviewed by the Secretary. If approved, it will implement measures to control the bycatch of red king crab, C. bairdi Tanner crab, and Pacific halibut in groundfish trawl fisheries. Amendment 16a, the topic of this document, includes additional measures to control that bycatch and the bycatch of herring. These additional measures were not included in Amendment 16 because there was not sufficient time to consider them adequately prior to the Council's approval of Amendment 16 in June.

In addition to the status quo, the options being considered to control the bycatch of crab and halibut would:

(1) provide the Regional Director the authority to temporarily close limited areas in-season due to high bycatch rates;

(2) permit the Regional Director to set a limit on the amount of the pollock TACs that can be taken in other than the mid-water pollock fisheries; and

(3) establish PSC limits equal to 50%, 100%, or 150% of the Amendment 12a limits.

Two alternatives to the status quo are being considered to control the bycatch of herring in the groundfish trawl fisheries. Either alternative would:

(1) provide a framework for establishing an annual herring PSC limit as a fixed percentage of the estimated herring biomass;

(2) specify time/area closures along the Alaska Peninsula; and

(3) specify a winter savings area.

PSC limits of 1%, 2%, 4%, and 8% of the estimated eastern Bering Sea herring biomass are being considered under both alternatives to the status quo. The difference between the two alternatives is the size of the winter savings area.

The analysis of bycatch management in the groundfish fishery focuses on two uses of crab, halibut, and herring. They are (1) the use as bycatch in the groundfish fishery and (2) the use as present or future target catch. The use of crab, halibut, and herring as contributors to the rest of the ecosystem is not germane if, out of consideration of the future productivity of the crab, halibut, and fisheries, these stocks are maintained at levels that do not adversely affect the ecosystem as a whole. The use of crab, halibut, and herring as incidental fishing mortality in non-groundfish fisheries is probably more important in determining the appropriate combined total removals by the groundfish, crab,

halibut, and herring fisheries than in determining the appropriate distribution of these removals between these two uses.

With respect to these two competing uses of crab, halibut, and herring resources, fishery managers are faced with the task of providing for the appropriate allocation between these two uses. This consists of both assuring that an acceptable level of total removals (i.e., fishing mortality) is not exceeded for any stock and assuring that an appropriate use of crab, halibut, and herring as bycatch in the groundfish fisheries can occur.

The appropriate (i.e., optimal) allocation of these resources among these two competing uses depends on the relative values of these uses, where value is as broadly defined as is appropriate given the MFCMA, Executive Order 12291, other applicable Federal regulations, and the goals and objectives of the Council. The values of competing uses would include their effects on biological conservation, the maintenance of traditional fisheries and dependent communities, and the maintenance of international treaty obligations, as well as on components of the value of a use that are more readily measured in monetary terms.

The appropriate levels of bycatch (i.e., use in the groundfish fishery) can also be thought of as the levels that minimize the cost of bycatch, where that cost has three components: (1) the present and future costs imposed on those who benefit from the crab, halibut, and herring fisheries or the existence of those stocks; (2) the costs imposed on those who benefit from the groundfish fisheries; and (3) management costs associated with regulating bycatch. These three types of costs will be referred to as impact costs, control costs, and agency costs, respectively.

There is a need for regulatory intervention to control bycatch because there are competing uses of crab, halibut, and herring and because there is no mechanism in place to assure an allocation of these resources that will minimize the cost of bycatch or, equivalently, produce an efficient allocation of these resources among alternative uses. The reason for this is that, in making decisions concerning bycatch, a groundfish fisherman considers his bycatch control costs because he bears them but he principally ignores the impact costs because they are borne by others. As a result of ignoring the impact costs, he will tend to take too much bycatch from society's perspective. Therefore, the root of the problem is that the impact cost is an external cost and is not considered by the groundfish fisherman.

Instead of having a mechanism that rewards each individual operation for its success in reducing bycatch, there is a mechanism that penalizes those who attempt to reduce bycatch rates and rewards those who do not. This perverse mechanism is in part the result of the race for fish which is intensified by the PSC caps. The intensified race substantially increases the opportunity cost to individual operations of controlling bycatch rates. Therefore, fewer actions are taken to control bycatch and bycatch rates were higher than they would otherwise be.

Bycatch Model

A bycatch simulation model was used to estimate the effects of all of the crab, halibut, and herring bycatch control measures being considered except the inseason authority to close bycatch hot spots. The model extends the bycatch simulation model described by Smith at al. (1988), which has been used by the Council to evaluate the impacts of alternative crab and halibut bycatch control measures for Amendments 12a and 16. The model was changed to make it more flexible, to allow the crab and halibut options to be considered simultaneously with the herring options, to have it more closely reflect the actual management of TACs, and to simplify error checking.

The temporal and spatial variability of bycatch rates and the uncertainty about future TAC's and their distribution among fisheries, time, and areas introduces large amounts of uncertainty in the analysis of the effects of the alternatives on catch and bycatch. The variability in product prices, CPUE, and other factors that determine the gross and net value per unit of catch has a similar result with respect to the estimates of economic performance. Similarly, the variability of the factors that determine impacts costs per unit of bycatch result in uncertainty concerning the total bycatch impact costs associated with each set of bycatch management measures.

Analysis of Modeled Options

The model results for two versions of the status quo, two apportionments of the pollock TACs between the mid-water pollock fishery and other fisheries, three levels of crab and halibut PSC limits, and no herring PSC limits or closures were generated in runs 1 through 8. The other nine runs provide the results for nine specific crab, halibut, and herring options. Runs have not been made for the other 33 possible options. The results of the 17 runs are summarized in Tables 5.1 through 5.4. The 17 runs are defined below and the changes between consecutive runs are identified with a "*".

Alternative 1: Status quo

Run 1: No crab or halibut PSC limits
No vessel incentive program
75% of pollock TACs taken in mid-water pollock fishery
No herring PSC limits or closures

Run 2: No crab or halibut PSC limits
* A vessel incentive "penalty box" program
75% of pollock TACs taken in mid-water pollock fishery
No herring PSC limits or closures

Options with crab and halibut PSC limits but without herring PSC limits or closures

Run 3: * 50% of 12a PSC limits
A vessel incentive "penalty box" program
75% of pollock TACs taken in mid-water pollock fishery
No herring PSC limits or closures

Run 4: * 100% of 12a PSC limits
A vessel incentive "penalty box" program
75% of pollock TACs taken in mid-water pollock fishery
No herring PSC limits or closures

Run 5: * 150% of 12a PSC limits
A vessel incentive "penalty box" program
75% of pollock TACs taken in mid-water pollock fishery
No herring PSC limits or closures

Run 6: * 50% of 12a PSC limits
A vessel incentive "penalty box" program
* 50% of pollock TACs taken in mid-water pollock fishery
No herring PSC limits or closures

Run 7: * 100% of 12a PSC limits
A vessel incentive "penalty box" program
50% of pollock TACs taken in mid-water pollock fishery
No herring PSC limits or closures

Run 8: * 150% of 12a PSC limits
A vessel incentive "penalty box" program
50% of pollock TACs taken in mid-water pollock fishery
No herring PSC limits or closures

Options with crab, halibut, and herring PSC limits and closures

Run 9: 100% of 12a PSC limits
A vessel incentive "penalty box" program
* 75% of pollock TACs taken in mid-water pollock fishery
* 1% herring PSC limit
* Winter herring closure B

Run 10: 100% of 12a PSC limits
A vessel incentive "penalty box" program
75% of pollock TACs taken in mid-water pollock fishery
* 2% herring PSC limit
Winter herring closure B

Run 11: 100% of 12a PSC limits
A vessel incentive "penalty box" program
75% of pollock TACs taken in mid-water pollock fishery
* 4% herring PSC limit
Winter herring closure B

Run 12: 100% of 12a PSC limits
A vessel incentive "penalty box" program
75% of pollock TACs taken in mid-water pollock fishery
* 8% herring PSC limit
Winter herring closure B

Run 13: 100% of 12a PSC limits
A vessel incentive "penalty box" program
* 50% of pollock TACs taken in mid-water pollock fishery
* 1% herring PSC limit
Winter herring closure B

Run 14: 100% of 12a PSC limits
A vessel incentive "penalty box" program
50% of pollock TACs taken in mid-water pollock fishery
* 2% herring PSC limit
Winter herring closure B

Run 15: 100% of 12a PSC limits
A vessel incentive "penalty box" program
* 75% of pollock TACs taken in mid-water pollock fishery
* 1% herring PSC limit
* Winter herring closure C

Run 16: 100% of 12a PSC limits
A vessel incentive "penalty box" program
75% of pollock TACs taken in mid-water pollock fishery
* 2% herring PSC limit
Winter herring closure C

Run 17: 100% of 12a PSC limits
A vessel incentive "penalty box" program
75% of pollock TACs taken in mid-water pollock fishery
* 4% herring PSC limit
Winter herring closure C

The following comments outline some of the deficiencies of the model's projections for the options being considered. It is assumed that bycatch rates by area, fishery, and month are not affected by the levels of the PSC limits or the size of the herring winter savings area. It is also assumed that fishing patterns are only affected by actual closures, not by the anticipation of closures. To the extent that fishermen would take actions in anticipation of closures, the model tends to estimate earlier closures than would occur, overstate the groundfish catch that would be foregone, and under estimate other bycatch control costs. The net effects on the estimates of bycatch control costs and net revenues are not known. Also the estimates of bycatch impact cost are based on estimates of foregone catch multiplied by the exvessel price of the bycatch species. This tends to understate the impact cost of herring to the extent that bycatch reduces subsistence catch and the value per unit of catch is higher for subsistence catch than for commercial catch. An additional limitation of the analysis is that the bycatch model just addresses the trawl fleet. It does not provide estimates of effects of the options on the catch, bycatch, or economic performance of other groundfish gear groups. It is not known how the inclusion of other gear groups would alter the benefit-cost analysis.

If the objective is to minimize the cost of bycatch, if none of the options would result in the collapse of a stock, and if the agency costs do not differ significantly among the options described by runs 2 through 17, the difference in gross groundfish revenue net of variable cost and the bycatch impact cost provides a method of comparing each alternative to the status quo. The ratio of the estimated reductions in bycatch impact cost and gross revenue net of operating cost for an alternative compared to the status quo provides a measure of the merits of that option compared to the status quo. Different benefit-cost ratios would of course result if different weights were given to the estimates of net revenue in the groundfish fishery and bycatch impact costs

Crab and Halibut Alternative 1: Status Quo

The results suggest that, in the absence of any of changes being considered under Amendment 16a, bycatch would be about 6,100 mt of halibut, 5,100 mt of herring, 173,000 red king crab, and 1,936,000 C. bairdi Tanner crab. The estimated total bycatch impact cost would be $26 million.

Other Crab and Halibut Alternatives

The first comparisons are between the status quo, with the vessel incentive program (i.e., run 2), and runs 3, 4, and 5 for which the PSC limits are 50% to 150% of the 12a limits and it is assumed that 75% of the pollock TACs are taken in the mid-water pollock fisheries.

50% of 12a PSC Limits

It is estimated that PSC limits equal to 50% of the 12a limits would reduce bycatch to about 2,700 mt of halibut, 3,100 mt of herring, 77,000 red king crab, and 1,935,000 C. bairdi Tanner crab. The associated bycatch impact cost is $12.6. With the exception of Tanner crab, these estimates are much less than for the status quo. The Tanner crab estimate is about 10% lower. The estimated impact cost is reduced by about $13.8 million or 52%. However, these limits are estimated to reduce trawl groundfish catch by about 511,000 mt and to reduce the associated gross revenue, gross revenue net of variable cost, and gross revenue not of total cost, respectively, by $250 million, $127 million, and $60 million. Therefore, the savings in terms of reduced bycatch and bycatch impact cost are at a high cost to the groundfish fishery. If the reduction in gross revenue net of variable cost is used as the measure of the bycatch control cost, the benefit-cost ratio is 13.8:127 or 0.11.

100% of 12a PSC Limits

PSC limits of 100% the 12a levels are also projected to reduce bycatch by constraining the trawl groundfish fishery. However, neither the reductions in bycatch nor the impact on the trawl groundfish fishery would be as great as with the 50% limits. It is estimated that, compared to the status quo, PSC limits equal to 100% of the 12a limits would reduce bycatch to about 5,100 mt of halibut, 4,600 mt of herring, 120,000 red king crab, and 2,500,000 C. bairdi Tanner crab. The associated bycatch impact cost is $22.2. These estimates indicate a larger percentage decrease for king crab than for herring or halibut and an increase in Tanner crab bycatch. The estimated impact cost is reduced by about $4.1 million or 16%. However, these limits are estimated to reduce trawl groundfish catch by about 143,000 mt and to reduce the associated gross revenue, gross revenue net of variable cost, and gross revenue not of total cost, respectively, by $114 million, $66 million, and $43 million. Making the same comparison as for the 50% PSC limits, the benefit-cost ratio is 4.1:66 or 0.06.

150% of 12a PSC Limits

PSC limits equal to 150% of the 12a levels are also projected to reduce red king crab and Tanner bycatch by about 12% and 4%, respectively, without changing the bycatch of herring or halibut, and without decreasing trawl groundfish catch. It is estimated that bycatch would be about 5,900 mt of halibut, 5,100 mt of herring, 152,000 red king crab, and 2,040,000 C. bairdi Tanner crab. The associated bycatch impact cost is $25.5. Compared to the 100% PSC limits, the herring, halibut, and king crab bycatch estimates are higher, but the Tanner crab estimate is about 18% lower. The estimated impact cost is reduced by about $845,000 or 3%. These limits are estimated to result in an insignificantly small increase in trawl groundfish catch. This occurs because changes in fishing patterns caused by Tanner crab PSC closures allow more groundfish to be taken before the TACs close fisheries. Gross revenue is estimated to increase by $0.7 million, but the estimated decreases in gross revenue net of variable cost and gross revenue net of total cost are, respectively, $16.7 million, and $18.3 million. Making the same comparison as for the 50% and 100% PSC limits, the benefit-cost ratio is 0.845:16.7 or 0.05.

Limits on the Percentage of Pollock Taken in Bottom Trawl Fisheries

Comparison between runs 3 to 5 and runs 6 to 8 are used to evaluate the effects of changing the percentage of the pollock TACs taken with bottom trawls. For the former set of runs, 75% of the pollock TACs is taken in the mid-water pollock fisheries; in the latter set, only 50% is taken by these fisheries.

An increase in the percentage of pollock taken in the bottom trawl fisheries did not consistently increase bycatch. When comparisons are made for the same levels of PSC limits, halibut bycatch increase but not by much, herring bycatch decreases, crab bycatch only increases for some PSC limits, and in no case is the change in crab bycatch significant. The total effect on bycatch can be compared by considering the effect on estimated bycatch impact cost. When the percentage taken with bottom trawl gear increases from 25% to 50%, bycatch impact cost decreases from $12.6 million to $12.2 million for the 50% PSC limits, from $22.2 million to $21.5 million for the 100% PSC limits, and from $25.5 million to $25.3 million for the 150% PSC limits. These reductions in bycatch impact costs of about $0.4 million, $0.7 million, and $0.2 million are associated with estimated reductions in trawl groundfish gross revenue net of operating cost of $74 million, $29 million, and -$10 million. With the 150% PSC limits, net revenue is higher when 50% of the pollock in taken with bottom trawl gear due to the combination of relatively few PSC closures and higher net revenues per metric ton of pollock in the bottom trawl pollock fishery than in the mid-water pollock fishery.

This potentially surprising result that a substantial increase in the percentage of pollock taken with bottom trawls reduces herring bycatch and has little effect on the bycatch of crab or halibut can be explained by two factors. First, there are changes in intended fishing patterns and the apportionments of PSC limit caused by the increased apportionment of pollock to the bottom trawl fishery. Second, there are subsequent changes in PSC closures and fishing patterns.

Herring Status Quo

The bycatch model estimates that under the status quo about 5,100 mt of herring are taken as bycatch in the trawl groundfish fishery whether or not there is a crab and halibut vessel incentive program. The estimated herring bycatch ranges from about 2,200 mt (run 6) to 5,100 mt (run 5) for the six options considered for crab and halibut PSC limits and bottom trawl pollock limits. The effects of alternative herring PSC limits and winter savings areas in addition to 100% crab and halibut PSC limits and different pollock apportionments are considered in this section.

Herring Alternative 2

Under herring Alternative 2 (runs 9 to 14), herring PSC caps range from 1% (778 t) to 8% (6,221 mt) of the eastern Bering Sea herring biomass in combination with the smaller of the two winter savings areas (winter savings area B. With the 100% crab and halibut PSC limits and a 75% apportionment to the mid-water pollock fishery, the 8% herring cap imposes no constraints on any of the groundfish fisheries, and the overall herring bycatch of 4,570 mt is identical to Run 4 with no herring caps in place. The 4% cap is only slightly constraining and reduces herring bycatch slightly to 4,557 mt compared to 4,570 mt without the 4% cap. With a 4% cap JV flatfish fisheries are forced to move from herring zone 1 on June 22; and from herring zone 2 on July 1. The herring closures only slightly constrain the JV flatfish fishery as the fishery closes in the entire Bering Sea on July 8. Domestic flatfish trawls and other bottom trawls are also slightly impacted by the herring restrictions. The differences in herring bycatch and the aggregate performance of the trawl fishery are insignificant with the 4% herring limit.

Herring PSC limits of 2% and 1% cause many more fishery closures, but under the model assumptions fishing effort transfers to remaining open areas such that the overall groundfish catch does not decline. A 2% herring cap limits the herring bycatch to 3,761 mt while the 1% herring cap limits herring bycatch to 3,128 mt. Note that when herring caps are attained, fishing can continue outside of the limited herring savings areas so that the actual herring bycatch can exceed the cap level. Neither the 1% nor 2% herring PSC limit significantly affects crab or halibut bycatch.

The addition of the 1% and 2% herring PSC limits to 12a (100%) crab and halibut PSC limits are estimated to decrease total bycatch impact cost by about $0.9 million and $0.5 million, respectively, increase trawl groundfish catch by about 13,000 mt and 2,000 mt, and to increase gross revenue net of variable cost by $13.3 and $3.3. This surprising result occurs because the herring closures shift effort from an area with a relatively high halibut bycatch rate to areas with lower halibut bycatch rates. This increases the amount of groundfish harvested prior to Bering Sea-wide closure of the cod and pollock bottom trawl fisheries. If the 1% or 2% herring limit is added to the crab and halibut PSC limits, but if only 50% of the pollock is apportioned to the mid-water pollock fisher, the directions of change are similar but they are smaller (compare run 7 with runs 13 and 14.

Herring Alternative 3

Under herring Alternative 3, herring PSC limits also range from 1% (778 mt) to 8% (6,221 mt) of the eastern Bering Sea herring biomass but are combined with the larger of the two winter savings areas (winter savings area C. As under alternative 2, the 8% herring limit imposes no constraints on any of the groundfish fisheries. When herring limits are 1%, 2%, or 4%, herring bycatch is reduced from about 3,100 mt to 2.900 mt, 3,800 mt to 3,500 mt, and 4,600 mt to 4,300 mt, respectively, by the expanded winter savings area (compare runs 9 to 11 with 15 to 17). The difference in the winter savings area does not have a significant effect on the estimates of aggregate bycatch impact cost, groundfish catch, gross revenue, or net revenue.

Biological Implications for Halibut

If the reproductive compensation is done correctly and if the bycatch is estimated correctly, the halibut spawning stock size will remain in the same condition whether bycatch occurs or not. The halibut fishery pays for maintenance of the resource through lower catches. Therefore, changes of $\pm$ 50 percent in the bycatch limits will be felt in the halibut fishery, but should not affect the condition of the resource.

Biological Implications for Crab

Given that the crab PSC limits being considered typically would result in bycatch accounting for a small part of the annual removals due to natural mortality and fishing mortality, changes of $\pm$ 50 percent in the bycatch limits will be felt in the crab fisheries, but typically would not jeopardize the long-term productivity of the crab stocks. When the crab stocks are at or approaching a critical level of abundance, emergency actions may be appropriate to further limit bycatch.

Biological Implications for Herring

The bycatch simulation model was used to evaluate the magnitude of the herring bycatch under varies alternatives. Biological and economic impacts of the herring bycatch depend to a large degree on how the bycatch is distributed among the several Bering Sea herring stocks. One approach is to assume that during the migration, all herring stocks are randomly mixed, so that bycatch is taken from

each stock in proportion to the relative biomass of each stock. However, herring spawning occurs at different times along the western Alaskan coast, so that different stocks begin their migration at different times. Therefore, particularly early in the herring migration, there is a potential for trawl bycatch to occur disproportionately on different herring stocks. Until additional information is available on the composition and migratory timing of Bering Sea herring stocks, it is difficult to fully analyze bycatch impacts.

The reporting requirements that are currently in place should not need to be augmented to support any of the options being considered. The observer program that is in place to monitor catch and bycatch to exist current regulation and the vessel incentive program being reviewed by the Secretary as part of Amendment 16 will not have to be significantly changed in response to the options being considered. However, there would be additional administrative costs to annually apportion PSC limits and to both monitor and enforce those apportionments.

Distribution of Costs and Benefits

The data in Table 5.2 provide estimates of the distributions of benefits and cost that can be quantified more readily. The estimated benefit-cost ratio of moving from the status quo to each of the options considered is substantially less than 1. There are two reasons for this. First, with the estimated bycatch rates, impact costs per unit of bycatch, and groundfish operating costs, an option that constrains groundfish catch usually results in the foregone gross revenue net of variable cost greatly exceeding the decrease in aggregate impact cost. Second, options that change fishing patterns tend to reduce the net revenue per unit of catch.

This does not mean that the PSC limits being considered are necessarily too low. What it does suggest is that given the structure of the groundfish fishery, the PSC limit that are being considered will tend to reduces groundfish catch and have benefit-cost ratios less than one. The situation would be quite different if the groundfish fishery were characterized by a single decision maker or if the industry could organize in such a way that the decisions of individual fishermen, with respect to controlling bycatch, reflected the best interest of the groundfish fishery as a whole. If either were possible, the need for Council action would be reduced substantially.

If the groundfish fishery acted as if there were a single decision maker, it would be able to minimize the cost of any set of PSC limits and, conceivably, it could do so for some of the PSC limits being considered without reducing groundfish catch. If that were possible, such limits would not be too low. However, in the absence of either such an ability, a Council imposed vessel incentive program that produces comparable results, or the ability of the industry to impose such a program, the options considered are expected to have benefit cost ratios less than one unless different weights are given to the estimates of bycatch impact cost and net revenue. This suggests that it is in the interest of the groundfish fishery, the Council, and NMFS to implement such a program.

In addition to providing the estimates used in the benefit-cost analysis, the bycatch model is useful in demonstrating that bycatch control measures can have unexpected effects due to the complex interrelationships between PSC limits and fishing patterns. The unexpected effects and the uncertainty associated with the model's projections demonstrate the difficulty in determining what bycatch management measures will have the desired effects.

Other Considerations for Halibut

There are additional implications for the bycatch of halibut that should be considered. Juvenile halibut spawned from adults in the Gulf of Alaska and Canada may reside in the Gulf of Alaska or in the Bering Sea, and juvenile halibut from the Bering Sea may stay there or migrate into the Gulf of Alaska and as far south as Oregon or California. Management of halibut bycatch should consider coast wide effects of bycatch mortality. Migration of juvenile halibut has major domestic allocation and international management implications because nearly all adult halibut harvested in southeast Alaska, British Columbia, and Washington-Oregon passed through western and central Alaska as juveniles.

At the January, 1990 Annual Meeting of the IPHC, the Canadian Commissioners abstained from voting on measures involving catch limits or seasons for the U. S. halibut fishery in a protest over the high halibut bycatch in Alaska waters. Loss of harvest by Canadian (and U.S.) fishermen caused by catch limit reductions to compensate for bycatch was of particular concern. The Canadian Commissioners cited a need for a plan to reduce bycatch to levels of the mid-1980s before a vote could take place. The U.S. Commissioners agreed with the need to solve bycatch problems, but indicated the measures that the U.S. government has taken to move toward solution. Actions of the Canadian government indicate that it believes that optimum yield cannot be attained in their fishery because of the bycatch taken from the halibut resource.

In considering the effect of bycatch on optimum yield. it may be appropriate to reevaluate the optimum yield from the halibut stocks by considering the differences in economic yield from the use of halibut in the halibut and groundfish fisheries. That is, it may be appropriate to define the optimum yield in terms of x mt of catch for the halibut fisheries and y mt of bycatch in other fisheries.

Similarly, in considering the effect of bycatch on and U.S. treaty obligations, it may be appropriate to consider what the U.S. could do to mitigate the effects of bycatch in the Bering Sea on the Canadian halibut fisheries and the Indian halibut fisheries in Washington. For example, if it is determined that bycatch of halibut in the Bering Sea is a higher valued use, the U.S. could agree to compensate those in Canada and Washington with treaty rights to halibut. The compensation could be in terms of fishing rights in U.S. waters or there could be direct monetary compensation. The point is that potentially there are a variety of ways to both define and meet the treaty obligations.

Other Considerations for Herring

As noted throughout this document, the estimates of the herring bycatch impact costs are based on the assumption that the reductions in herring catch due to herring bycatch in the groundfish fishery would be borne by the commercial herring fisheries, not the subsistence fisheries. To the extent that this assumption is incorrect and that the value per unit of catch is higher in the subsistence fishery, the estimates are too low.

The higher priority that the State has given to subsistence catch indicates that the State places a higher value on subsistence catch. The dependence of some communities on both subsistence and commercial herring catch may also suggest that the value of the commercial catch in some areas is under estimated. It is difficult to identify the degree to which the estimates of herring bycatch impact cost may understate the actual cost.

Analysis of Inseason Bycatch Hot Spot Closure Authority

Based on bycatch rates observed in the 1990 JVP and DAP fisheries, closure of areas or fisheries that demonstrated high bycatch rates would have positive benefits in terms of reducing average bycatch rates in the BSAI, reducing the probability of bycatch amounts exceeding established limits, and increasing the opportunity to harvest groundfish TAC amounts before PSC limits are reached. Future inseason closures to reduce bycatch rates within areas or fisheries could be expected to have the type of impact that such closures would have had during 1990.

During 1990, inseason authority to close "hot spots" would probably not have extended JV fishing in Zone 1, although closure of area 516 would have reduced the amount by which the red king crab bycatch quota was exceeded. Furthermore, the JV flatfish fishery would have benefitted from a closure of area 517 in terms of reduced bycatch rates of halibut and additional groundfish harvest and associated revenues totaling about $5.2 million.

The DAP fisheries were also constrained by halibut bycatch during 1990. Closure of the Greenland turbot fishery, which demonstrated an intrinsically high bycatch rate of halibut, could have allowed for an additional 77,545 mt harvest of groundfish, with associated net benefits, of $48.5 million in gross revenues.

The North Pacific Fishery Management Council has recognized that high bycatch rates of red king crab in the Zone 1 flatfish fisheries and high bycatch rates of halibut in the Greenland turbot fishery are major contributors to premature fishery closures in the BSAI. The Council recommended several management changes under Amendment 16 and an associated regulatory amendment that will reduce the impact of these fisheries on other groundfish operations. These measures include the establishment of separate PSC limits for the Greenland turbot fishery, if PSC limits are established, and a season delay in the BSAI flatfish fishery. However, it would still be useful to have inseason authority to implement interim closures of areas to limit other fishery operations that may exhibit unexpectedly high bycatch rates.

Bycatch rates exhibit great variability from week to week and this variability creates some difficulty in determining whether bycatch rates in a fishery or area are intrinsically high, are an exhibition of "dirty fishing", or simply represent natural variability in an other wise "clean fishery" or area. Historical data should be examined, therefore, to determine whether consistent "hot spots" occur in the BSAI groundfish fisheries so that this information could be juxtaposed with variable inseason data to help determine whether an inseason closure is warranted to reduce overall bycatch rates.

PUBLIC COMMENTS ON AMENDMENT 16a EA/RIR/IRFA

Alaska Crab Coalition: Strongly supports maintenance of bycatch caps as established by Amendment 12a, limitation on the proportion of the pollock TAC that may be taken by bottom trawl gear, authority to close bycatch hotspots in-season, and herring bycatch management measures. [N.B. Appendices to this organizations comments are available upon request.]

American Factory Trawler Association: Prefers implementation of the "penalty box" (Amendment 16) combined with no PSC caps. If penalty box cannot be implemented, caps should be set at 150% of Amendment 12a levels.

Greenpeace: Supports a modified version of Alternative 3 to institute a winter savings area 20% larger than discussed and a PSC cap set at 1% of herring biomass.

International Pacific Halibut Commission: Suggests halibut PSC limits be set at 4000 mt mortality (4200 mt catch assuming 95% mortality as an interim step pending further analysis). Supports authority to the Regional Director to close bycatch hotspots in-season, supports authority to limit the proportion of pollock that may be taken with bottom trawl gear.

ALASKA CRAB COALITION

3901 Leary Way (Bldg.) N.W., Suite #6 • Seattle, WA 98107 • (206) 547-7560 • FAX (206) 547-0130

DATE: September 19, 1990

TO: Don W. Collinsworth, Chairman
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK 99510

FROM: Arni Thomson
Executive Director
Alaska Crab Coalition

RE: COMMENTS ON THE EA/RIR/IRFA FOR AMENDMENT 16A TO THE BERING SEA/ALEUTIAN ISLANDS GROUNDFISH FISHERY MANAGEMENT PLAN

The Alaska Crab Coalition ("ACC") has reviewed the Draft Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for Amendment 16a to the Fishery Management Plan for Groundfish of the Bering Sea/Aleutian Islands ("EA"), dated August 27, 1990. ACC is a non profit trade association representing 65 Bering Sea crab vessels and five of the major crab processing companies in the Northeast Pacific Ocean and Alaska.

The ACC believes that the EA, though not without defects, provides an adequate basis for the adoption of an effective bycatch regime. In particular, the EA provides support for the maintenance of the prohibited species cap "PSC" limits established by Amendment 12a to the Fishery Management Plan for the Groundfish Fisheries of the Bering Sea/Aleutian Islands ("FMP"); for a limitation of the pollock Total Allowable Catch ("TAC") that may be taken by bottom trawl; for the establishment of authority to close "hot spots" in-season; and for the institution of meaningful herring bycatch limitation measures. The ACC strongly supports each of these measures for the control of bycatch in the groundfish trawl fisheries.

The ACC believes that the EA should be amended to improve its analytical approach. The EA should recognize that conservation, defined as wise use and encompassing the avoidance of waste, is the central feature of bycatch management. The emphasis in the EA on allocation among gear groups and the fisheries in which they are engaged is misplaced, both as a matter of fact and as a matter of law.

The principal purpose of the governing statute, the Magnuson Fishery Conservation and Management Act ("ACT") is conservation. This is clear from the express language of the ACT, including National Standard 1, and from the extensive legislative history. (See attached memorandum.) Allocation is a secondary objective of the ACT, and indeed, may not form the sole basis for any management measure. (See National Standard 4.)

Bycatch limitation is a conservation matter because the incidental taking of crab, halibut and herring in the groundfish trawl fisheries is wasteful. Trawl gear is inherently non-selective, and bottom trawling has a particularly heavy impact on non-target crab and halibut, among other species. The characterization by the EA of all gear as "partially non-selective" is grossly misleading, as fixed gear is far more selective than trawl gear and the impact of trawling on non-target species is dramatically greater than the impact of fixed gear on those species. NMFS data for the years 1986 through 1990, for the groundfish trawl fisheries are abundant. The greater impacts have long been an integral part of the administrative record of fisheries management in not only the Northeast Pacific Ocean, but they are part of the administrative record in the North and Mid Atlantic Ocean. (Reference, NMFS Foreign and Joint Venture Observer Reports, Alaska Region, 1977 - 1990; Susan E. Blanding, "Effects of Trawling on Target and Non-Target Species," September 1986.)

Specifically taking into account the Bering Sea groundfish trawl fisheries, among several others, the highly respected and influential National Fish and Wildlife Foundation states in its January, 1990 study, "Needs and Assessment of the National Marine Fisheries Service":

> **Many fishing operations waste more fish than they ever bring to market by discarding unwanted or prohibited fish taken while fishing for desired species.** If similar conditions existed in other industries that use natural resources, the protests would be deafening. (Page 40.)
>
> * * *
>
> **Since the Magnuson Act states that U.S. fishery management efforts are to 'promote efficiency in the utilization of fishery resources,' the Foundation believes that seeking ways to reduce bycatch should be a top NMFS priority.** (Page 105.) (Emphasis added.)

Until such time as there are improvements in gear technology, such as the Foundation envisions, caps and time and area closures are going to be essential.

There is simply no other effective near term solution to the problem of bycatch in the trawl fisheries.

Although not too abundant, there is documentation to show what fishermen commonly recognize, namely that selective line gears (and salmon and herring net gears in the Northeast Pacific) are quite selective and result in little or less dramatic impact on non-target species. Two recent reports on Bering Sea crab fisheries developed on fisheries conducted in 1989, show very low impact on halibut and non-target crab species. An ACC funded bycatch report on the bairdi fishery in Zone 1 in 1989, showed zero bycatch of halibut in a 9 day observation, utilizing 2 NMFS observers sampling 367 pots. (ADF & G, Westward Region Report to the Alaska Board of Fisheries; ACC Bycatch Report in Bering Sea Bairdi Fishery.) In addition, NMFS data is becoming available on the selectivity of longline and pot fishing for Pacific cod, which is demonstrating to industry greatly reduced impacts on non-target species compared to trawl gears. An unpublished report on the Gulf of Alaska pot fishery for Pacific cod based on a catch of 1.7 million pounds, shows a rate of .031% catch or 559 pounds of halibut. In terms of actual mortality, only 3 halibut were not returned alive to the sea. During the same period, only 152 bairdi crab were caught and these were all returned to the sea alive. The general area in which the vessels were fishing, was one of high abundance of halibut. (Reference, unpublished Observer/Logbook Report, 1990.)

Another recently published report by Natural Resources Consultants (June, 1990), portrays pot and longline fisheries as having high impacts on some non-target species, particularly halibut by using historical data. The data produced in the report, in many cases, shows only rates and omits references to tonnages caught and length of seasons involved, two significant references necessary to scientifically assess impacts. In reference to claims about the impacts of Bering Sea crab fisheries on halibut, this report and IPHC estimates are based on outdated material from the king crab fisheries of the late 1970s and early 1980s. At that time, the fleet was conducting prolonged fisheries in the Zone 1 area, where there is a high abundance of juvenile halibut.

However, the revitalized Bering Sea crab fleet has dramatically changed its fishing patterns since the collapse of the king crab stocks. Since 1984 and until recently, the fleet has been depending on the opilio fishery and most recently with the resurgence of bairdi stocks, it has begun fishing bairdi again. In summation, the bulk of the opilio fishery has been west of 165 degrees W. longitude, in the Pribilofs and Northwest of the Pribilofs to the US/USSR Boundary line. Reports from fishermen and limited ADF & G observer reports will show that halibut mortality is very

low in the opilio fishery. The NRC report does not reflect recently produced ADF & G bycatch data on the crab fisheries, the NMFS observer data in the pot fishery for Pacific cod, nor the ACC Report or a similar report as recent as 1989 on the bairdi fishery. (Reference, "The Nature and Scope of Fishery Dependent Mortalities in the Commercial Fisheries of the Northeast Pacific"; Prepared for the Highliners Association, June 1990.)

A significant new study by Bjordal and Laevastu also supports the selectivity of longline gear. Among the results of the study are: a) If a given level of stock is desired, higher annual catches can be taken with longlines than with trawl. b) With the same catch size, longlines remove more older and more piscivorous fish which is beneficial to recruitment if the latter is largely controlled by predation. And, that some longline fishing might be allowed to continue when the TAC for trawlers has been reached. (Effects of Trawling and Longlining on the Yield and Biomass of Cod Stocks - Numerically Simulated, ICES 1990, Asmund Bjordal and Taivo Laevastu.)

An even more compelling reason why bycatch limitation must be regarded, first and foremost, as a conservation matter, is that crab, halibut and herring taken incidentally in the groundfish trawl fisheries are depressed or declining. As noted in the EA, though without sufficient elaboration, some fisheries for those species have been curtailed or closed for conservation purposes. Ipso facto, any impact on those species by trawling constitutes a conservation problem, and a serious one at that.

DEPRESSED AND DECLINING STATUS OF KING CRAB, HALIBUT AND HERRING STOCKS OF THE EASTERN BERING SEA:

A brief overview of Bering Sea king crab fishing seasons and the status of the stocks illustrates the overall depressed nature of the various stocks. In the 1989 Bristol Bay red king crab fishery, the fishery lasted only 10 days (compared to 6 to 9 week fisheries in the late 1970s, through 1981) and produced 10.2 million pounds, 40% less than the anticipated 17 million pound quota, due to low catch per unit of effort. Small quotas and short fishing seasons have been characteristic of the king crab fisheries since the collapse of the stocks in 1980.

The recent 1990 NMFS Bering Sea king crab survey shows very little improvement in the overall population, however, it does show a decline in the estimate of legal males over 1989 from 12 million animals to 9.4 million legal males. This is a 22% decline in the legal males. The overall population estimate for 1990 is 57 million animals compared to 54 million animals in 1989.

The depressed condition of the stocks is further illustrated by the following. In the summer of 1989, the NMFS announced that based on analysis of the 1988 survey, that there would likely be no fishery in Bristol Bay in 1989, but the 1989 survey would have to confirm this. Later that summer, a fishery was announced, but the population was still considered depressed, and the prerecruit crab were well below the average and declining. The 1990 Report to Industry on the Bering Sea crab survey is not yet available, but the preliminary stock status report shows little overall increase over the 1989 population estimates. (References, NMFS/NWAFC Report to Industry on the East Bering Sea Crab Survey, 1989, 1990; ADF & G Westward Region Report to the Alaska Board of Fisheries, March 1990; and ADF & G announcement of 1990/91 Westward king crab seasons and guideline harvest levels, dated August 10, 1990. Attachments.)

The Dutch Harbor area red king crab fishery which produced catches as high as 17 million pounds in 1980, has been closed to commercial fishing, due to depressed stocks, since January of 1983. (There is a limited deep water golden king crab fishery that produces 1.9 million pounds per year in this area.)

The Adak area red king crab fishery continues to be depressed as does the Pribilof Islands blue and red king crab fisheries. This year, there will be no blue and red king crab fisheries in the Pribilofs. This marks the third year in a row there has been no fishery due to depressed stocks. The Alaska Crab Coalition has actively supported no fishery in the Pribilofs this year for conservation of the depressed stocks.

Stocks of halibut and herring are also declining in the Eastern Bering Sea. A recent 1990 draft stock assessment document for the Pacific halibut resource prepared by the staff of the International Pacific Halibut Commission shows a decline in biomass of 6 percent, a rate which is similar to the 5-6 percent decline observed in recent years. The impact of bycatch on the setline fisheries has been revised to one pound for every pound of bycatch removed. This is in contrast to the 1.58 conversion previously used and 1.3 used in the EA.

The total estimated halibut bycatch mortality for the BS/AI in 1990 in the Northeast Pacific will be an estimated 15.8 million pounds (7,200 mt) of which the setline fisheries will account for an estimated 2.0 million pounds (968 mt) or 13% of the total bycatch, with the trawl fisheries accounting for the bulk of the remaining bycatch mortality of over 13 million pounds (6,200 mt). (References, IPHC, Draft, 1990 Stock Assessment and Fishery Evaluation (SAFE) For The Pacific Halibut Resource of The Bering Sea and Northeast Pacific Ocean,

September 3, 1990, Attachment; and NMFS Observer Reports for the Gulf of Alaska and Bering Sea Fisheries, August 20, 1990, Attachments.)

Recent reports by Alaska Department of Fish and Game provide estimates of herring bycatch in the domestic trawl fisheries. They also illustrate the declining status of Bering Sea herring stocks, which also results in decreased quotas in the directed herring fisheries. A recent analysis shows an estimated decline in biomass from 180,000 mt in 1988 to 130,000 mt in 1990, an overall 28% decline in the herring stocks. For the largest stock in the system, and the major commercial fishery, the Togiak stock, there is a corresponding decline from an estimated biomass of 120,000 mt to 80,000 mt, a 33% decline in abundance. (Reference, ADF & G, Preliminary Summary of 1990 Bering Sea Herring Stock Status, Fritz Funk, June 1990.)

ANALYIS OF GROUNDFISH INDUSTRY USE OF BYCATCH QUOTAS OF KING AND BAIRDI CRAB AND HALIBUT IN ZONES 1 AND 2 IN THE EASTERN BERING SEA DURING 1989 AND 1990:

The EA analysis of bycatch utilization should be expanded to focus on actual utilization of bycatch quotas in Zones 1 and 2, in terms of fisheries performance, if an objective analysis of trawl bycatch needs is to be made. The following is an analysis of utilization of trawl bycatch quotas in 1989 and through August 20, 1990. Although NMFS observer coverage extended only to the JVP fleet in 1989, NMFS estimates of DAP bycatch are derived from JVP rates and the DAP industry. In 1990, NMFS estimates almost 90% observer coverage for the groundfish industry in the Bering Sea/Aleutian Islands.

The record of JVP performance in Zone 1 flounder fisheries in 1986, 1987 and 1988, under the Amendment 10 king and bairdi crab caps, illustrates the ability of industry to adapt to bycatch caps when enforced with permit conditions and monitored by a NMFS/Industry Bycatch Monitoring Program. Bycatch rates of king and bairdi crab were reduced three and four fold in three years. In 1988 the program encompassed 34 companies and monitored crab bycatch for almost 5 months on a daily basis and accounted for over 900,000 tons of groundfish. The NMFS description and evaluation of this program rates it as successful in increasing groundfish catches in Zone 1 and in lowering crab bycatch rates. Several of the concepts employed could be modified for use in the DAP industry. However, trawl groups criticize the program as being unworkable on a large scale for the DAP industry. However, a Directory of Factory Trawler Companies in the U.S. EEZ in the North Pacific, published in the September 1990 issue of Pacific Fishing Magazine, shows only 33 companies managing 64 factory trawlers, a number equal to the 1988 JVP Monitoring program. (JVP Performance in Zone 1 Flounder Fisheries, based on NMFS

Foreign and JVP Observer Program; J. Smoker, NMFS/AKR, Overview of Bycatch Monitoring Programs in Alaskan Groundfish Fisheries 1988 - 1989.)

Analysis of Bycatch Utilization in 1989 in Zones 1 and 2:

In correspondence dated February 5, 1990 addressed to Arni Thomson, Steve Pennoyer, Regional Director of the NMFS in the Alaska Region, provided year-end reports for PSC catches and groundfish catches in Zones 1 and 2 of the Bering Sea for 1989. (Attachment) In addition to showing a breakdown of the JVP and DAP catches, this report shows the tonnages caught in the zones and what those tonnages represent as a percent of the total catch of groundfish.

The findings are significant relative to king crab conservation needs in terms of time and area closures to trawling in Zone 1. The total DAH catch (JVP and DAP) in Zone 1 was 376,000 tons of groundfish, or 21% of the Total Allowable Catch (TAC). Analysis further shows that JVP fished 72 days in Zone 1 and caught 169,000 tons of groundfish or 32% of its TAC in Zone 1. On the other hand, DAP had the opportunity to fish in Zone 1 for 242 days, until September 3rd, date of implementation of Amendment 12A and closure of Zone 1 to DAP trawling. (See Attachment, NMFS Press Release, August 14, 1989.) Thus the DAP sector was able to fish in a relatively unconstrained manner in 1989. However, DAP did not need to fish in Zone 1 for such an extended period of time. The NMFS year-end report shows that DAP only caught 206,000 tons of groundfish, 16% of its TAC of 1.2 million tons of groundfish in 242 days. The balance of its catch, 82% of it was taken in Zone 2.

Despite trawl industry testimonies about severe economic hardships created by Amendment 12A caps, this is not the case, particularly in the case of the DAP fleet. It should also be noted that JVP was not closed out of Zone 1 because of the red king cap in 1989, it was only closed after it had taken the quota of yellowfin sole. (NMFS Press Release, August 14, 1989.) The JVP fleet did exceed its red king crab cap by almost 50,000 crabs, as the NMFS/ Industry Crab Bycatch Monitoring Program was abandoned and the rate doubled over the previous year.

Another interesting aspect of the analysis, is that of determining how much of the bairdi caps were actually used. In 1989, NMFS estimates that the total catch of bairdi was 2.6 million animals out of the combined Zone 1 and 2 caps of 4 million animals. They estimate that 65% of the quota was used and that left a surplus of 1.4 million animals.

NMFS analysis of the halibut bycatch shows a combined catch of 4,144 tons, extrapolated from JVP bycatch and a surplus of 1,189 tons or 22% of the halibut quota. NMFS best estimates of this species indicates that the 5,333

ton halibut cap was more than adequate to cover the needs of the entire DAH fleet. The rates assigned to DAP on halibut in the flatfish fisheries was double the observed rate in the JVP fisheries and for other fisheries DAP was assigned a rate 35% greater than JVP. This was to make allowance for inexperience. The rates were calculated to allow for the total harvest of the Bering Sea TAC.

Although there was an overage on the red king crab cap of an estimated 92,000 animals, this cap has to be constraining in the Zone 1 area for conservation, or the species could be irreversibly depleted with trawl gear.

Analyis of 1990 Bycatch Utilization in Zones 1 and 2:

An extensive time and area analysis of the 1990 groundfish catch and bycatch performance should have been conducted in the EA, as the major area closures occurred by July first. In addition, for the first time, there is a high level of observer coverage on the Bering Sea DAP groundfish fleet. According to Russ Nelson of the NMFS Observer Program, there has been 90% observer coverage of the Bering Sea catch. Curiously, there is very little analysis of this data, which has been available to the industry on a weekly basis since March via the computerized NMFS Electronic Bulletin Board.

A number of obvious conclusions can be made from the data which is already available. The king and bairdi crab caps have not been the constraining caps on the closures of either Zone 1 or 2. Also there is a dramatic JVP overage of 324% on the Zone 1 red king crab cap, however, DAP only took 50% of its Zone 1 cap. The cap of 200,000 king crab has been exceeded by 54,000 crabs. Also in Zone 1, the bairdi cap of 1,000,000 crab has been exceeded by only 54,500 crabs. JVP exceeded its cap of 210,000 by 12,500 and DAP exceeded its cap of 790,000 crabs by 42,000 crabs.

Although the Bering Sea cap of halibut was reached by June 30th, a substantial surplus again exists in 1990 in the Zone 2 bairdi crab cap, despite another sizeable increase in the bairdi population. (See ADF & G Guideline Harvest Quotas for 1990.) JVP utilized 83% of its quota of 1 million crabs, or 827,000 crabs. However, as of the August 20th NMFS Observer Report, DAP has only utilized 17% of its quota of 2 million crabs, or 336,000 crabs in Zone 2. This is significant since as of this same date, 70% of the Bering Sea quota of cod has been taken and over 80% of the pollock TAC has been taken. It is anticipated that the remainder of the pollock quota can be taken with midwater trawl and cod can be harvested with longline and pot gear.

In conclusion, the cap of 1,000,000 bairdi in Zone 1 has been utilized. However, in Zone 2, only 1.2 million bairdi have been used out of the cap of 3 million crabs,

leaving 1.7 million crabs as a surplus cap, or a 57% surplus. Despite an increasing population of bairdi crab, the existing cap is more than adequate and it needs no increase, merely to accommodate the bycatch needs of a small number of vessels who are unable to fish clean.

Another potentially positive influence on the bycatch of king crab, bairdi crab and halibut, is the schedulled delay in the opening date of the JVP flatfish fishery in 1991. With the delay of the fishery until May first, it is hoped that there will be little or no JVP fishing in Zone 1 and reduced fishing in Zone 2. The net result should be to allow DAP to absorb the bulk of the crab and halibut quotas in Zone 1 for the rock sole and cod fisheries. This is the rationale provided for delaying the flatfish fisheries and thus it should correspondingly become the rationale for no increase in the Zone 1 caps.

RATIONALE FOR USE OF TIME AND AREA CLOSURES AND BYCATCH CAPS FOR PROHIBITED SPECIES:

The trawl sector of the groundfish industry has repeatedly pointed to Amendment 10 and Amendment 12A caps as being flawed from the beginning, as the amendments assume that the industry would find ways to live with the caps to harvest the TAC. However, they maintain this is not the case and that substantial harvests of groundfish are being foregone, because they cannot be harvested with bottom trawls. The erroneous nature of this argument needs to be dealt with here, as it is part of the ongoing assault upon the very foundation of bycatch management in the Bering Sea, time and area closures and prohibited species caps. Both of these management tools have been in practice for decades in not only the North Pacific but the North Atlantic Ocean.

In a letter of June 1, 1990 to Steve Pennoyer, Regional Director of the NMFS, Vince Curry, Government Liaison for the recently renamed American Factory Trawler Association provides a discussion of factory trawler halibut bycatch rates in bottom trawl fisheries. (Reference, Correspondence V. Curry to S. Pennoyer, June 1, 1990.) At the time, industry had already been on notice for 6 months that there would likely be a bottom trawl closure in the Bering Sea by July or August. (In reality, the closure occurred within 30 days of the Curry letter to Pennoyer.) Curry goes on to explain that AFTA had started a Bottom Trawl Committee (finally) and that it had developed guideline bycatch rates which it had published and sent to its member vessels. (Attachment to Pennoyer letter.)

Curry also states: "To our knowledge, this was the first time any effort has been made to provide DAP vessels operating in the Bering Sea with some sort of guideline bycatch rate based on current year performance data."

The statement illustrates the narrow interpretation that AFTA has developed of the annual fluctuations in bycatch rates. However, their insistence on use of "current year performance and bycatch rates" is merely part of their long established legal argument to avoid NMFS using JVP rates as benchmerks for DAP. The argument is key to keeping the NPFMC and the NMFS from using running averages of historic Foreign and JVP rates and caps, for which there is a lengthy record of more than 12 years. The need for a "learning curve" period is also used to counter the use of JVP rates. But astute production oriented business managers of the factory trawler syndicates know better than to put kids in the pilothouses of $20 to $60 million dollar factory ships. It is now time for the NMFS to come to this realization.

NMFS developed formula rates for DAP in 1989, (previously mentioned above), that would have permitted bottom trawling to occur throughout the year in 1989 and leave a surplus of almost 1,200 tons of halibut. In other words if pre season rates are established and published for the groundfish industry, they could harvest the TACs within the confines of the caps. AFTA's action at the eleventh hour could not forestall the bottom trawl closure, however, if this type of notice is sent out prior to the beginning of the fishing year, it could be productive and the factory trawler fleet would have a performance benchmark.

Caps and time and area closures have been used extensively by the North Pacific Fishery Management Council since its inception and even prior to that by the Bureau of Commercial Fisheries to control foreign fishing impacts on prohibited species of salmon, crab, halibut and herring. Since 1986, time and area closures and caps have also been applied to the JVP and domestic trawl fisheries for similar reasons.

The State of Alaska Board of Fisheries and the U.S. Canada Salmon Commission also make extensive use of time and area closures and caps as management tools for allocative and conservation purposes regarding chinook salmon. The Board of Fisheries also imposes gear restrictions in salmon gillnet and purse seine fisheries, herring fisheries and shellfish and pot groundfish fisheries. ADF & G engages in research and analysis of proposed regulatory measures prior to the Board taking action. In regards to decisions on gear restrictions and caps, the Board analyzes the information available and then takes appropriate action. Seldom are decisions delayed or prolonged indefinitely, awaiting ADF & G or the industry to report back to the Board with a new improved gear design that reduces bycatch of chinook or chum salmon. The Board of Fisheries has a responsibility to manage fisheries for conservation and allocative reasons, similar to the Council. In carrying out its mandate, the Board is cognizant that

delays in decisionmaking could result in irreversible losses to a resource or the loss of a fishery to a harvesting group.

However, within the North Pacific Fishery Management Council process, the subject of reducing bycatch in bottom trawl gears and developing an improved bottom trawl has been deliberated at great length for several years. To date, no regulatory modifications have been approved for this gear. Managers have been led to believe that such modifications are extremely complex and that implementation of regulations would be too cumbersome and eventually unenforceable. This approach ignores the extensive management record of North Atlantic European countries and that of the New England and Mid Atlantic Fishery Management Councils.

In lieu of improvements to multispecies trawl gear, it appears management alternatives are limited to the use of time and area closures, caps and use of pelagic trawls (defined as having no contact with the seabed), verified by observers.

The most recent discussion about the need for development of an improved bottom trawl to reduce crab and halibut bycatch took place at the NPFMC Ad Hoc Bycatch Committee meeting in Seattle on September 7th, 1990. The discussion took place between Robert Alverson, Manager of the Fishing Vessel Owners' Assn. of Seattle, Steve Pennoyer, Regional Director of NMFS for the Alaska Region and Bill Aron, Director of the NMFS Alaska Fisheries Science Center in Seattle. In response to Alverson's question as to what the Center was doing in terms of research and development on an improved bottom trawl, Aron responded that NMFS is no longer involved in trawl development and has not been since their last gear person went to work for a trawl manufacturer (in 1987).

Steve Pennoyer went on to say that research and development on trawl gear is very costly, takes a great deal of time and that regulatory actions on this type of gear take a lot of time to develop. However, gear modifications such as the recent Emergency Rule requiring modifications on groudfish pots is not very complex and does not require a lot of analysis. (However, the rule has to be completely revised, as it is unenforceable in that it does not distinguish that gear from a king crab pot.)

The discussion was significant in that it ended where all these discussions have ended, with NMFS saying they don't have the funds to conduct the research and for some reason, the trawl industry perpetuating the myth to Council Representatives, that until NMFS does develop a "magical" bottom trawl, it is their God given right to continue their wasteful fishing practices.

It should also be noted that the significantly different impacts of midwater and bottom trawling have recently been obscured by the confusion created by the National Marine Fisheries Service in its approach to defining the two gear types. Efforts to address bycatch must encompass a meaningful distinction between pelagic and bottom trawls and must provide for effective enforcement. The attached correspondence illuminates the importance of the issue. (See correspondence to Bill Fox from Alaska Crab Coalition, Fishing Vessel Owners' Assn., T. Kronmiller and Greenpeace.)

RELEVANCE OF THE DECLINE OF NEW ENGLAND AND MID ATLANTIC FISHERIES TO THE NORTH PACIFIC:

In assessing the issue of bycatch management in the multispecies trawl fisheries, the NMFS Regional Director and the NPFMC members should familiarize themselves with recently published reports and articles chronicalling the decline and near collapse of the multispecies fisheries of the Northeastern United States to avoid acquiescing to a similar pattern of decisionmaking that resulted in the declines.

Joseph Campbell's Special Report of The Hartford Courant (Connecticut), "Empty Nets, the Devastation of a New England Resource," points out inherent flaws in the overly democratic Council system and the Magnuson Act, lack of enforcement capability and the pressures of the open access system as leading to the collapse.

Steven A. Murawski of the NMFS/Northeast Fisheries Science Center has analyzed the decline of the Northeastern multispecies fisheries in "Can We Manage Our Multispecies Fisheries?" The analysis is soon to be published in Fisheries, the Magazine of the American Fisheries Society. Amongst his conclusions is this important statistical observation: "Since the late 1960s, total trawlable biomass has increased to levels exhibited prior to intensive distant water fisheries, but the proportion of marketed to non-marketed species biomass has reversed. Marketed species have declined steadily in abundance since 1977, with spiny dogfish and skates comprising the bulk of the total catches in recent years." (Attachment, S.A. Murawski)

In a substantive 315 page report released January 1, 1990, by the National Fish and Wildlife Foundation, the National Marine Fisheries Service is described as "an agency with severe problems and challenges that require immediate attention to ensure the well-being of the nation's marine resources. Inadequate funding and ineffective management are listed as problems that NMFS has faced for years. The report goes on to say that in addition to a number of management difficulties, the agency also suffers from historically weak leadership, political pressures from the

fishing industry, lack of strategic planning and budgeting, disorganized research program, and poor information management."

The report entitled "Needs Assessment of the National Marine Fisheries Service," provides findings and recommendations for the overall administration of the agency and its four management programs: fisheries conservation, law enforcement, protected species, and habitat conservation.

Below is one of the report's key findings and recommendations in regards to fisheries conservation and management. "Currently 14 marine fish stocks are considered by NMFS scientists to be overexploited. Ten of the 14 stocks would require five to 10 years to recover if fishing were stopped altogether. Yet, fishing continues in eight of the 10 overexploited fisheries. The report states that the major reason for this is the Councils' tendency to set catch levels that are more attuned to the economic needs of fishermen than to the long-term conservation of the stocks. A strategic plan by NMFS to address these major problems is recommended." (Reference, SFI Bulletin No. 415, June 1990, Attachment.)

ANALYSIS OF THE NMFS/NPFMC BYCATCH MODEL AND CONCLUSIONS IN THE EA:

The model employed in the EA is defective in a number of significant respects and these deficiencies suggest the need for a more, rather than a less conservative approach to bycatch management.

Overall Comments:

1. The approach in analyzing bycatch does not take into account major cost areas that affect current user groups. Areas that are not addressed include bycatch of: salmon, opilio tanner crab and non-target groundfish species to name a few.

2. The marginal cost approach to analysis of impacts employed in the EA does not address the potential overall impacts to the fixed gear groups. At some point, factory trawl bycatch will affect the total revenue and average cost structure of the fisheries, resulting in potential revenue losses much higher than the marginal revenue loss from the additional bycatch amount.

3. The analysis of impacts to the crab fisheries in particular are on a status quo basis i.e. taking the current depressed population level as a given. What the Council and NMFS should be striving for is a management regime to increase king and tanner crab populations to the point where the optimum harvests can be taken from the fishery. What is missing is the opportunity cost of not having optimum crab

harvests in the case that bycatch is one of the important causes of the depressed stocks.

4. Another serious drawback of this EA and other similar analyses is that they don't include unobserved/ incidental crab mortality from contact with trawl gear. The existence of such mortality is recognized by experts and government bodies. (David Hoopes, "Effects of Trawling on Bering Sea Crab Stocks" U.S. Bureau of Commercial Fisheries, INPFC, 1974 p. 7; Wes Johnsen, "Effects of Bottom Trawling on Crab Stocks of the Bering Sea" September, 1985; Quarterly Report Northwest and Alaska Fisheries Center, National Marine Fisheries Service, January-March 1986, p.28).

5. The actual cost of bycatch to the crab sector may be up to 15 times higher than previously recorded, once unobserved/incidental mortality is accounted for. Unobserved/ incidental mortality may also have an important impact on outyear crab populations. (Dr. David G. Raboy, "Cost Benefit Analysis of Bycatch Measures in the Bering Sea" November 28, 1988, Prepared for ACC, NPFMC Comment on Amendment 12A to the BS/AI FMP.)

Specific Comments:

1. The model being employed by the NMFS is extremely complicated, representing many man-months of effort. The model is a combination of SAS and EXCEL modules. The use of SAS to develop the model severely restricts the number of persons who can work with it since the language is generally available only on government and university mainframes. The main point is that public review of the bycatch model is very difficult.

2. This is a large and complex model and its sheer size and complexity leads to problems and oversights. A cursory review of the catch and allocation data reveals several areas that need clarification. The SP-COMP.OBS file has four hundred records but it repeats every 133 records. Why is this so? One hundred thirty three records is inadequate for estimating species composition when you have as many fishery and area variables as NMFS is dealing with.

3. The model assumes that all of the catch is retained and sold except for those species where the TAC has been reached (p. 5-4). However, the norm is that very few species other than the target species are processed on a factory trawler. They don't have enough space to put in multiple lines, and the equipment for handling one species is unable to handle another. This significantly understates fishing mortality and overstates catch per vessel and the overall benefit/cost comparisons with crab and longline vessels.

4. A major point is that the model is so complex that it is difficult to find internal errors that compound small variations into large variances.

Benefit/Cost Ratios:

The benefit/cost ratios which summarize the analysis for Amendment 16A contain biases which tend to greatly overstate benefits to the factory trawlers and greatly understate the cost impacts to the directed fisheries for crab and halibut. Examples are noted below.

1. 100 percent option, page viii: In calculating the benefit cost ratio, the profit (gross revenue net of total cost) for factory trawlers is estimated to be 37.7 percent. This is unreasonably high. Looking at the balance sheet for Arctic Alaska, a public company, the income net of costs for the last three years has varied from 14 to 16 percent, less than half of that used in the model. What this indicates is that the model's benefit/cost ratios are calculated using data which overstate trawl income.

2. The trawl gross revenues are also overstated by assuming that all catch is retained (except those exceeding TAC - see page 5-4). The model multiplies the entire trawl catch by the gross value per metric ton to arrive at the gross revenue. In actual fishing, it is more typical for non-target species to be discarded. In fisheries such as rock sole and rockfish, valuing the non-target species introduces a large error.

3. The model incorrectly uses processed price for factory trawlers vs. ex-vessel price for crab and longline fisheries, even given the fact that a substantial portion of the trawl catch goes to processing plants onshore. In addition, neither the model nor the amendment provides enough information for us to verify the processed costs, we just get a number with some discussion about an average yield. The model DAP midwater trawl price of $660 per mt is not even discussed in the amendment.

Underestimate of Costs to the Directed Fisheries:

1. The crab natural mortality rates used in the model are excessively high for king and tanner crabs, respectively at .45 and .46. For Amendment 1 to the FMP for the Commercial King and Tanner Crab Fisheries in the Bering Sea, the Crab Plan Team uses a natural mortality factor of .30, much less.

2. Overall, the price comparisons are flawed. In determining the loss to the crab and halibut fisheries, ex-vessel prices are used. Ex-vessel prices are used in the revenue estimates for the J-V groundfish fishery. However, the prices used for other components of the groundfish

fishery are equivalent to first wholesale level prices. This error is exacerbated by the use of unreasonably high recovery rates of 30 percent (see Table 5.8). A recovery factor of 12 to 18 percent is more in line with what the factory trawl fleet actually achieves.

To be consistent, the model should use first level wholesale prices for king and tanner crab and convert these to round weight in the same manner as groundfish. The model uses ex-vessel prices of $5.00 per pound for red king crab and $2.25 per pound for bairdi. Current wholesale prices for processed crab are more than double the ex-vessel values at $15.00 and $4.50.

3. It is technically incorrect to use both constant future prices in determining future crab and halibut prices and use a discount rate to calculate the present value of losses. The discount rates of 5 and 10 percent are excessively high, particularly since the constant prices are used. With a constant future price level, the discount rate should be a maximum of 3 percent.

A final point about the bycatch model concerns the bycatch rates in pollock fisheries. The bycatch rates file (BYRATES.REB) does not show any crab or halibut bycatch data for midwater pollock trawl. However the economic impact model (IMPACT.WK1) does show bycatch for midwater pollock trawl. Although it is difficult to believe, the model attributes more crab bycatch to midwater pollock trawl than to pollock bottom trawl. If the bycatch amounts presently going to midwater pollock trawl could be allocated to other fisheries, it would result in greater groundfish catches and reduced costs to the trawl fleet.

APPENDIX I

DETAILED COMMENTS ON THE EA/RIR/IRFA FOR AMENDMENT 16A TO THE BERING SEA/ALEUTIAN ISLANDS GROUNDFISH FISHERY MANAGEMENT PLAN (ATTACHMENT, Ted Kronmiller)

APPENDIX II

LEGAL COMMENTS ON THE EA/RIR/IRFA FOR AMENDMENT 16A TO THE BERING SEA/ALEUTIAN ISLANDS GROUNDFISH FISHERY MANAGEMENT PLAN (ATTACHMENT, Ted Kronmiller)

CONCLUDING REMARKS:

In closing, the ACC wishes to emphacize that the Council should recognize the increasing need for improved conservation in the groundfish fisheries. The enormous

increase in domestic trawl effort, particularly in the factory trawl sector, has placed severe strains on the capacity of the management system to respond. It has become commonplace for the PSC limits to be greatly exceeded, because NMFS is constrained by tardy reporting and analysis of bycatch data, and because the agency insists (wrongly) that it lacks the authority to anticipate the achievement of those limits and to order the close of fisheries before overages occur. The ACC urges that this defect in the system be definitively remedied in the current amendment cycle, and that the Council recommend emergency authority on an interim basis.

The attached comments by the Fishery Conservation Action Group on bycatch issues are provided for the record. Those comments are highly relevant to Amendment 16A.

AMERICAN FACTORY TRAWLER ASSOCIATION

September 20, 1990

Mr. Clarence Pautzke
Executive Director
North Pacific Fisheries Management Council
605 West 4th Ave. Room 306
Anchorage, AK 99501

Dear Clarence:

This letter contains AFTA's comments on the EA/RIR/IRFA for Amendment 16A to the Bering Sea/Aleutian Islands Groundfish Fishery Management Plan.

THE PENALTY BOX

We note at the outset that all of the alternatives to the Status Quo are based on a "penalty box" program. This is as it should be, in our judgement, because if there is one aspect of bycatch management that is agreed to by virtually all of those involved in the groundfish fishery and its management, it is the need for individual vessel accountability. Perhaps the most striking conclusion reached by the RIR analysis is that one of the largest increments of bycatch reduction is projected to be achieved by implementing only a penalty box program with no PCS caps, and with no increase in cost to the groundfish industry (Runs 1 vs. 2).

The penalty box type of program places the responsibility for minimizing bycatch where it belongs and where it will be most effective -- on the fishermen. It relieves the Council/NMFS of the responsibility of devising operationally restrictive measures to avoid bycatch. With such a plan in place, there would be no reason for the manager to care whether fishermen are towing at night, or using "pelagic" trawls with or without rollers and bobbins, and there would no longer be a need for time-area restrictions. Instead, individual fishermen who fished when or where they should not, or used the wrong gear, would be banished because they took too much bycatch, rather than because they were operating in a manner that someone less operationally knowledgeable judged to be "dirty". In short, the penalty box approach provides the critical element whose absence made 12-A unworkable -- an effective incentive program.

4039 21st Avenue West • Suite 400 • Seattle, Washington 98199
Telephone: 206-285-5139 • Fax: 206-285-1841

NMFS' concerns regarding lack of funds and staff notwithstanding, the penalty box approach simply must be implemented in 1991 if bycatch is going to continue to drive the groundfish fishery. To do otherwise would virtually assure a repeat of the 1990 situation.

PSC CAPS

The benefit-cost ratios (as described in the RIR) associated with all combinations of PSC caps show that for each $1 of reduced impact to the combined PSC-directed fisheries the trawl industry absorbs a cost of from $7 to $20. Although some will argue that ex-vessel, first wholesale, second wholesale, or various conbinations of these factors should be used for the impact:control cost evaluations, the fact remains that no such combination will produce a benefit:cost ratio of 1 or more. Given that all of the PSC runs examined in the RIR are based on having a penalty box program in place, this disparity cannot be simply willed away, as it was a year ago, by assuming that the trawl fleet will somehow make further adjustments to prevent closures from occurring. The projected costs to the trawl industry and the associated impacts on secondary producers, consumers, supplies, and the trade imbalance will be real -- the runs for all caps of 50% and 100% of the 12-A levels show net costs (costs to trawlers minus savings to PSC fisheries) of $48 million to $188 million.

The only combination examined that shows a positive benefit:cost relationship, and a substantial one at that, is the implementation of a penalty box system and no PSC caps (net savings of $9.8 million). In fact, for all but the 50%-of-12A-cap runs, the lion's share of any reduced impact cost comes from the penalty box system and not the associated PSC cap.

If, for whatever reason, there will be no penalty box system in place for 1991, then the only examined alternatives that make any economic sense are the two for 150% of the 12-A caps (Runs 5 and 8, with net costs of $15.9 and $6.1 million, respectively). However, Run 8 assumes 50% of the pollock catch will be taken by bottom trawl, an unlikely event. There may be other acceptable 150% options which include 75% of the pollock catch being taken in midwater trawls as well as herring savings measures, but none were analyzed in the RIR.

Sincerely,

Bert

H. A. Larkins
Executive Director

ADELAIDE • AMSTERDAM • ANCHORAGE • AUCKLAND • BOSTON • BRUSSELS • BUENOS AIRES • CHICAGO • COPENHAGEN • DUBLIN
FORT LAUDERDALE • GOTHENBERG • HAMBURG • LEWES – U.K. • LONDON • LUXEMBOURG • MADRID • MONTREAL • OSLO • PALMA DE MALLORCA
PARIS • ROME • SAN FRANCISCO • SAN JOSE – COSTA RICA • SEATTLE • STOCKHOLM • SYDNEY • TORONTO • VANCOUVER • VIENNA
WASHINGTON • WORLD PARK BASE – ANTARCTICA • ZURICH

GREENPEACE

Greenpeace USA • 4649 Sunnyside Ave N • Seattle WA 98103 • Tel (206) 632-4326
• Fax (206) 632-6122 •

September 17, 1990

Don W. Collingsworth
Chairman
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK. 99510

RE: Amendment 16a to the FMP for the Bering Sea/Aleutian Islands.

Dear Mr. Collingsworth:

On behalf of Greenpeace U.S.A., I am providing comments on the draft Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA) concerning proposed alternatives to implement herring bycatch measures in the Bering Sea/Aleutian Islands area.

As an environmental organization devoted to protection of the marine environment and its diversity of species, we are deeply concerned over the decline in herring stocks that has become evident in all areas of the Bering Sea except Norton Sound. Assertive action is clearly necessary to regulate and decrease bycatch of herring which is being caused by bottom and midwater trawl fishing in the region.

Pacific herring is a key component of the Bering Sea marine food chain and represents important prey for other fish species, such as salmonids, as well as for a number of marine mammal and seabird species.

As the draft document explains, herring has been a key prey item for Steller sea lions, northern fur seals, and spotted seals. While walleye pollock represents the primary prey for the threatened Steller sea lion population, we believe that healthy herring stocks could serve to assist stabilization and recovery of the species. Conversely, continued declines in herring stocks could exacerbate the population's already precarious situation. Moreover, it is believed that depletion of herring may be a major cause of the decline in spotted seal abundance in the Nunivak and Nelson Island areas. Discussion of these concerns should be expanded in the final EA.

Furthermore, the draft EA lacks any information on the implications of herring declines on populations of toothed

cetaceans. The EA should consider effects on species such as Dall's porpoises, sperm whales, and beaked whales. Moreover, the draft EA also neglects to consider ramifications for a range of seabird species that consume herring as prey.

In formulating its position on amendment 16a, Greenpeace supports the needs of the Central Yup'ik Eskimo of the Nelson Island area to have sufficient herring resources available for current and future utilization. The draft EA clearly substantiates the fact that herring are critically important to the traditional culture and economy of Native peoples in coastal western Alaska. These peoples will be greatly affected if herring stocks are not afforded protection.

As a result of these ecological, socioeconomic, and cultural concerns, Greenpeace cannot support any of the three alternatives listed in the EA.

Alternative 1, "do nothing - maintain the status quo," is clearly the least desirable because it is critical that action be expediently taken to actively protect herring being lost to bycatch resulting from trawl operations. Alternatives 2 and 3 clearly do not provide enough savings area to effectively protect migrating herring stocks. In addition, the range of options for setting PSC limits as percentage of total herring biomass are too wide and too open to manipulation by trawl fishing interests.

In light of the inadequacy of the listed alternatives, Greenpeace supports a modified version of Alternative 3, which provides a Prohibited Species Catch (PSC) limit, and timed area closures along the Alaska Peninsula with a larger winter savings area. We recommend that Alternative 3 be modified to increase the sizes of both winter and and summer savings areas, and to establish the herring PSC limit caught in the entire Bering Sea/Aleutian Islands area to 1% of total herring biomass.

Expansion of the winter and summer savings areas is necessary in order to effectively protect migrating herring stocks in the areas through which they migrate at various times. We recommend that the Council develop and institute expanded savings areas that are at least 20% larger than those provided in Alternative 3. In addition, the PSC limit should be mandatorily set at 1%: higher figures would allow removal of large numbers of herring during this period of dangerous decline in stock size.

For protection of the Bering Sea marine ecosystem, we encourage the Council to adopt Alternative 3 with the above modifications. Further, we request the Council staff to revise the draft EA/RIR/IRFA to address the inadequacies concerning marine mammal and seabird species that I have discussed.

Thank you for consideration of Greenpeace's comments.

Sincerely,

Alan Reichman
Special Projects,
Ocean Ecology Campaign

cc: William Fox, NMFS
John Twiss, MMC
Mike Bean, Environmental Defense Fund

INTERNATIONAL PACIFIC HALIBUT COMMISSION

ESTABLISHED BY A CONVENTION BETWEEN CANADA
AND THE UNITED STATES OF AMERICA

DIRECTOR
DONALD A. MC CALGHRAN

P.O. BOX 95009
SEATTLE, WA 98145-2009

TELEPHONE
(206) 634-1838

FAX
(206) 632-2983

SEP 17 1990

September 13, 1990

Dr. Clarence Pautzke
Executive Director
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

Dear Clarence:

The Staff of the International Halibut Commission has reviewed the EA/RIR for Amendment 16A to the Bering Sea-Aleutian Island Groundfish Management Plan. We recommend that the Council: 1) take an intermediate step in reducing the bycatch limit for halibut to 4,200 mt (round weight), 2) establish authority of the Regional Director of the NMFS-Alaska Region to close bycatch hotspots, 3) establish the authority of the RD to require up to 75 percent of pollock be harvested with mid-water trawl.

1) Establish PSC limits equal to 50%, 100%, and 150% of the Amendment 12A limits

We commend the authors of this section for their efforts with the time and information available for analysis. The discussion of impact costs, control costs, and agency costs was illuminating, and the analysis as presented does not favor raising the bycatch limits. Further, the discussion of the impact of the Olympic system on bycatch rates pointed out the flaws with current groundfish management. However, the applicability of the analysis is limited by two factors.

First is the assumption that the race for fish under the Olympic system should be the basis for analysis. As the race for fish is reduced through incentives to control bycatch or other management measures, lower bycatch rates reduce the quantity of bycatch required to harvest groundfish. The EA/RIR demonstrates the beneficial effects of even a simplified a penalty box incentive program, and the 1990 yellowfin sole fishery made excellent use of the last 60 mt of its halibut PSC limit. Costs of controlling bycatch are greatly and unnecessarily increased under a race for fish: higher bycatch rates than are necessary to harvest the groundfish result, as fishermen cannot afford reduced competitiveness to reduce bycatch rates. The Olympic system causes higher costs to the groundfish fishermen because of the race for fish, as individuals in the fleet spend more money to increase catch rates, while the fleet as a whole takes the same amount of fish in a shorter time. Reduction of operating costs without the race for fish would greatly offset costs of bycatch control. Cost-benefit analysis of bycatch control is biased in favor of groundfish fishermen under an Olympic system. Although some components of the groundfish

fleet have supported replacement of the Olympic system or supported actions to reduce effects of the race for fish, the groundfish fleet should not benefit at the expense of halibut, crab, or herring fishermen from an analysis based on inappropriate management. Further, many groundfish fishermen also fish for halibut or crab, so would directly benefit from reduced bycatch. We recommend that future economic analyses incorporate effects of management measures that blunt the results of the race for fish, such as improved incentives, allocation to cleanest gear, gear restrictions, or other actions that move toward lower bycatch for a given harvest of groundfish, to give a clearer picture of costs and benefits.

Second is the inability of the predictive model to account for actual fishery and economic performance given the complexity of the interactions among various groundfish fisheries and prohibited species. The model uses average bycatch rates from defined fisheries at monthly time steps for each management area. Data are missing from many cells, and low numbers of observations in other cells cause high variability. Actual bycatch rates (at least for halibut) are determined more by species composition of the groundfish harvest than by the time or area of harvest (Berger et al. 1989. Procedures for bycatch estimation of prohibited species in the 1989 Bering Sea domestic trawl fisheries. NOAA Tech. Memo NMFS F/NWC-173). We submit that movements to new areas after area closures will result in changes in species composition for a given defined fishery, which will change apparent bycatch rates, but not the underlying species-based rates. Actual bycatch will be more accurately estimated by a species based predictor than by fishery-time-area cells.

We have recommended in the past (for example, our letter to the Council of June 20, 1990) that performance of the foreign and joint venture fisheries of the mid 1980s should be analysed to provide target limits for the domestic fleet. The 1983-1987 average bycatch in the BS-AI was 2,800 mt, and 3,200 mt for the 1978-1987 period, far below the 5,300 mt limit of Amendment 12A. The Council gave the foreign fleets five years to reduce bycatch rates by 50 percent, a goal achieved in only three years. Had cost of bycatch control been onerous to these fleets, bycatch reductions would have been delayed as long as possible. To give the domestic fleets on opportunity to move gradually toward reasonable bycatch limits, we suggest that the Council use its mortality goal of 4,000 mt as the basis for the Amendment 16A limit. The BS-AI team and the IPHC use a 100 percent mortality rate assumption for bottom trawls. Observer data, however, is likely to show lower mortality. As an interim step pending analysis of mortality by the Team, a 95 percent mortality rate would provide for a 4,200 mt bycatch limit. Application of a mortality-based accounting system (through the next amendment cycle) in the BS-AI would provide incentives to groundfish fishermen to reduce mortality rates.

2) Authorize the Alaska Regional Director the authority to close bycatch hotspots

The species-based bycatch rate predictor (Berger et al. 1989) suggests that hotspots incorporating an entire management area are unlikely to occur, and the EA/RIR suggests that observer data may not be detailed enough to subdivide management areas. However, new time-area combinations for fisheries may occur, such as the 1989 turbot fishery, with high bycatch rates that will justify short term closures. We support this alternative to increase flexibility of the RD.

3) Authorize the Alaska Regional Director the authority to require up to 75% of the pollock TAC be taken with midwater trawl

The species-based bycatch rate predictor (Berger et al. 1989) suggests that the bycatch associated with bottom trawl pollock will change only slightly with time and area. The highly variable rates used in the month-area cells of the bycatch prediction model may mask the actual relationship. If the full quantity of pollock allotted to bottom trawl is taken, then the lower the bottom trawl allotment, the lower the halibut bycatch. Therefore, we support this alternative to increase the flexibility of the RD to address bycatch control.

Thank you for the opportunity to comment on these amendment alternatives. A member of our Staff will be available at the Council meeting should questions arise about our response.

Sincerely yours,

Donald A. McCaughran
Director

cc. Commissioners

CATCH AND BYCATCH TRADEOFFS

WITH A 1 METRIC TON REDUCTION IN RETAINED COD CATCH

ASSUMPTIONS

	Exvessel Price ($/lb.)	Wholesale Price ($/lb.)	Product Recovery Rate
Cod	0.15	2.00	.20
Halibut	1.51 (dressed)	2.50	1.0
Red King Crab	5.00	10.00	0.65
C. bairdi Tanner crab	2.20	4.30	0.66

	Bycatch/mt	Foregone Catch
Halibut	0.0118 mt	3,530 lb./mt halibut
Red King Crab	0.9 crab	4,200 lb./1000 crab
C. bairdi Tanner crab	4.6 crab	1,000 lb./1000 crab

ESTIMATED EFFECTS:

1 mt reduction in retained cod catch

	Landed Weight (lb.)	Ex-vessel value ($)	Product Weight (lb.)	Wholesale Value ($)
Halibut (dressed)	31	47	31	77.5
Red King Crab	3.8	19	2.5	25
C. bairdi Tanner crab	4.6	10	3	6.60
Halibut & Crab	39.4	76	36.5	109.10
Cod (decrease)	(2,205)	(330)	(440)	(880)

Table 1. Evaluation of Halibut and Crab PSC Limits.

	RUN 2 No PSC Caps Penalty Box 75% MW Pol.	RUN 3 50% Caps Penalty Box 75% MW Pol.	RUN 4 100% Caps Penalty Box 75% MW Pol.	RUN 5 150% Caps Penalty Box 75% MW Pol.
BYCATCH AMOUNTS				
Halibut (mt)	6,493	2,737	5,170	6,493
Herring (mt)	3,791	3,073	3,471	3,791
Red king crab (no.)	131,161	66,512	111,980	131,161
C. bairdi (no.)	1,950,597	1,128,217	1,757,432	1,950,597
GROUNDFISH CATCH (mt)				
Atka Mackerel Trawls	26,270	26,270	26,270	26,270
Pollock Bottom Trawls	299,288	55,970	176,388	299,288
Deepwater Flatfish Trawls	15,858	4,990	16,874	15,858
Flatfish Bottom Trawls	26,213	7,007	39,864	26,213
JV Flatfish Bottom Trawls	287,979	188,954	294,920	287,979
Midwater Pollock Trawls	862,854	862,854	862,854	862,854
Other Bottom Trawls	234,202	84,366	200,112	234,202
Rock Sole Bottom Trawls	117,657	28,178	111,414	117,657
All Fishery-Gear Groups	1,870,321	1,258,589	1,728,696	1,870,321
BYCATCH IMPACT COSTS ($1,000s)				
Halibut	$21,427	$9,032	$17,061	$21,427
Herring	$2,149	$1,742	$1,968	$2,149
Red king crab	$2,308	$1,171	$1,971	$2,308
C. bairdi	$3,648	$2,110	$3,286	$3,648
TOTAL:	$29,532	$14,055	$24,286	$29,532
GROSS REVENUE ($1,000s)				
DAP	$1,139,810	$733,669	$1,025,727	$1,139,810
JVP	$43,773	$28,721	$44,828	$43,773
TOTAL:	$1,183,583	$762,390	$1,070,555	$1,183,583
NET REVENUE = GROSS REVENUE - VARIABLE COST ($1,000)	$584,946	$375,337	$529,842	$584,946
NET REVENUE - BYCSTCH IMPACT COST ($1,000)	$555,414	$361,282	$505,556	$555,414

Table 2. Evaluation of Herring Options.

	RUN 4 100% Caps Penalty Box 75% MW Pot.	RUN 9 100% Caps Penalty Box 75% MW Pol. 1% Herring	RUN 10 100% Caps Penalty Box 75% MW Pol. 2% Herring	RUN 11 100% Caps Penalty Box 75% MW Pol. 4% Herring	RUN 12 100% Caps Penalty Box 75% MW Pol. 8% Herring	RUN 15 100% Caps Penalty Box 75% MW Pol. 1% Herring	RUN 16 100% Caps Penalty Box 75% MW Pol. 2% Herring	RUN 17 100% Caps Penalty Box 75% MW Pol. 4% Herring
BYCATCH AMOUNTS		Winter-B	Winter-B	Winter-B	Winter-B	Winter-C	Winter-C	Winter-C
Halibut (mt)	5,170	5,176	5,170	5,170	5,170	5,180	5,173	5,173
Herring (mt)	3,471	2,857	3,314	3,494	3,471	2,604	3,061	3,240
Red king crab (no.)	111,980	111,792	111,792	111,980	111,980	111,792	111,792	111,980
C. bairdi (no.)	1,757,432	1,756,803	1,756,352	1,757,380	1,757,432	1,756,877	1,756,426	1,757,458
GROUNDFISH CATCH (mt)								
Atka Mackerel Trawls	26,270	26,270	26,270	26,270	26,270	26,270	26,270	26,270
Pollock Bottom Trawls	176,388	176,388	176,388	176,388	176,388	176,388	176,388	176,388
Deepwater Flatfish Trawls	16,874	16,874	16,874	16,874	16,874	16,874	16,874	16,874
Flatfish Bottom Trawls	39,864	39,652	39,652	39,864	39,864	39,652	39,652	39,864
JV Flatfish Bottom Trawls	294,920	294,920	294,920	294,920	294,920	294,920	294,920	294,920
Midwater Pollock Trawls	862,854	862,752	862,854	862,700	862,854	862,752	862,854	862,690
Other Bottom Trawls	200,112	200,112	200,112	200,112	200,112	200,112	200,112	200,112
Rock Sole Bottom Trawls	111,414	111,414	111,414	111,414	111,414	111,414	111,414	111,414
All Fishery-Gear Groups	1,728,696	1,728,382	1,728,484	1,728,542	1,728,696	1,728,382	1,728,484	1,728,532
BYCATCH IMPACT COSTS ($1,000s)								
Halibut	$17,061	$17,081	$17,061	$17,061	$17,061	$17,094	$17,071	$17,071
Herring	$1,968	$1,620	$1,879	$1,981	$1,968	$1,476	$1,735	$1,837
Red king crab	$1,971	$1,968	$1,968	$1,971	$1,971	$1,968	$1,968	$1,971
C. bairdi	$3,286	$3,285	$3,284	$3,286	$3,286	$3,285	$3,285	$3,286
TOTAL:	$24,286	$23,953	$24,192	$24,299	$24,286	$23,823	$24,058	$24,165
GROSS REVENUE ($1,000s)								
DAP	$1,025,727	$1,025,496	$1,025,563	$1,025,626	$1,025,727	$1,025,496	$1,025,563	$1,025,619
JVP	$44,828	$44,828	$44,828	$44,828	$44,828	$44,828	$44,828	$44,828
TOTAL:	$1,070,555	$1,070,324	$1,070,391	$1,070,453	$1,070,555	$1,070,324	$1,070,391	$1,070,447
NET REVENUE = GROSS REVENUE - VARIABLE COST ($1,000)	$529,842	$529,729	$529,762	$529,793	$529,842	$520,729	$529,762	$529,789
NET REVENUE - BYCSTCH IMPACT COST ($1,000)	$505,556	$505,776	$505,570	$505,494	$505,556	$496,906	$505,704	$505,624

Table 3. Evaluation of Pollock Apportionments.

	RUN 2 No PSC Caps Penalty Box 75% MW Pot.	RUN 2a No PSC Caps Penalty Box 50% MW Pol.	RUN 3 50% Caps Penalty Box 75% MW Pol.	RUN 6 50% Caps Penalty Box 50% MW Pol.	RUN 4 100% Caps Penalty Box 75% MW Pol.	RUN 7 100% Caps Penalty Box 50% MW Pol.	RUN 5 150% Caps Penalty Box 75% MW Pol.	RUN 8 150% Caps Penalty Box 50% MW Pol.
BYCATCH AMOUNTS								
Halibut (mt)	6,493	6,945	2,737	2,657	5,170	5,347	6,493	6,862
Herring (mt)	3,791	2,962	3,073	2,052	3,471	2,513	3,791	2,969
Red king crab (no.)	131,161	131,816	66,512	65,731	111,980	112,463	131,161	122,162
C. bairdi (no.)	1,950,597	2,063,194	1,128,217	1,158,525	1,757,432	1,505,740	1,950,597	2,076,350
GROUNDFISH CATCH (mt)								
Atka Mackerel Trawls	26,270	26,270	26,270	26,270	26,270	26,270	26,270	26,270
Pollock Bottom Trawls	299,288	666,314	55,970	110,440	176,388	352,739	299,288	644,893
Deepwater Flatfish Trawls	15,858	13,825	4,990	4,587	16,874	9,947	15,858	13,643
Flatfish Bottom Trawls	26,213	18,766	7,007	13,531	39,864	20,093	26,213	18,766
JV Flatfish Bottom Trawls	287,979	287,979	188,954	172,882	294,920	265,767	287,979	289,988
Midwater Pollock Trawls	862,854	556,879	862,854	556,879	862,854	556,879	862,854	556,879
Other Bottom Trawls	234,202	205,350	84,366	74,677	200,112	179,979	234,202	205,350
Rock Sole Bottom Trawls	117,657	116,069	28,178	29,556	111,414	104,750	117,657	116,069
All Fishery-Gear Groups	1,870,321	1,891,452	1,258,589	988,822	1,728,696	1,516,424	1,870,321	1,871,858
BYCATCH IMPACT COSTS ($1,000s)								
Halibut	$21,427	$22,919	$9,032	$8,768	$17,061	$17,645	$21,427	$22,645
Herring	$2,149	$1,679	$1,742	$1,163	$1,968	$1,425	$2,149	$1,683
Red king crab	$2,308	$2,320	$1,171	$1,157	$1,971	$1,979	$2,308	$2,150
C. bairdi	$3,648	$3,858	$2,110	$2,166	$3,286	$2,816	$3,648	$3,883
TOTAL:	$29,532	$30,776	$14,055	$13,255	$24,286	$23,865	$29,532	$30,361
GROSS REVENUE ($1,000s)								
DAP	$1,139,810	$1,189,275	$733,669	$571,882	$1,025,727	$912,908	$1,139,810	$1,172,401
JVP	$43,773	$43,773	$28,721	$26,278	$44,828	$40,397	$43,773	$44,078
TOTAL:	$1,183,583	$1,233.048	$762,390	598,160	$1,070,555	953,304	$1,183,583	$1,216,479
NET REVENUE = GROSS REVENUE - VARIABLE COST ($1,000)	$584,946	$608,624	$375,337	$294,707	$529,842	$470,403	$584,946	$600,456
NET REVENUE - BYCSTCH IMPACT COST ($1,000)	$555,414	$577,848	$361,282	$281,452	$505,556	$446,538	$555,414	$570,095

Bill Orr
D-4a

P Cod

WEEK ENDING	WKLY CATCH	TOTAL CATCH	QUOTA PLUS RESERVE	% TAKEN	EST. WEEKS REMAINING
6-Jan	1,246	1,246	221,893	0.56	
13-Jan	3,081	4,327	217,566	1.95	
20-Jan	3,108	7,435	214,458	3.36	87
27-Jan	3,881	11,316	210,577	5.11	63
2-Feb	4,299	15,615	206,278	7.05	55
10-Feb	5,934	21,549	200,344	9.73	45
17-Feb	10,978	32,527	189,366	14.69	27
24-Feb	2,374	34,901	186,992	15.77	29
3-Mar	8,542	43,443	178,450	19.62	24
10-Mar	7,437	50,880	171,013	22.98	28
17-Mar	5,966	56,846	165,047	25.68	23
24-Mar	5,063	61,909	159,984	27.97	26
31-Mar	3,894	65,803	156,090	29.72	31
7-Apr	3,359	69,162	152,731	31.24	37
14-Apr	5,701	74,863	147,030	33.82	34
21-Apr	6,664	81,527	140,366	36.83	27
28-Apr	3,473	85,000	136,893	38.40	26
5-May	4,611	89,611	132,282	40.48	27
12-May	4,289	93,900	127,993	42.42	31
19-May	4,195	98,095	123,798	44.31	28
26-May	3,269	101,364	120,529	45.79	31
2-Jun	3,728	105,092	116,801	47.47	31
9-Jun	3,371	108,463	113,430	49.00	33
16-Jun	4,477	112,940	108,953	51.02	28
23-Jun	4,221	117,161	104,732	52.92	26
30-Jun	2,815	119,976	101,917	54.20	27
7-Jul	1,667	121,643	100,250	54.95	35
14-Jul	2,337	123,980	97,913	56.00	43
21-Jul	1,713	125,693	96,200	56.78	50
28-Jul	1,654	127,347	94,546	57.53	50
4-Aug	2,077	129,424	92,469	58.46	51
11-Aug	2,132	131,556	90,337	59.43	46
18-Aug	1,868	133,424	88,469	60.27	44
25-Aug	1,708	135,132	86,761	61.04	46

NOTES:

1. Estimated weeks remaining is derived by dividing the remaining quota by the average weekly catch for the latest three weeks

2. Prior to the June 30 bottom trawl closure, cod was being taken at 4614 mt per week.
After the closure, cod has been harvested at 1,895 mt per week

3. At the harvest rate experienced before the bottom trawl closure, about 4614 mt of cod (1 weeks catch) would have remained at years end. With the rate experienced after the closure, approximately 53,060 (28 weeks catch) will remain unharvested at years end.

4. Assuming a $0.70/lb FOB Alaska price for H&G cod and a 63% recovery rate, the closure reduced revenues from the fishery by $51,595,809.30

Assuming a $2.00/lb FOB Alaska price for cod fillets and a 25% recovery rate the closure reduced revenues from the fishery by $58,498,650.00

Assuming a 50-50 split between H&G and fillet production, the closure reduced revenues in the fishery by $55,047,229.65

AD HOC BYCATCH COMMITTEE

Draft Minutes

September 24, 1990 Meeting
Sheraton Hotel, Anchorage

Committee Chair Larry Cotter convened the meeting at 10:40 a.m. on Monday, September 24, 1990. Other Council members present included Mark Pedersen, Wally Pereyra, Bob Alverson, Henry Mitchell, Ken Parker, and Steve Pennoyer.

Review of September 6-7, 1990 Draft Minutes

The Committee reviewed the September 6-7 minutes and made several slight modifications.

1991 Penalty Box Program

Steve Pennoyer reviewed the status of the proposed 1991 Penalty Box Program and presented the Committee with a letter (attached) detailing NMFS' concerns with the program as proposed and their recommended solution. After considerable discussion, the Committee decided to recommend to the Council adoption of the NMFS recommendations. In doing so, however, the Committee expresses its concern with the impact uncontrolled dirty fishing may have on otherwise clean fisheries in the absence of a comprehensive penalty box program or clean fishing incentives.

Legal Issues

NOAA GC Lisa Lindemann responded to two questions posed at the September 6-7 meeting:

1. Does the Council have the legal authority to require salmon PSC be retained and sold with the proceeds going to the federal government?

She reported that the Council does have the authority to require retention of prohibited species, and can require the proceeds of sale to revert to the government. However, she cautioned the approach used by the Council to implement the required sale and subsequent transfer of funds might cause various approaches to be more practical than others. The Committee will pursue alternative approaches at later meetings.

2. Can the Council charge fees for the capture of bycatch species?

Consistent with earlier comments from NOAA General Counsel, Lisa Lindemann said the Magnuson Act does not provide the Council with that authority.

Additions to Amendment 17 Bycatch Package

1. Inshore-offshore Bycatch Allocations: The Committee added a provision to the halibut, king crab, and C. bairdi Tanner crab alternatives to allow the Council to apportion PSC between inshore and offshore components for those species which may be allocated to the two groups. The apportionment would be accomplished the same as other PSC allocations among gear groups and fisheries. The Committee noted the apportionment must be fair and equitable.

2. Pelagic Trawl Apportionment: The Committee recognized there are three types of trawls: bottom, bottom pelagic, and mid-water pelagic trawls. The Committee added an alternative which would allow the Regional Director to prohibit the use of the bottom trawl or bottom pelagic trawl in certain fisheries once a certain level of PSC bycatch in a pelagic fishery had been reached.

De Minimus Gear Proposal

The Committee discussed the de minimus gear plan amendment proposal (#26) submitted by AFTA. The Committee recognizes the need to identify gear which results in a de minimus bycatch mortality, and believes the review of bycatch impacts, by fishery, contained in the analysis will accomplish this.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

September 21, 1990

Clarence Pautzke, Executive Director
North Pacific Fishery Management Council
605 West 4th Avenue
Anchorage, AK 99501

RE: NMFS recommendations for 1991 "penalty box" program

Dear Clarence:

The Council adopted the penalty box program at its June meeting to provide an incentive to vessels to avoid fishing practices that result in excessive bycatch rates of prohibited species. The penalty box, as originally proposed by NMFS, was limited in scope and intent in recognition of the technical, data, personnel and possible funding constraints that implementation of a vessel incentive program could entail. NMFS' proposal received general support, but was greatly expanded to accommodate the Advisory Panel's recommendation for a more comprehensive program that could limit excessive bycatch rates of prohibited species in 18 different fisheries in the Bering Sea/Aleutians area (BSAI) and Gulf of Alaska (GOA).

At the June meeting, NMFS staff testified that various elements of the proposed penalty box program need further analysis and that staff would provide results of these analyses to the Council at the September meeting. The Council could then use the information presented as a basis for comment to the Secretary on recommended revisions to the portion of the proposed rule for Amendments 16/21 that would implement the penalty box for the 1991 fishing year. The following discussion presents a summary of NMFS' findings with respect to the proposed penalty box program and alternatives to address weaknesses of the proposed program. The Council must provide guidance to NMFS on whether it wishes to proceed with the implementation of a 1991 vessel incentive program within the constraints identified below.

1. <u>Verification of observer data will not be timely enough for inseason enforcement of incentive programs</u>

The proposed penalty box program is based solely upon observer data to generate fleet and vessel bycatch rates. Observer data cannot be used to take action against an individual vessel until the observer has been debriefed and the data are verified to be as accurate as possible. The existing time period necessary to achieve a verified database may be up to 6 months. Such a time lag prohibits NMFS from taking immediate inseason action against individual vessels, although action could be taken against vessels once NMFS is satisfied that the observer data used as a basis for such action are as accurate as possible. The

Council must expect a delay from the time a vessel violates an acceptable bycatch performance standard until the vessel is penalized.

2. Basing acceptable performance standards on a moving fleet average would not be statistically valid.

Under the proposed penalty box program, a vessel's average bycatch rate in a fishery over the past four week period would be judged against the concurrent fleet average. Under the proposed rule, action would be taken against the vessel if its bycatch rate were found to be more than two times the fleet average.

As mentioned above, determinations of actual performance standards would be hampered by the time lag needed to obtain a verified observer database. Furthermore, initial analyses of fleet bycatch rates indicate that so much variation exists within a fishery that statistically proving that a single vessel's bycatch rate differs significantly from the average rate calculated for that fishery would be difficult. This problem would be aggravated to the extent that definitions for different fisheries proposed for the 1991 penalty box program are based on species composition of catch that may not truly reflect intrinsic bycatch rates of target operations.

Given the above findings, we advise that fixed average rates observed during the 1990 DAP fisheries and the historical JVP flatfish fisheries be used as a basis for acceptable performance standards in 1991. This procedure would allow vessel operators to know what specific acceptable bycatch rates exist in a fishery so that they may more readily adjust fishing practices if daily observer data indicate vessel rates are in excess of established performance standards. Further analyses of the observer database will need to be completed before NMFS is able to determine the extent of seasonal differences in fishery bycatch rates, variance allowances around fishery bycatch rates and recommend performance standards within these allowances.

3. Penalties based on vessel suspensions would be ineffective.

The time lag required to achieve a verified observer database undermines the use of vessel suspensions as an effective penalty to vessels judged to have exceeded acceptable bycatch performance standards. The ineffectiveness of vessel suspensions could result from a number of situations: vessel operators and\or owners may be issued a suspension notice after a vessel operator has left the vessel; areas maybe closed due to the attainment of a groundfish quota or bycatch allowance; or the vessel owner may elect to use a suspension period as part of his routine maintenance schedule.

We recommend, therefore, that a vessel's failure to meet acceptable bycatch performance standards be considered a violation of regulations under Section 307 of the Magnuson Act. As such, possible action against the vessel include a warning, civil penalty of up to $25,000 for each violation, permit sanction, or even vessel forfeiture. Such actions could be effectively levied against a vessel operator or owner months after the vessel had been preliminary warned of excessive rates.

4. Monitoring vessels within numerous target fishery categories is not feasible for 1991.

The penalty box program adopted by the Council would require that halibut, red king crab, and C. bairdi Tanner crab bycatch rates be monitored for individual vessels in 10 different BSAI fisheries and that halibut bycatch rates be monitored in 8 different GOA fisheries. The proposed rule to implement the penalty box program limited the 1991 penalty box program to halibut bycatch only due to concerns about NMFS' ability to monitor so many fishery categories.

Technical, administrative, data and possible budget constraints require that the initial implementation of a penalty box approach for 1991 bycatch management be further limited. This action would assure that the initial program would be implemented and administered as successfully as possible and would provide a solid basis for future consideration of more complex incentive programs. It is NMFS' position, therefore that the 1991 vessel incentive program should only be applied to the highest priority fisheries that require bycatch control. We assess these fisheries to be the DAP flatfish fishery, JVP flatfish fishery, and the DAP trawl fishery for Pacific cod.

5. Additional analyses and public review will be required.

NMFS cannot promulgate regulations to implement the incentive program proposed under Amendment 16/21. We believe, however, that an incentive program developed within the constraints discussed above is feasible for 1991.

The most effective means to ensure timely implementation of a 1991 incentive program will require that the Secretary disapprove that portion of Amendment 16/21 that would authorize the implementation of an incentive program. The Council may then submit a revised amendment accompanied by appropriately revised proposed regulations to the Secretary. After the Secretary receives the revised amendment, he must approve\disapprove the amendment within 60 days and promulgate implementing regulations within 75 days. Given this schedule, a revised incentive program could be implemented in April, 1991. This schedule of events will require the following action by the Council:

- September 1990 meeting: Council receives notice of partial disapproval of Amendment 16/21 from the Regional Director and directs staff to prepare a revised amendment package and proposed rulemaking.

- December or January meeting: Council and public review of draft amendment analysis and proposed rule. Pending public comment received at the meeting, Council directs staff to make necessary changes to analysis and/or proposed rule and requests that the revised amendment package be submitted to the Secretary for 60-day review.

- Revised amendment and implementing rule become effective 75 days after being received by the Secretary (early to mid April effective date).

The NMFS shares the Council's frustration in striving to develop and implement bycatch management measures. We remain committed to the concept that a vessel incentive program is the only way to effectively limit prohibited species bycatch rates and maximize groundfish harvests under prohibited species catch limitations. We also recognize, however, that a vessel incentive program must be developed within the operational and administrative constraints of NMFS to implement such a program.

Sincerely,

Steven Pennoyer

Steven Pennoyer,
Director, Alaska Region

CHANGES TO THE BYCATCH MODEL

1. The model was expanded to simultaneously consider management options to control crab, halibut, and herring bycatch.

2. The number of fisheries defined in the model was increased.

3. Weekly time steps were substituted for monthly or quarterly time steps.

4. Preseason allocations of TAC's are no longer made (matrix inversion). Now, fisheries are closed when TAC's and PSC's are reached. These closures determine the allocation of TAC's among fisheries.

5. The programming language was changed from Excel to SAS.

BASIC ASSUMPTIONS

1. The bycatch rate for each fishery, area, and month is constant. That is, fishermen do not respond to an anticipated closure in a way that will change a specific bycatch rate.

2. Bycatch impact cost equal discounted foregone exvessel value.

3. Reductions in trawl catch will not be offset by increased fixed gear catch.

4. All groundfish catch contribute to groundfish revenue. The gross revenue per metric ton of catch is $152 for JVs, $660 for mid-water pollock, $1,639 for the deep water turbot/sablefish, and $774 for other bottom trawl catch.

CORRECTIONS TO THE BYCATCH MODEL (SINCE AUGUST PUBLIC REVIEW DOCUMENT)

1. The mapping from quarterly to monthly data was corrected.

2. The apportionment of Tanner crab PSC limits among fisheries was corrected.

3. The unconstrained run for the runs with increased bottom trawl pollock catch was corrected.

4. The estimates of bycatch impact cost per crab were increased to reflect lower natural mortality rates.

CHANGES IN NET GROUNDFISH WHOLESALE VALUE VERSUS CHANGES IN GROSS EXVESSEL VALUE OF CRAB, HALIBUT, AND HERRING

1. The estimates of bycatch impact cost used in the analysis of Amendments 12a, 16, and 16a have been based on foregone gross exvessel value.

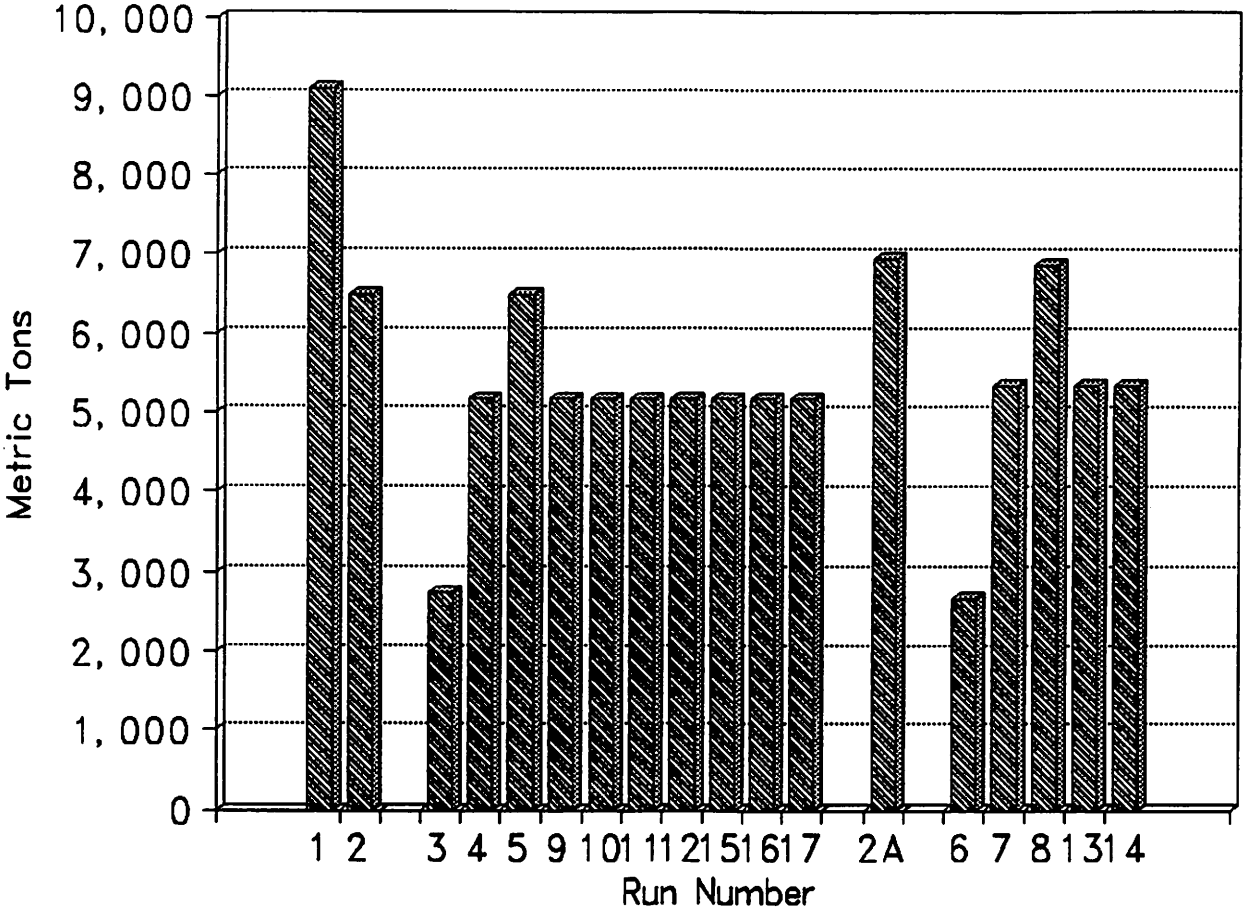
2. It has been demonstrated that this tends to overstate the actual bycatch impact costs to those who benefit from the commercial harvest of crab, halibut, or herring.

3. The cost information necessary to estimate bycatch impact cost in terms of foregone net wholesale value was not collected.

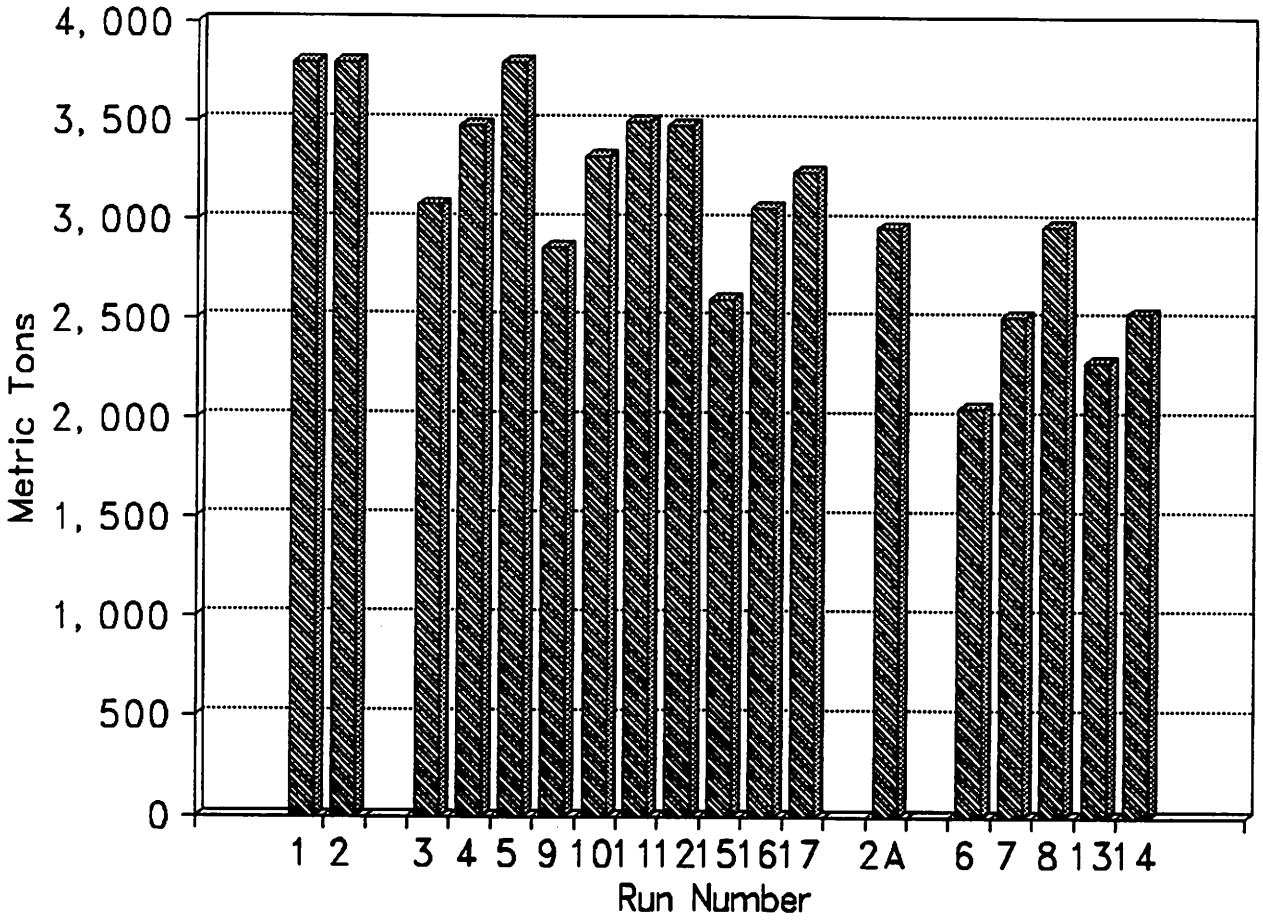
4. The tendency for foregone exvessel value to overstate bycatch impact costs has not changed the conclusions that can be drawn from the model's estimates.

5. Efforts are underway to collect the information necessary to measure bycatch impact costs in terms of foregone net wholesale value.

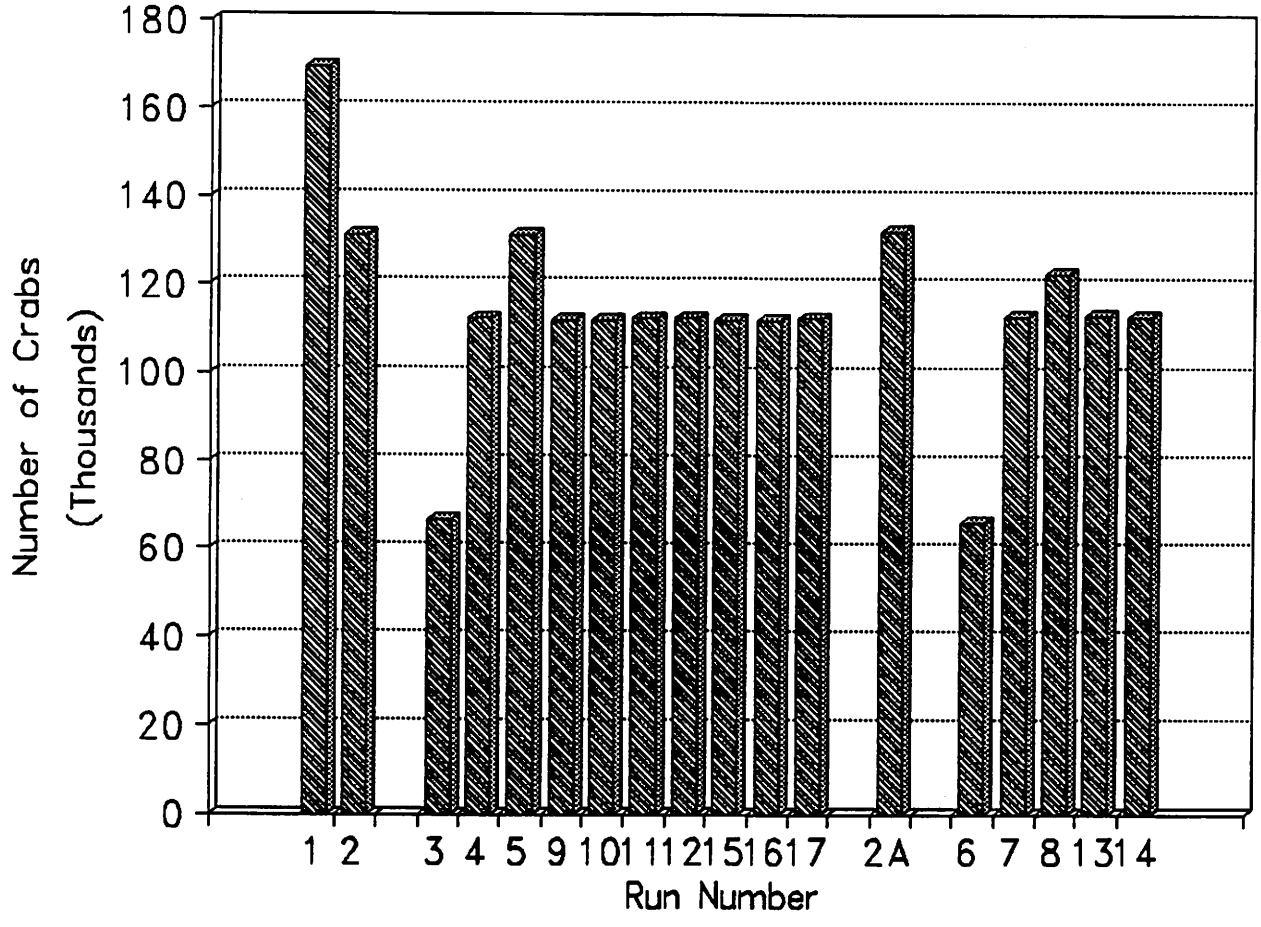
Halibut Bycatch Under Alternatives



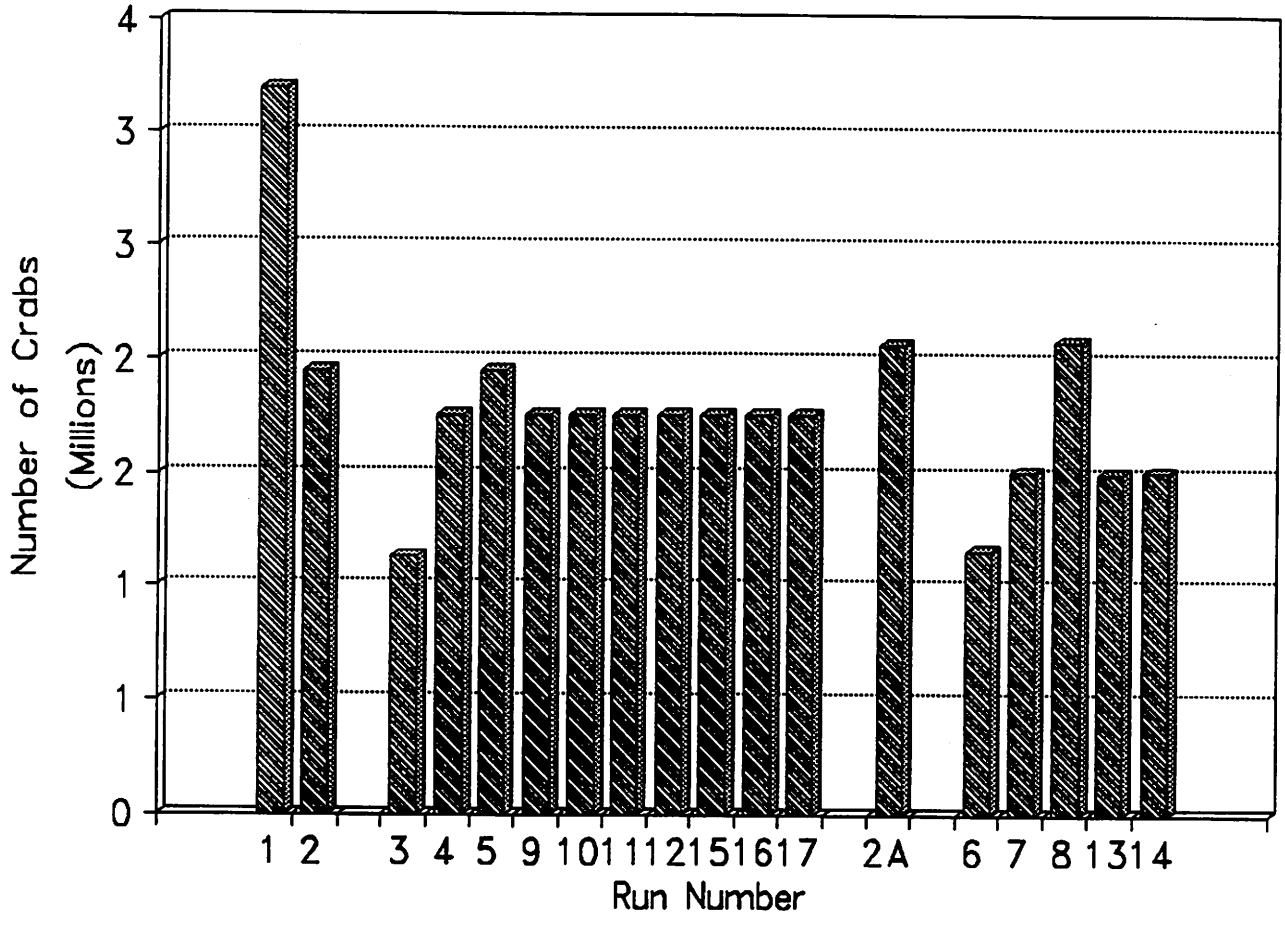
Herring Bycatch Under Alternatives



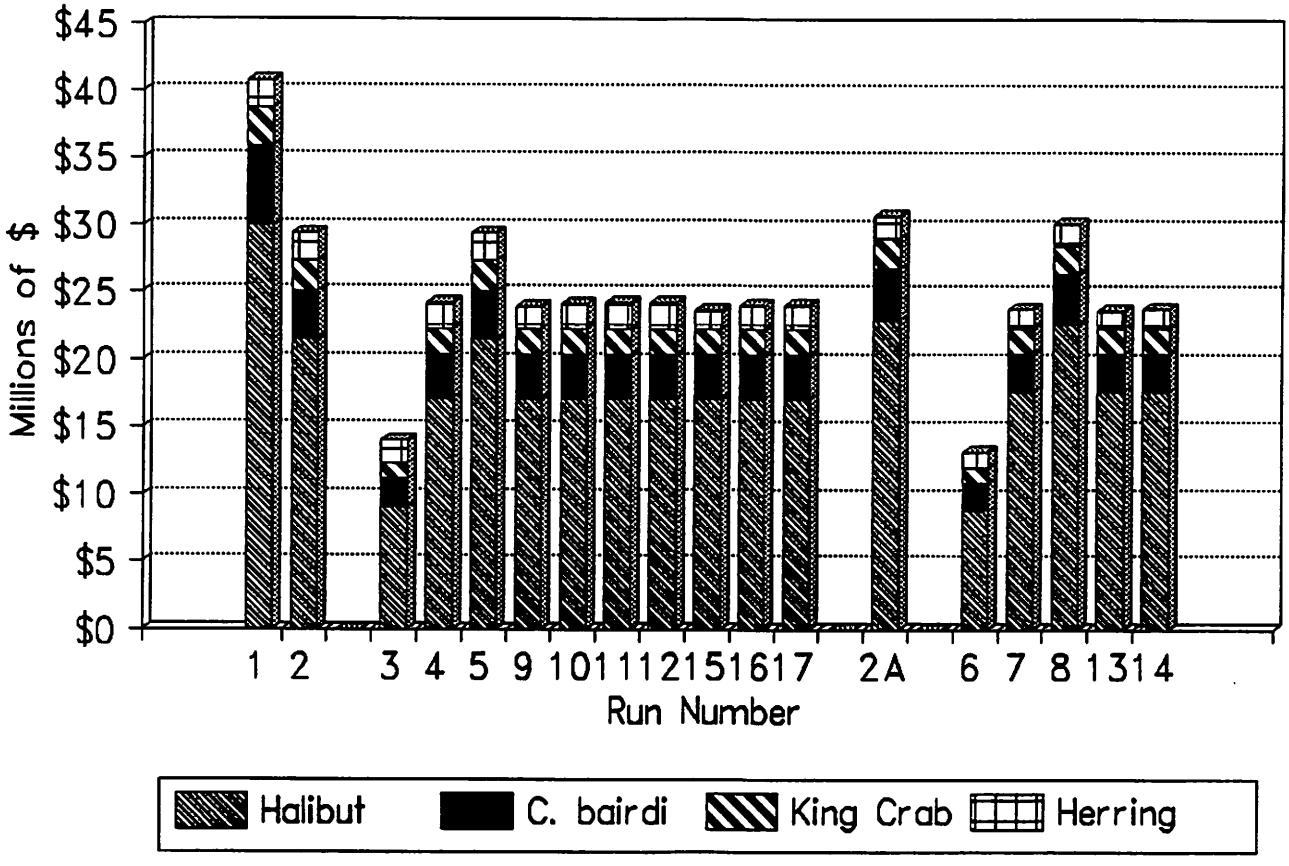
King Crab Bycatch Under Alternatives



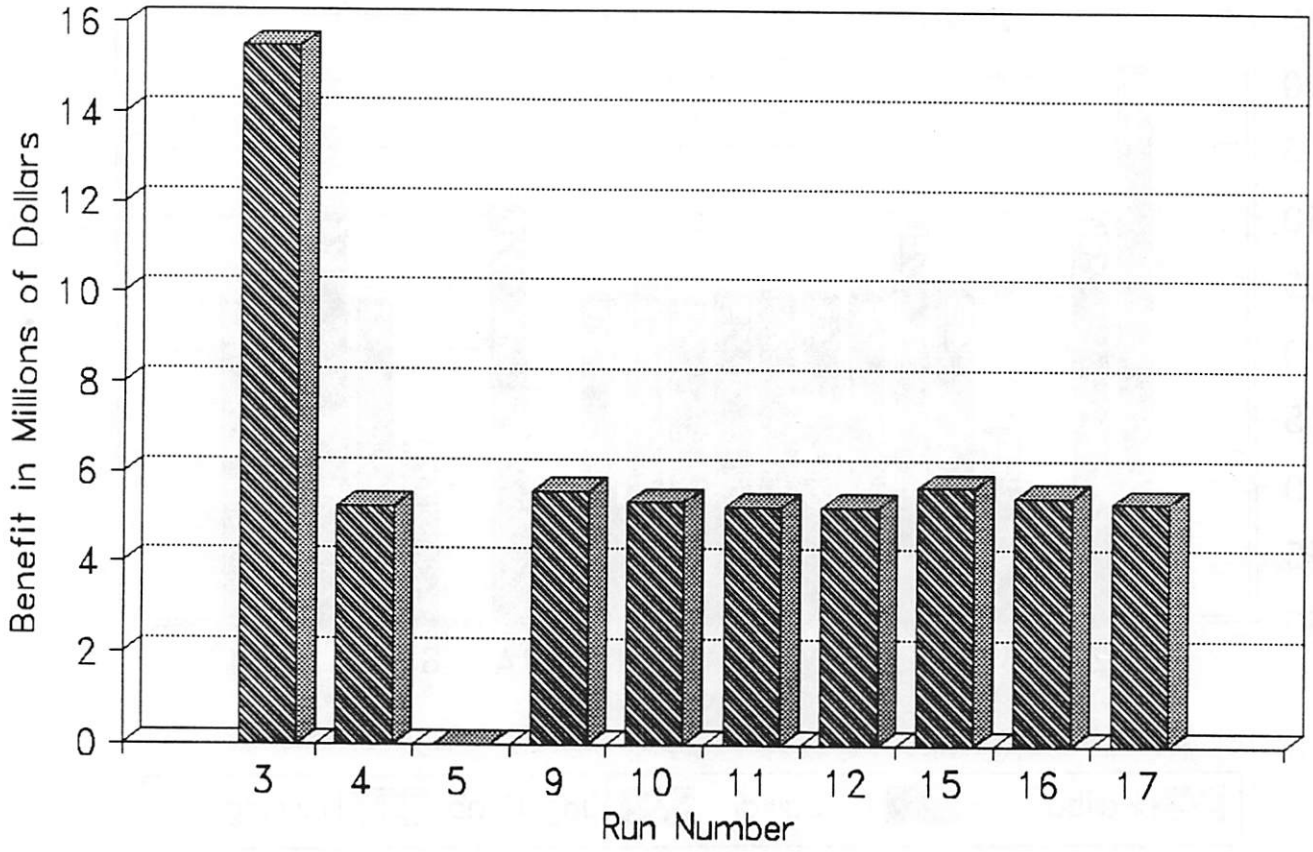
C. bairdi Bycatch Under Alternatives



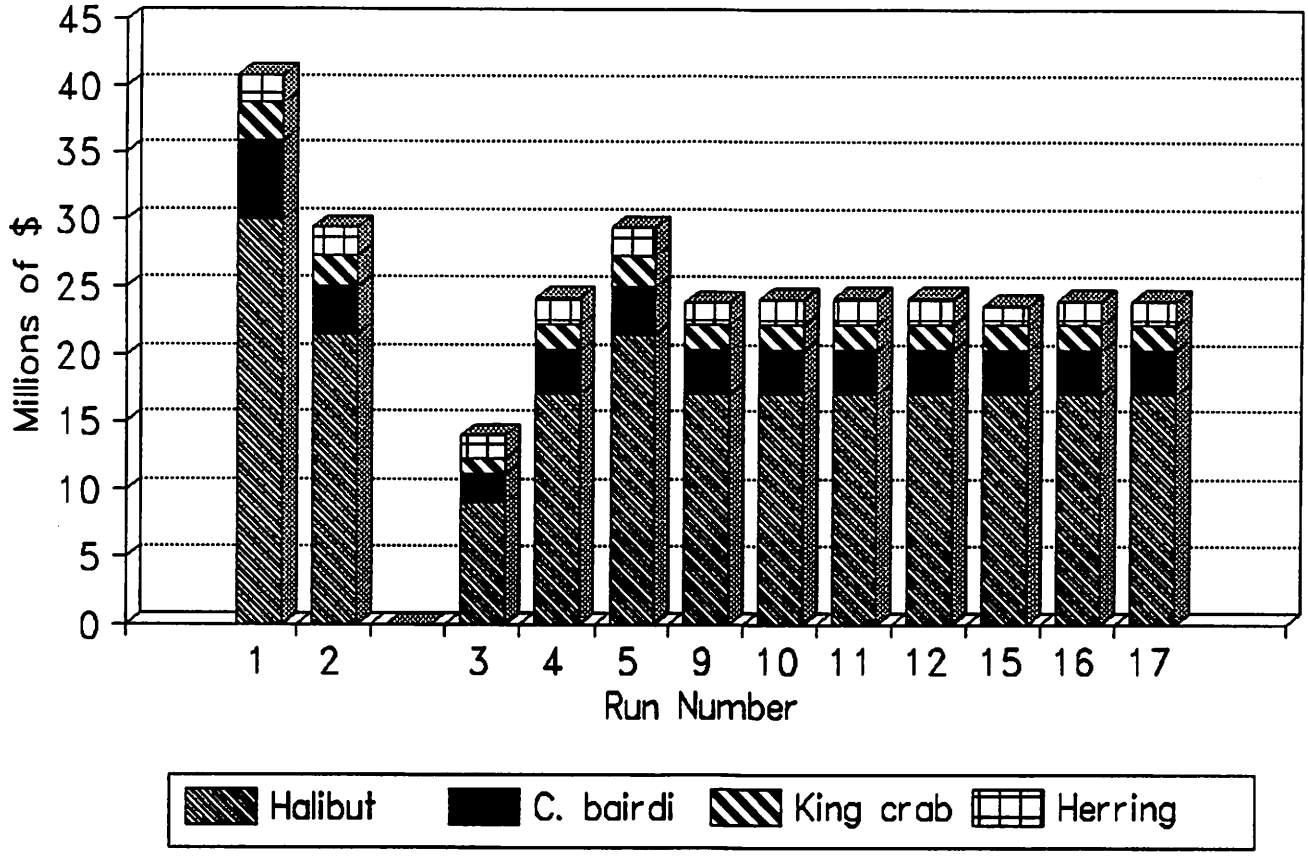
Bycatch Impact Costs
Under Alternatives 1–17



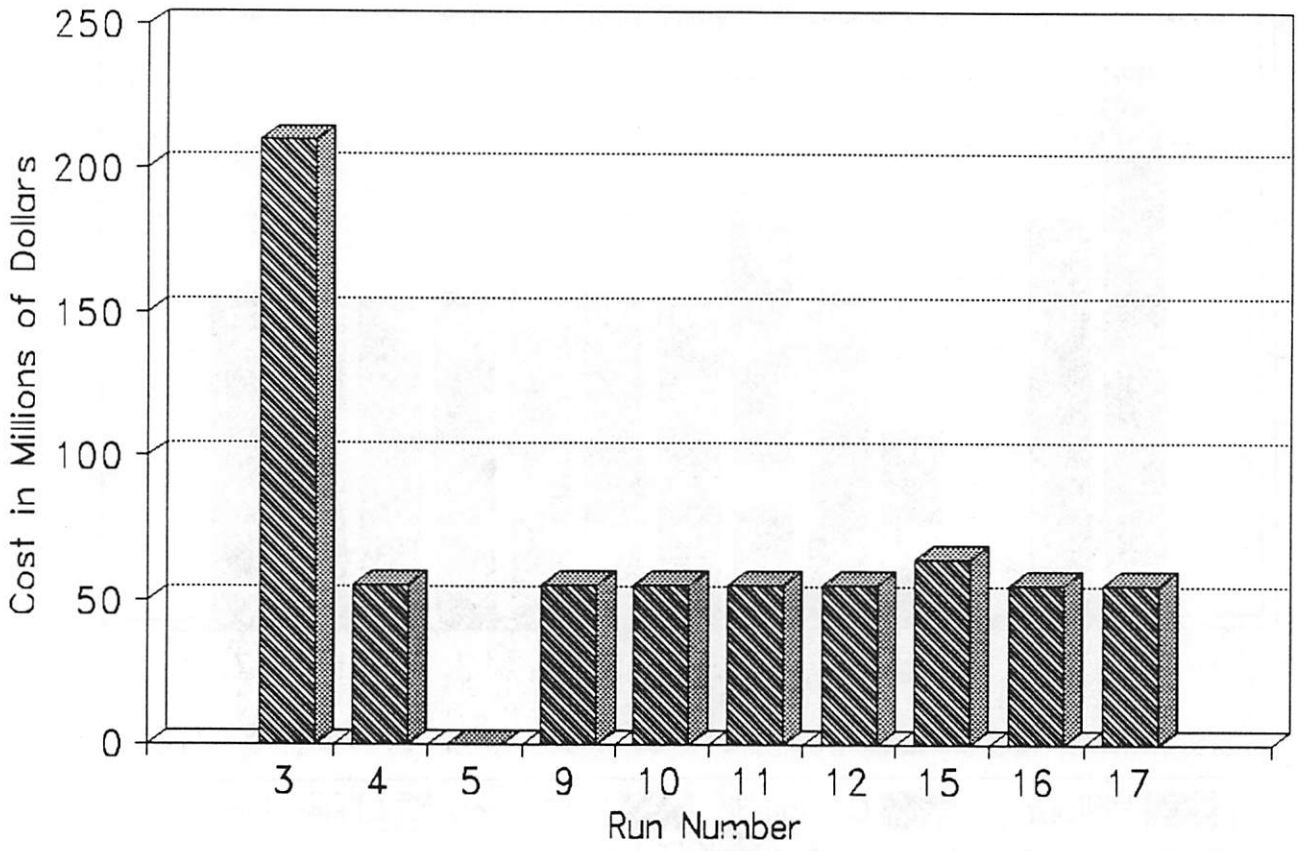
Reduction in Bycatch Impact Cost
(Compared to Run 2)



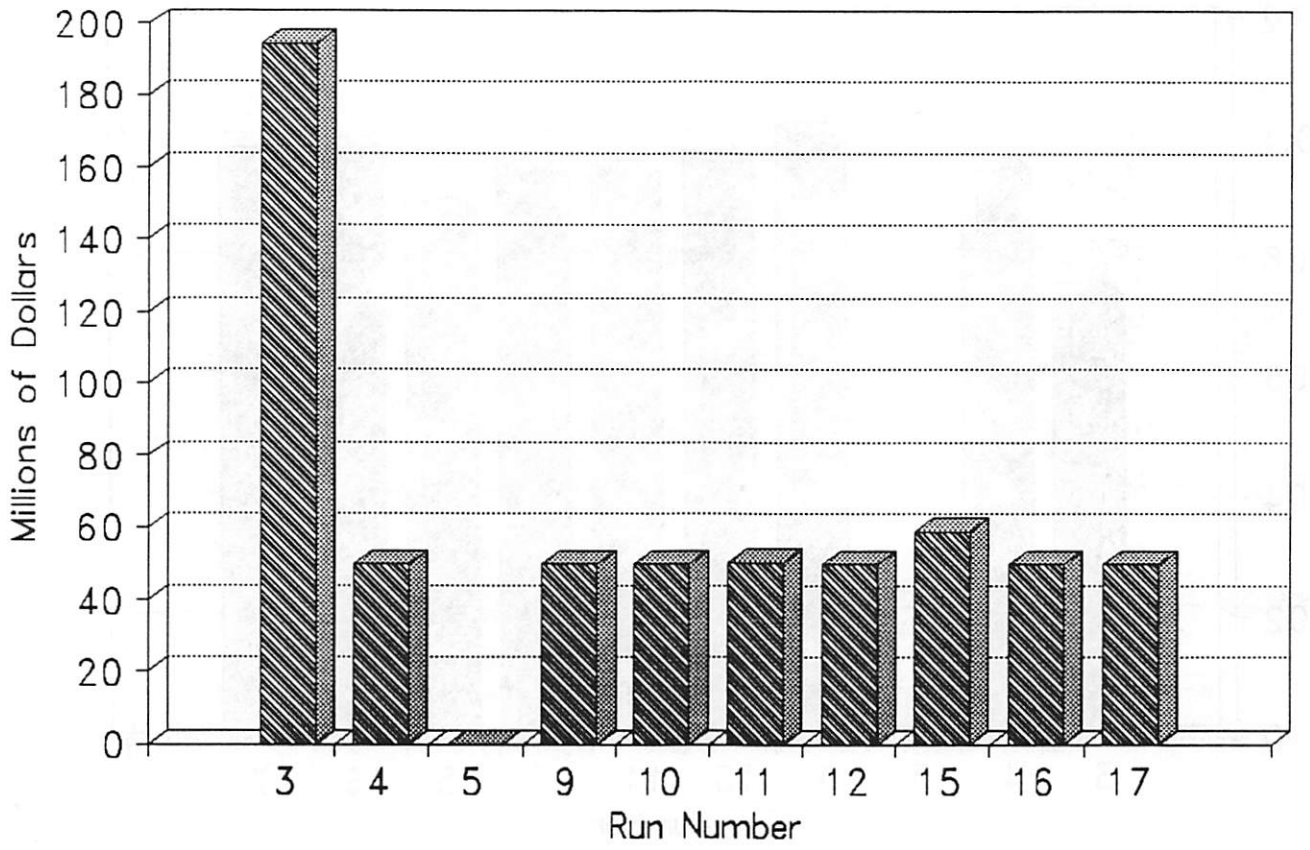
Bycatch Impact Costs
(Under 75% Midw. Pollock Alternatives)



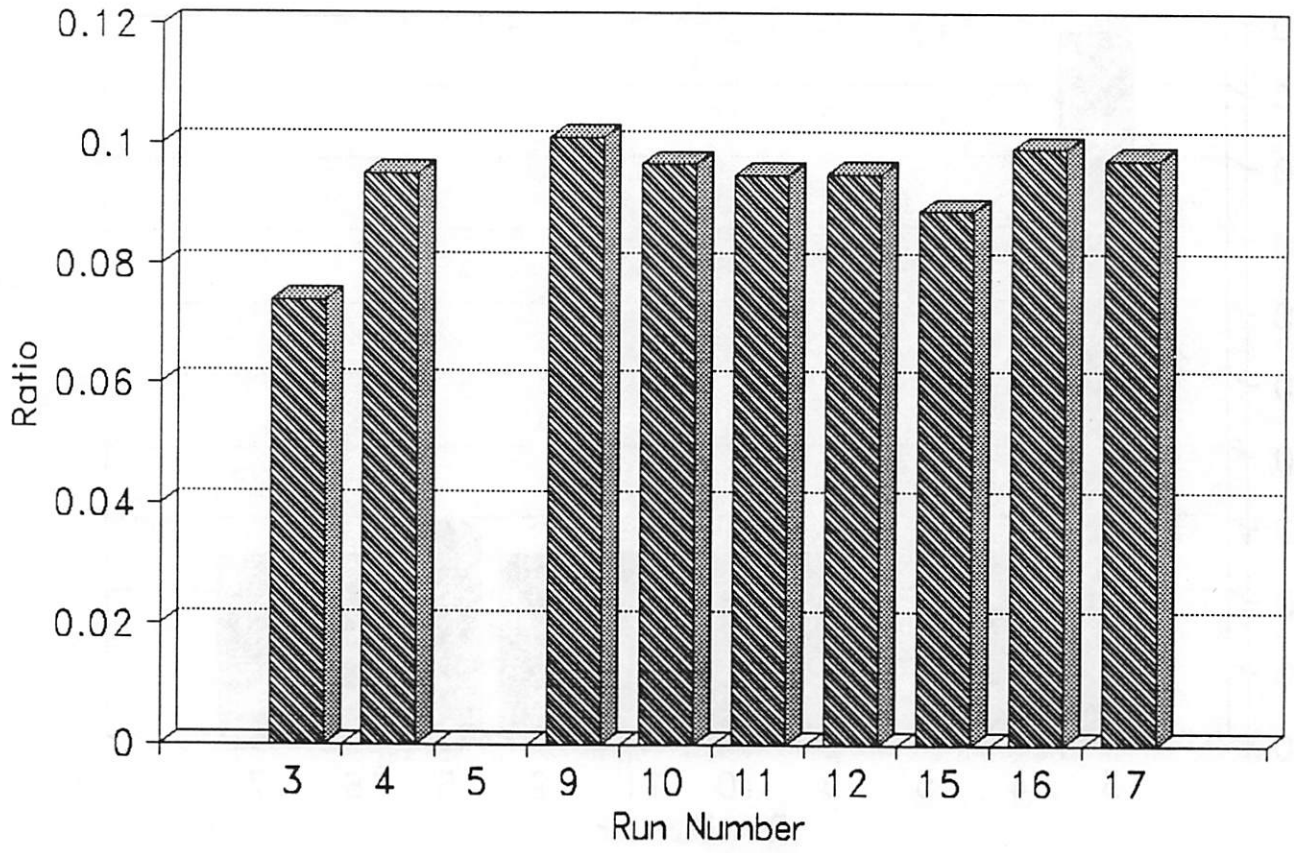
Increase in Bycatch Control Costs
(Compared to Run 2, VC/GR=Constant)



Reduction in Net Benefit
(VC/GR=Constant)

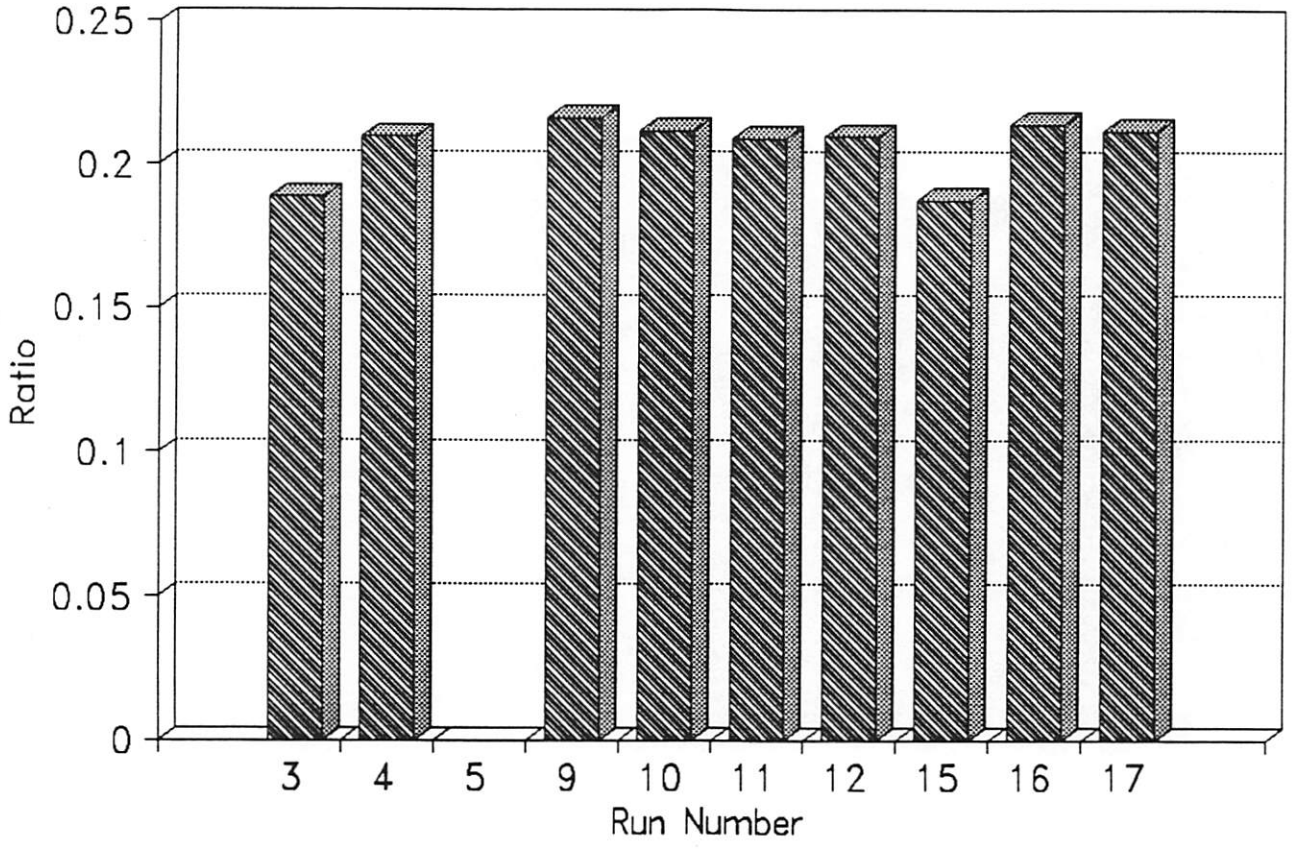


Benefit/Cost Ratio
(of change from status quo:vc/gr=c)



Benefit/Cost Ratio

(of change from status quo, 10X crab ben



Jon Zuck
D-4a

BSFA Recommendations for Amendment 16a on Herring Bycatch Management Measures (Section 4.0)

1. PSC Limits

* Support the frameworked PSC limits based on no more than 1% of the total eastern Bering Sea herring biomass;

* Accrual of herring bycatch numbers under the PSC limits should be done on a Bering Sea wide basis starting January 1 each year;

* Attainment of the PSC limit shall trigger time and area closures specified below for all trawl gear;

* Summed total PSC limits allocated to each fishery shall not exceed the number established under this rule (ie, once the summed PSC for all fisheries reaches the PSC limit, closures will be enforced);

2. Time/Area Closures (see attachment)

* Support time/area closures in the larger winter savings area northwest of the Pribilof Islands under Alternative 3 (option C in the 1983 FMP);

* Expand the Alaska Peninsula summer area described in Alternatives 2 and 3 to the west one degree to 167 00W (this matches the area in the emergency action adopted by the Council in April);

* Create an additional migratory savings area east of the Pribilof Islands for the time period from July 15 to September 15

3. Other Recommendations

* Support research on herring discrete stock identification from bycatch in the Bering Sea

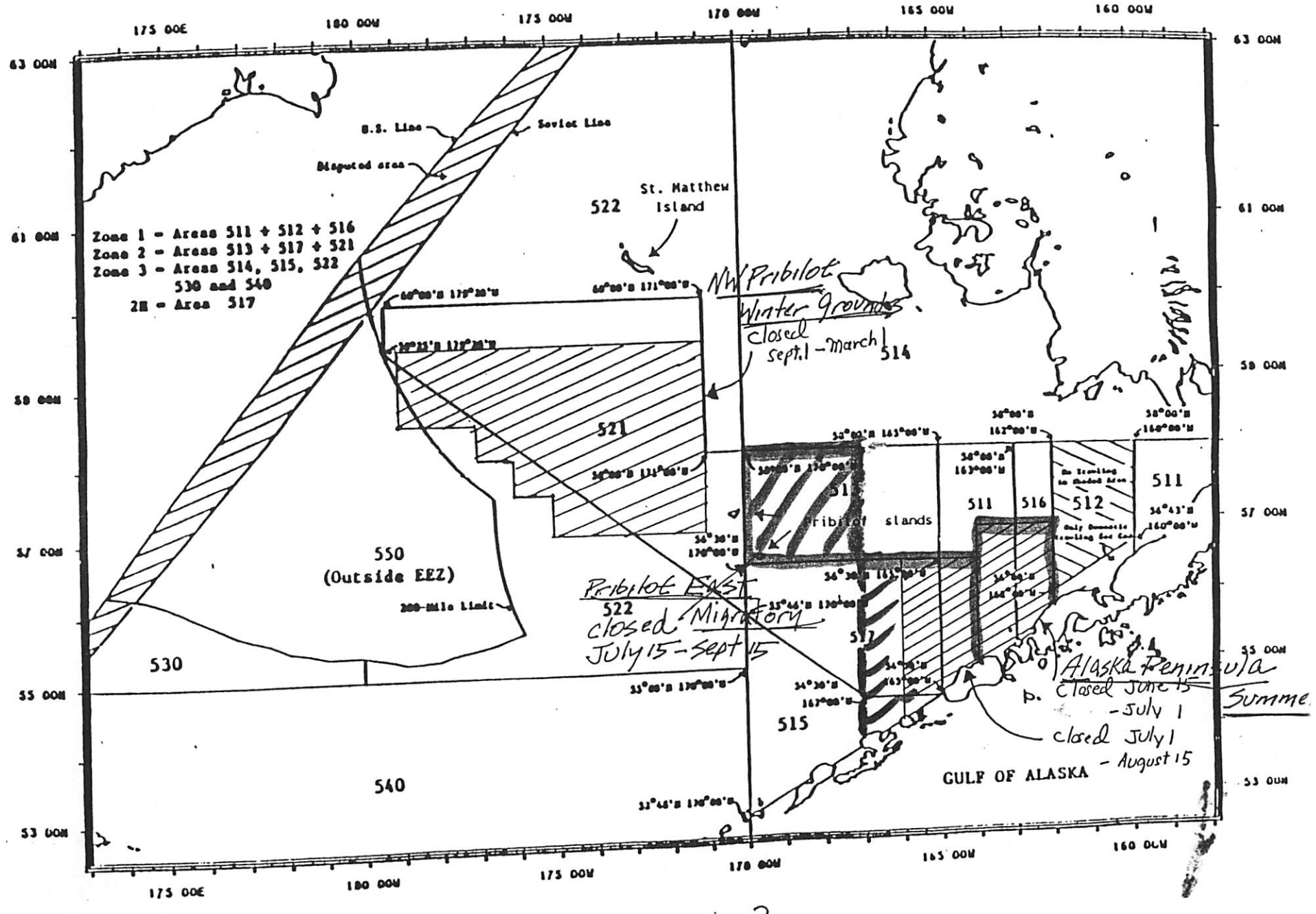


Figure 3-12 Herring Savings Areas under Alternative 3.

BRISTOL BAY NATIVE ASSOCIATION
P.O. BOX 310
DILLINGHAM, ALASKA 99576
PHONE (907) 842-5257

September 24, 1990

Larry Cotter
By-Catch Subcommittee
North Pacific Fishery Management Council

Hand delivered: September 25, 1990

Dear Mr. Cotter;

I am writing to you out of concern for the stocks of Nushagak drainage chinook salmon. These stocks have been declining in recent years to the point where concern has led ADF&G management to eliminate the directed commercial king salmon fishery (1987) and to reduce sport bag limits and institute time and area closures. The king stocks have not responded to these management efforts. Return per spawner statistics indicate that there is a "hole in the bucket" on the high seas which we have not been able to identify - much less mitigate.

My understanding is that chinook stocks in other areas may be experiencing similar problems; in Western Alaska, the chinook resource is and has historically been a significantly valuable commercial, subsistence and sport fishery. Focusing on our local chinook stocks, harvest rates (1969-1986) show the Nushagak District commercial fishery accounting for 13% of Alaska's production of chinook, in fact it has historically been the second largest stock-specific chinook fishery in the state - nearly matching production from the Yukon River.

While fecundity studies indicate that the Nushagak chinook stocks rate among the highest fecundities recorded on the Pacific Coast of North America, the very low return per spawner (in some recent years the run failed to reproduce itself) has led to elimination of the commercial chinook fishery here and jeapordized efforts to rehabilitate the stocks. Indications are that while we, onshore can act to minimize our impact upon those stocks (and are doing so) the effect is likely to be a holding action. Some action must be taken re the low return per spawner and high seas mortality in order to recover our chinook fishery. We need to identify where the "holes" are and plug them.

Stock failures to respond adequately to available management techniques have led to concern that despite subjecting commercial and subsistence gill net fisheries and the sport fishery to progressively more stringent regulations, the natural productivity of the system cannot be maintained. There is a clear need for a careful, quantitative appraisal of fishery impacts and of regulatory options that might be implemented to maintain or increase productivity, and plug the "hole in the bucket" - while at the same time minimizing or balancing hardships among resource users. Such an effort must be a cooperative effort in order to be successful.

I would like to request, therefore, that the North Pacific Fishery Management Council, National Marine Fisheries Service, and the Alaska Department of Fish and Game join a task force of local users (perhaps a subcommittee of the Nushagak Advisory Committee) in gathering a well planned body of data and to devise protective and rehabilitative measures for these stocks. I am sure that much of the data gathered by such a task force would be relevant information for other impacted chinook stocks as well.

I am sending similar letters to the other above mentioned parties in hope of eliciting a favorable response. Please share this, as a letter of concern about our chinook stocks, with the other members of the bycatch subcommittee. I hope the council can assist us in rehabiliting our chinook stocks, I am convinced that it cannot be done without your help.

Sincerely,

Terry

Terry Hoefferle
Executive Director

similar letter: Henry Michell
cc: Robert Heyano, Nushagak Adv. Committee, SW Regional Council
Dan O'Hara, Naknek/Kvichak Adv. Committee
Joe Chythlook, ADF&G

AGENDA D-4(a)
SEPTEMBER 1990
SUPPLEMENTAL

SUBSISTENCE HERRING FISHING IN THE NELSON ISLAND AND NUNIVAK ISLAND DISTRICTS, 1990

by

Mary C. Pete

Alaska Department of Fish and Game
Division of Subsistence
Fairbanks, Alaska

September 1990

ABSTRACT

This report summarizes results of surveys conducted in summer 1990 on the participation rates and harvest levels of herring for subsistence use communities in the Nelson Island and Nunivak Island districts. The 1990 surveys were prompted by concern over low projected returns of herring to those districts. Communities in the Nelson Island area were surveyed from 1986 through 1988 and results of those surveys are compared with the 1990 findings. This is the first complete survey (100 percent sample) administered in Mekoryuk, the single contemporary community on Nunivak Island. All fishing families were surveyed in four communities. Harvest estimates were generated for a fifth community, Nightmute, which did not give permission to conduct the surveys, primarily because of their concern about the declining herring stocks.

The 1990 survey showed that herring is a central component of the subsistence economy of the communities in the Nelson Island area, as did the previous surveys. A total of 125.7 short tons herring was harvested and processed for subsistence use by approximately 72 percent of all Nelson Island households. Mekoryuk families including 59 percent of all households harvested substantially less herring than the Nelson Island families: 4.5 short tons or 46 pounds of herring per capita compared to 222 pounds per capita for the Nelson Island communities combined. Drying the consistently fat herring caught along Nunivak Island involves much time and labor.

The 1990 harvest was the second lowest in Nelson Island since 1986, and the lowest for Toksook Bay and Newtok. Evidence of recent declines in herring stocks have been compared to shortages in the 1960s and 1970s. Current projected declines understandably cause concern. Some families have begun to make adjustments by increasing harvests of other, less-preferred types of fish.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

This report presents results of subsistence herring harvest surveys administered in summer 1990 in three Nelson Island area communities and Mekoryuk on Nunivak Island (Fig. 1). Herring harvest estimates for a fourth Nelson Island community are also included. The 1990 findings are compared with results of surveys in the Nelson Island area communities conducted from 1986 through 1988. Surveys were conducted to document the level of subsistence use of herring by those communities, monitor the effects of the commercial herring sac-roe fishery initiated in 1985, and annually estimate the subsistence herring harvest.

Herring comprise a significant part of the economy of communities along the eastern Bering Sea coast, particularly in the Nelson Island area (Pete 1984; Pete and Kreher 1986; Pete, Albrecht, and Kreher 1987; Pete 1990). Herring stocks in both the Nelson and Nunivak Island districts were projected to be below thresholds to allow commercial harvest in 1990 (Hamner 1989); these projected low returns motivated the 1990 survey. Concern about subsistence productivity, even if commercial harvest were prohibited, required in-season surveys. The low projections were borne out in the Nunivak Island district. A surplus of 205 short tons was observed in the Nelson Island district in 1990 (Alaska Department of Fish and Game 1990). Commercial openings were announced, but no herring were sold as buyers did not register for the district, anticipating the low returns.

METHODOLOGY

The survey in Newtok, Tununak, and Toksook Bay was administered following previous methodologies (Pete and Kreher 1986; Pete, *et al.* 1987; Pete 1990). Letters were sent to the Nelson Island communities and Mekoryuk in early May asking for permission to administer surveys and for recommendations for local assistants. All communities, except one, Nightmute, agreed to participate. Households censuses were updated with city officials upon arrival. Harvest information collected was similar to that recorded in previous surveys; harvest estimates were generated from direct observation

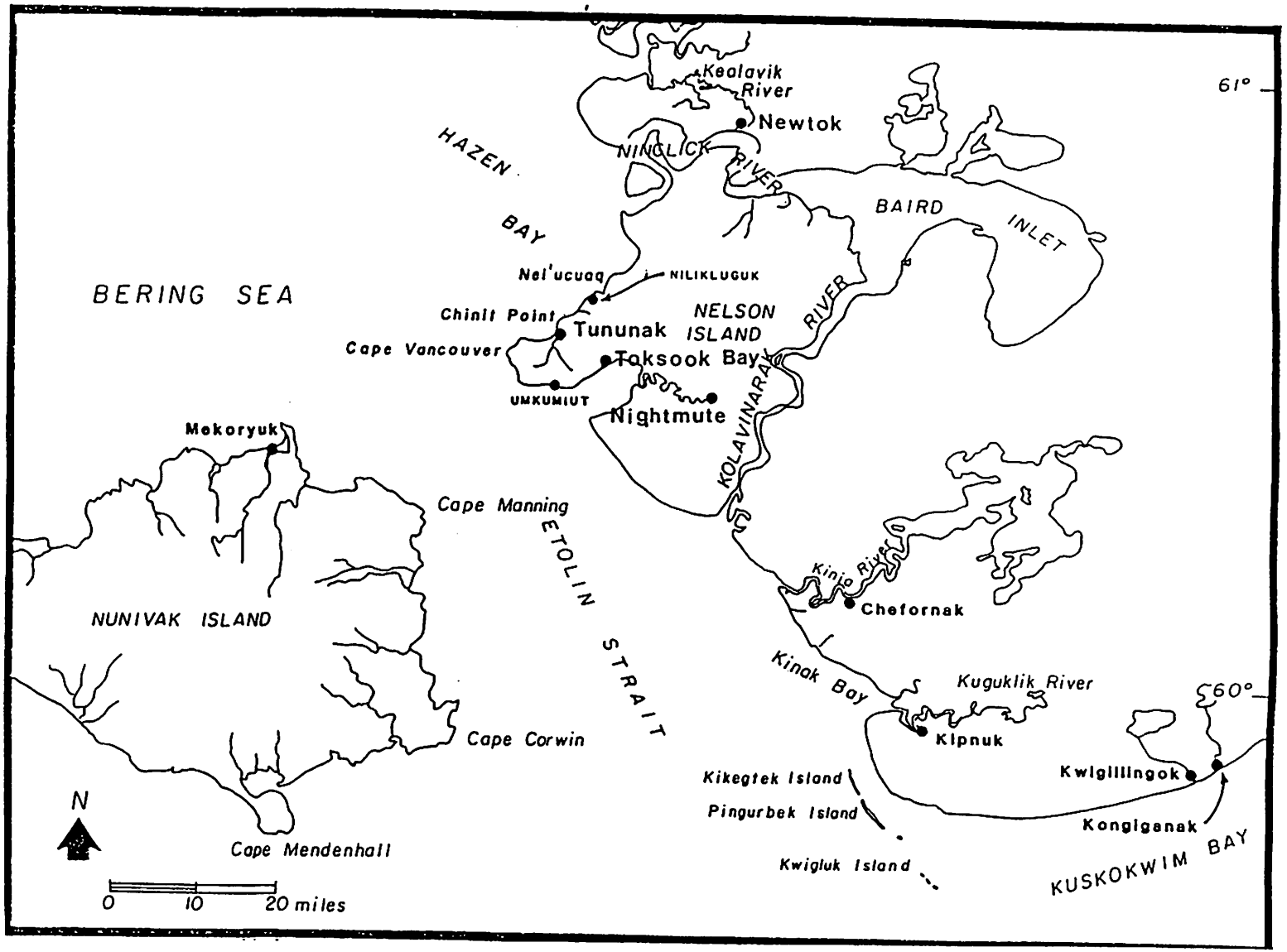


Fig. 1. Location of communities on Nelson and Nunivak Islands.

of herring on drying racks. Detailed information on fishing sites, timing of harvest, specific personnel involvement, roe-on-kelp collection levels, and gear used was collected from several key respondents in each community. Participation in subsistence herring production by every household was noted.

Nightmute officials did not grant permission to conduct the survey in their community in 1990, offering that the importance of herring to their economy has been well-documented in previous surveys. If policy developers were still not convinced about the significance of herring to protect local herring stocks, they did not feel another year of information would "make them any more wise or concerned." It is a traditional Yup'ik belief that undue attention to resources in trouble hastens their downturn and eventual demise. Human intervention in the order of natural resources and attempted management of them is viewed as presumptuous and arrogant. Wild resources are known to make themselves scarce to remind humans of their equal footing with them, especially when humans make inordinate commotion over wild resources. When resources face difficult times, it is considered more appropriate to deliberate and act on what human behavior and interaction should be changed to improve the situation.

The harvest estimates for Nightmute were derived with a different methodology. The household census was updated as much as possible with the assistance of Nightmute residents fishing in Toksook Bay. Direct observation was made of drying racks of two Nightmute families who fished out of Toksook Bay with their permission. Fullness estimates of racks of seven families that fished from the fish camp at Umkumiut were made. Lastly, average harvests from previous surveys of four families that were identified as having fished out of Nightmute were used to arrive at complete harvest information for all Nightmute families that fished for herring for subsistence in 1990. Because of this non-standard methodology, Nightmute figures used in this report should be interpreted more cautiously than the other community estimates.

This was the first year since 1986 that any subsistence herring harvest information for Mekoryuk has been collected (Pete 1990). More importantly, this is the first survey in which a complete (100 percent) sample of Mekoryuk herring fishing households were contacted. Initial work included updating a household census on file with the city and determining the most common local unit

of herring harvest, which were 15-gallon tubs. In addition to household participation, harvest levels, methods of herring processing, information on harvest timing, areas fished, gear used, and harvest of herring roe-on-kelp was collected. Many residents offered information on current herring productivity compared to the recent past (ca. early 1980s).

COMMUNITY CHARACTERISTICS

Nelson Island District

Descriptions of the Nelson Island area communities were included in previous survey reports (Pete and Kreher 1986; Pete *et al.* 1987; Pete 1990). Briefly, the regional population of communities in the study represent the majority of the current *Qaluyaarmiut* Yup'ik society, one of approximately twenty traditional Yup'ik kin-based societies that generally share a land use area with unique patterns of resource use, often speak a distinctive linguistic dialect, and form a marriage universe (Fienup-Riordan 1983; Shinkwin and Pete 1984; Andrews 1989). The communities are small, most residents are Yup'ik Eskimo, and many elderly people speak only the Yup'ik Eskimo language.

The 1990 regional population increased by 2 percent and the number of households increased by 4 percent since 1988 (Table 1) (Pete 1990). Average household sizes were typically large, ranging between 4.9 to 6.0 persons per household. Toksook Bay and Tununak gained residents while Newtok was reduced by two people since 1988 for an overall estimated 1990 regional population of 1,134 people (Table 1). There was some inter-village migration due to marriage, as well as some, but less, movement for jobs to Bethel, the regional trade and transportation center.

The communities continue to rely heavily on local wild resources, with seasonal employment and commercial fishing providing the major opportunities for monetary income. The reduction in 1989, and the eventual lack of a commercial herring sac-roe fishery in 1990, was expressed as a loss of an important source of income. The commercial herring sac-roe fishery was estimated to contribute up to one-third of average annual household incomes (Pete 1990).

TABLE 1. NELSON ISLAND AND NUNIVAK ISLAND POPULATION AND HOUSEHOLD PARTICIPATION IN SUBSISTENCE HERRING PRODUCTION, 1990

Community	Population	Total number of households	Average household size	Number of participating households		Number of fishing families
Nelson Island						
Newtok	205	39	5.3	20	(51%)	12
Tununak	326	67	4.9	54	(81%)	37
Toksook Bay	440	82	5.4	60	(73%)	38
Nightmute[a]	163	27	6.0	18	(67%)	13
Subtotals	1,134	215	5.3	152	(72%)	100
Nunivak Island						
Mekoryuk	192	56	3.4	33	(59%)	19
Totals	1,326	271	4.9	185	(68%)	119

[a]Figures for Nightmute were derived from key respondents from Nightmute fishing at Toksook Bay and Umkumiut, rather than from interviews in Nightmute.

Nunivak Island District

A significant anthropological study of *Nunivaarmiut* (societal name for Nunivak Eskimos) conducted in 1939-40 by Lantis (1946) found 203 people in seven year-round settlements located around the entire coastline of Nunivak Island. Lantis noted seven other recently abandoned (ca. 1900) settlements, with many structures, being used as summer camps, along with numerous other camp

sites. Consolidation from 14 to 7 settlements probably occurred after disease epidemics in the 1800s and early 1900s (cf. Wolfe 1982). During the late 1930s, resources harvested for food and materials were five species of hair seal, walrus, beluga, sea lion, three species of Pacific salmon, halibut, Pacific cod, saffron cod, wolf fish, Dolly Varden, herring and herring roe-on-kelp, stickleback ("needlefish"), smelt, "dogfish" (shark sp.?), numerous types of shellfish and marine invertebrates, several species of flounder and sculpin, many species of waterfowl and sea birds and their eggs, ptarmigan, arctic and red fox, mink, reindeer (formerly caribou, until they were decimated and reindeer were introduced), and an occasional polar bear and dolphin (Lantis 1946). Many plant species and driftwood were also collected. Most of these species were still harvested and used in 1990, with the addition of introduced muskox. Mekoryuk residents still travel throughout the entire island and its coastal waters to hunt, fish, and gather wild resources.

In 1940, herring harvest and use was not large, compared to many other species taken throughout the island (Lantis 1946; Pete 1984). However, herring were more numerous on the east and south coasts of Nunivak Island (Lantis 1946:164), and specific settlements in the area not documented by Lantis may have incorporated greater use of herring for subsistence. The author spent most of the study year in communities along the north coast (Lantis 1946). Other subsistence studies since Lantis' work have been done in Mekoryuk, the only current permanent community on Nunivak Island (Nowak 1975a, 1975b, 1977), but information on herring use was not described.

Many Nunivak Island families had moved to Bethel or other points beyond since the 1950s, to prevent families splintering when children were of high school age, because boarding schools were the only option until the mid-1970s. Some families and their descendents moved back after a local high school was built in the late 1970s, or established a pattern of returning to the island in the summer to fish for salmon, halibut, Pacific cod and herring. There is a strong and binding network of ties among former Nunivak Island families and their resident relatives and counterparts expressed and strengthened by exchanges of subsistence labor and products. This dynamic adaptation is an important feature in family subsistence patterns.

Mekoryuk had 192 permanent residents in 56 households in 1990 (Table 1). Most (95 percent) people were Cup'ik Eskimo (*Cup'ik* is the dialect of Yup'ik spoken by *Nunivaarmiut* society). As with other rural communities in western Alaska, the economy in Mekoryuk is based on harvest and use of local fish and wildlife combined with the few opportunities for wage employment, commercial herring sac-roe and halibut fishing, and seasonal work outside of the community, such as construction or fish tendering and processing. Cost of living is high. The native corporation replaced a reindeer-processing plant that burned down several years ago in summer 1990. It was used to hold halibut commercially caught for export in cold storage, a facility designed to increase local involvement and production in the commercial halibut fishery. Previously, Mekoryuk fishermen had to transport their catch to Toksook Bay or Tununak, the nearest ice-machines.

The commercial herring sac-roe fishery essentially did not occur in the Nunivak Island district in 1989 and 1990, primarily due to low returns (Burkey 1990). As with Nelson Island residents, the loss of this income opportunity has had negative effects. Fishermen feared foreclosure on many loans for fishing equipment. Time spent preparing for subsequent non-existent commercial openings took time away from other pursuits, such as subsistence-herring fishing and sea mammal hunting.

SUBSISTENCE HERRING FISHING

Nelson Island District

Harvest and production of herring for subsistence use by Nelson Island area residents has been described in detail in previous reports (Pete and Kreher 1986; Pete *et al.* 1987; Pete 1990). The subsistence fishery was essentially the same in 1990. Gear used and areas fished was similar to those reported in earlier reports. Briefly, boats used were locally made wooden or purchased aluminum skiffs 14 to 28 feet in length; gill nets of between 2 to 2-3/4 inch mesh and 60 to 300 feet long were set; and areas fished were traditionally productive sites located near communities.

Production activities were organized and managed usually by a couple in charge of extended-family-based work groups. Generally, men oversee and engage in fishing and women take care of processing and storage. Extended families involving members of more and one household and many individuals with a wide age range cooperated in production activities.

In Tununak in 1990, gill nets were set as soon as the adjacent ocean was ice free and herring were present in appreciable numbers. The other communities waited until rivers were clear of ice (Newtok and Nightmute) or subsequent runs of herring, noted for lower fat content, arrived. Thus, fishing occurred from mid-May through mid-June around Nelson Island. In 1990, fishing started in late-May and extended until late-June, particularly in Toksook Bay. Reasons for the longer fishing season were related by respondents to poor returns.

In 1990, subsistence fishing for herring resulted in differential success depending on timing of harvest and the area fished. Herring were plentiful early in the season along the north shore; Tununak families did not have much trouble obtaining as much herring as they wanted with regular gear because they customarily fish early in the season. In 1990, many more herring were unusually fat. Fishermen and processors make note of the fat content of herring each year, because the fat content affects spoilage, especially in late June when weather is generally more sunny and windless.

Newtok and Toksook Bay families experienced a more difficult season in 1990, exacerbated by low gasoline supplies. By necessity, Newtok residents fish later than Tununak residents because they have to wait for ice to breakup in the Keyalivik River. Toksook Bay (and Nightmute) families traditionally wait until later, when typically less fatty herring arrive to set nets. This summer, herring abundance dropped off dramatically during mid-June in the Nelson Island area, although there were slight periodic increases throughout June along the south shore. Further, fatty herring continued to be caught even later in the season. Herring sizes were highly variable in all runs; large and small were mixed together, but all were fat. Nets with different mesh sizes (1-1/2 to 3 inches), including long (300+ feet) commercial gear, were strung together and set. Some families suspended fishing until later in hopes of getting leaner herring. Several families did not fish for herring at all, resulting in the lowest overall household involvement in herring production in the years of the survey. They diverted efforts to

increase halibut, Pacific cod, and salmon harvests, filling drying racks, as well as freezers with these welcome, but less-preferred, alternatives. Halibut, Pacific cod, and salmon may be viewed by outsiders as adequate, or even improved substitutes for herring. They certainly are preferred by Nelson Island families to non-local, imported foods. However, herring is the traditional winter food for Nelson Island families. Changing subsistence fishing strategies often means purchasing new gear and more gasoline, adjusting processing and drying facilities, investing more time fishing for other species, and altering subsistence production roles in the family.

Many respondents interpreted the unusual characteristics of the 1990 herring run as an indication of decreasing stocks. Some of these disturbing signs had been observed previously in herring stock reductions during the 1960s and 1970s, such as abundance of fatty herring, shorter duration of runs, and localization and concentration of spawning schools along Cape Vancouver and the north shore of Nelson Island (Pete 1990). However, there were some differences. Respondents view the recent trends with more alarm. Nelson Island herring stocks may have not experienced full recovery from earlier shortages before current relapses. In earlier times of shortage, herring were uniformly large one year, and then decreased in size the next year. The mixed size of herring and high fat content in 1990 are believed to show that herring numbers may be in a more drastic decline in comparison to the declines in the 1960s and 1970s. Different-sized herring (age-classes) are thought to be mixing because they are too few to sustain large enough schools for normal spawning saturation as discrete age-classes. Fewer herring with less competition for the abundant food have become uniformly fat.

Harvest Levels

The total 1990 harvest of herring for subsistence by Nelson Island communities was an estimated 125.7 short tons (Table 2), the second lowest recorded total harvest since 1986 (Pete 1990). The 1990 harvest produced the lowest per capita pounds of herring for the regional population and for Toksook Bay and Newtok (Fig. 2), the communities which fished later than Tununak. Regional per capita pounds of herring harvested ranged from 227 to 308 pounds in 1986-88; in 1990, the regional

harvest produced 222 pounds of herring per person for subsistence. Nightmute figures do not show any unusual reductions. However, Nightmute estimates were not generated from direct observation, thus interpretations should be made with caution.

TABLE 2. ESTIMATED NELSON ISLAND AND NUNIVAK ISLAND SUBSISTENCE HERRING HARVEST LEVELS (IN SHORT TONS) AND PERCENTAGE OF TOTAL HOUSEHOLDS INVOLVED IN PRODUCTION, 1986-88 AND 1990

	1986		1987		1988		1990	
Community	Short tons	% of involved households	Short tons	% of involved households	Short tons	% of involved households	Short tons	% of involved households
Nelson Island								
Newtok	12.6	46	10.0	56	12.5	68	7.9	51
Tununak	63.3	86	48.0	85	49.3	86	54.0	81
Toksook Bay	69.5	83	51.0	83	58.5	84	46.3	73
Nightmute	21.4	64	15.0	65	16.0	74	17.5[a]	67
Subtotals	166.8	75	124.0	76	136.3	80	125.7	72
Nunivak Island								
Mekoryuk[b]	no data		no data		no data		4.5	59
Totals							130.2	69

[a]Figures for Nightmute were derived from a combination of methods, rather than interviews with families in Nightmute or direct observation of all herring they processed.
[b]Herring harvest data from 1986 for Mekoryuk are incomplete and have been omitted (Pete 1990).

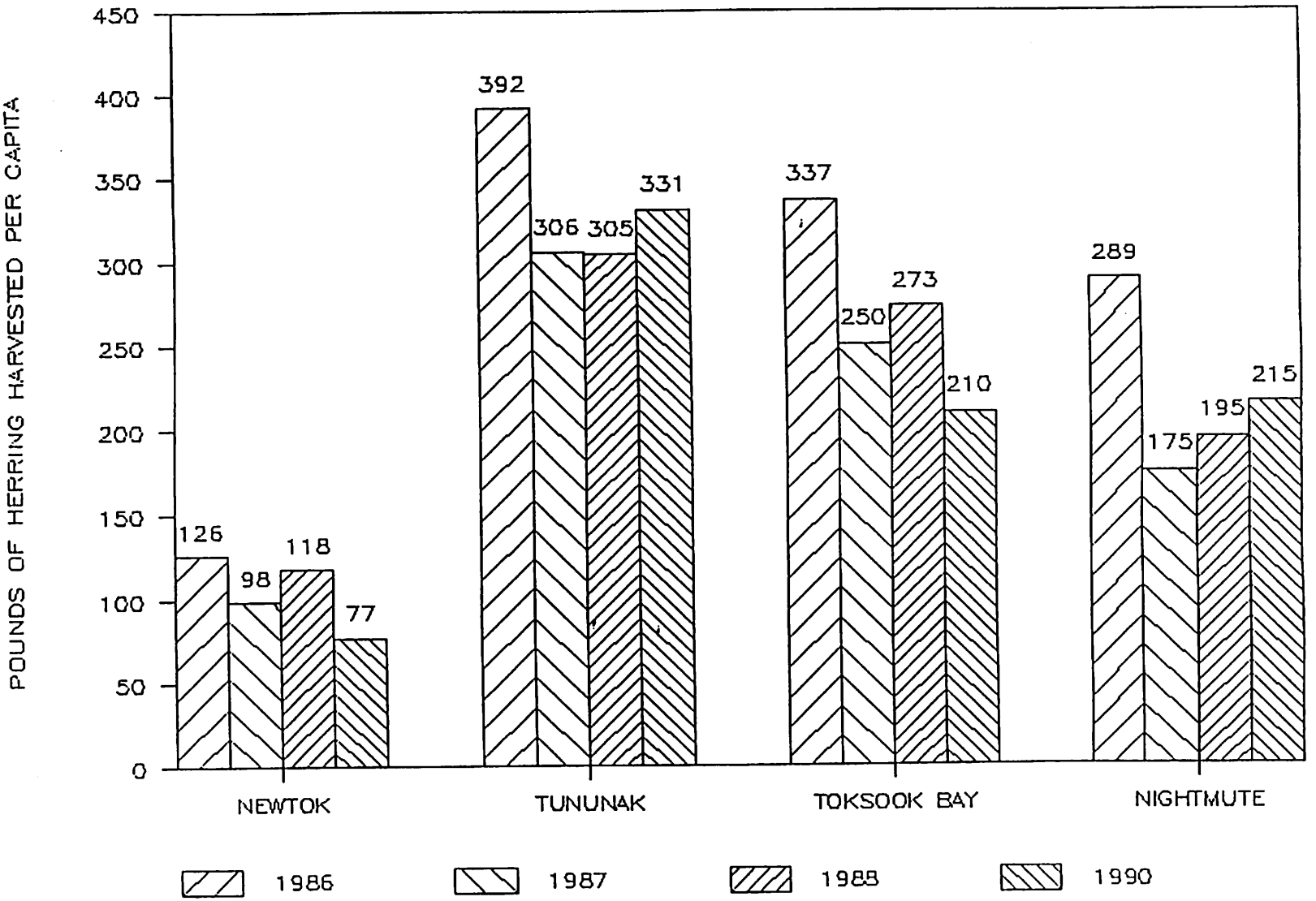


Fig. 2. Pounds of herring harvested per capita for subsistence use by Nelson Island communities, 1986-88 and 1990.

For the first time since 1986, the harvest by Toksook Bay was lower than the harvest by Tununak -- 46.3 short tons compared to 54.0 short tons, respectively. In previous years' surveys, harvest levels by Toksook Bay families usually accounted for over 40 percent of the total regional harvest while the harvest by Tununak families accounted for between 36 to 38 percent. Their contributions were reversed in 1990; Tununak harvested 43 percent of the total regional harvest while Toksook Bay obtained 37 percent of the total (Table 2) (Pete 1990). Newtok harvest levels were the lowest documented: 6.3 short tons was obtained in 1990, compared to a range of 10 to 12.6 short tons in 1986-88 (Pete 1990).

Household participation rates for Toksook Bay were likewise the lowest recorded since 1986: 73 percent of all households were involved in production of herring for subsistence use, rather than 83 percent. Although the usual percentage of Newtok and Nightmute households participated in subsistence herring production in 1990, a few families (cooperative multi-household units) in both communities that usually fish for herring for subsistence use did not do so in 1990. As mentioned, they chose to put their time and effort into catching and processing other types of fish for their subsistence. However, even with reduced involvement by households and fishing families, a substantial percentage (72 percent) of total households were involved in subsistence herring production (Table 2). This is evidence of the importance of herring as a subsistence resource to Nelson Island families.

Nunivak Island District

Timing of subsistence herring fishing on Nunivak Island is similar to that reported for Nelson Island. Herring are harvested from mid-May to mid-June. Most commonly, gill nets were set or "drifted" for herring with skiffs similar in size to that described for Nelson Island. Other methods of harvest included using dipnets, picking herring by hand from tidal pools or throwing home-made "toss nets," approximately six feet in diameter, over spawning schools and pulling them closed and ashore with the "purse" full of herring.

Commonly used set and drift net fishing areas extended east and south from Mekoryuk to Cape Corwin (Fig. 1). In 1990, most nets were set around Cape Etolin and in the Cape Manning area, between Ikathleewik Bay (*Iqalivik*, meaning "place to get many herring") and Nooravloaksmiut Island (*Nuugavluarmiut*, "inhabitants of *Nuugavluar* (big bluff)," name for a campsite derived from of the place-name of the coastal headland). Herring roe-on-kelp was collected from the same areas. One family boated across Etolin Strait to the area west of Umkumiut to get herring because they missed the unusually short window of harvest opportunity around Nunivak Island.

Although herring is harvested from camps along the east shore of Nunivak Island, all herring is brought to Mekoryuk to be processed. Processing of herring was similar to methods used by Nelson Island residents (Pete and Kreher 1986; Pete *et al.* 1987), with a few significant differences. Herring caught around Nunivak Island is noted to be consistently large and fat every year, requiring some specialized processing than those caught around Nelson Island. Unlike the Nelson Island pattern, herring were not aged in pits. They were immediately deheaded and filleted with a knife through the back, rather than the softened ventral side. Herring were then braided through a section of backbone left near the tail, with locally-collected beach grass into short strings of 15 to 40 herring each. The strings of herring were dipped in tubs of sea water to wash off slime and to add the right amount of salt for taste and good drying. These strings were hung up to dry on racks with other fish or sea mammal meat. When dry, the strings are moved into smoke houses to be smoked with green willow and driftwood, a step rarely taken by Nelson Island herring fishing families. Smoking prevents the fat from turning rancid, increasing sustained palatability and storage life. The strings of herring were stored along with other dried products in caches for the winter.

Key respondents noted the labor-intensive process as one of the reasons Nunivak Island people did not specialize in herring subsistence. Smoking of herring is viewed as an extra, but necessary step in subsistence herring production. Precious wood has to be gathered and cut (Nunivak Island is treeless tundra). The smoke has to be tended for several days to over a week. Other fish, even salmon, are rarely smoked, because they are generally not fat (salmon are caught primarily near spawning grounds). Halibut, Pacific cod, and salmon, can be dried at fish camps without smoking. A

few individuals thought that eating too much smoked products reduced endurance, a desired condition for walking throughout Nunivak Island for many subsistence activities.

Although harvest of herring roe-on-kelp by Mekoryuk residents was not documented, it is suspected to be considerable and may rival herring harvests in some years. Most families involved in herring fishing also collected roe-on-kelp; other families only collected roe-on-kelp. Herring roe-on-kelp not eaten immediately is frozen or dried for later use. The dried product is easily reconstituted by soaking it in water overnight.

As in Nelson Island, production of herring for subsistence use was a kin-based operation in Mekoryuk, with members of extended families, generally a couple and their adult children in separate households, working together. Five former Nunivak Island families now living in Bethel customarily return to the island to produce herring for subsistence, as they had in 1990. The herring products are divided with relatives that helped with production. The majority of harvesters were men, but relatively more women fished for herring than was documented in Nelson Island communities. Women generally helped their husbands or picked herring from tidal pools near Mekoryuk. Most people (90 percent) involved in subsistence herring production were between 25 and 70 years of age; no one under 18 years of age was involved in 1990.

Mekoryuk respondents noted that herring numbers have been decreasing since the mid-1980s. The commercial herring fishery initiated in 1985 brought heightened attention to local herring stocks. As around Nelson Island, herring do not stay in area waters as long as they had in the past. Herring also are used for bait in subsistence halibut and Pacific cod fishing; fishermen who drift for herring for bait noticed reduced schools that did not stay ashore as long as expected. Smaller numbers of herring make it more difficult to see "oiled" water surfaces which signal when vast schools have moved ashore to spawn. It has become confusing to gauge when herring fishing or roe-on-kelp collecting activities should start or to plan for expected productivity. Similar to Nelson Island, two families that usually fish for herring for food did not do so in 1990; they concentrated on halibut and Pacific cod fishing. Depth or amount of roe deposited on kelp has become highly variable, according to local observations.

Harvest Levels

Although subsistence herring production by Mekoryuk families is not of the same magnitude as Nelson Island families, a significant proportion or 59 percent of Mekoryuk households were involved in subsistence herring production in 1990. Thirty-three households cooperated in 19 fishing families to produce 4.5 short tons of herring for subsistence (Table 2) and approximately 46 pounds per capita. Family harvests ranged from 35 to 900 pounds. Previous incomplete surveys documented up to .7 short tons harvested by Mekoryuk residents (Pete 1990).

SUMMARY

Concern about reduced herring stocks in the Nelson and Nunivak Island districts in recent years prompted in-season harvest surveys in 1990. The commercial herring sac-roe fisheries in the Nelson and Nunivak Island districts were reduced in 1989 and did not occur in 1990.

The 1990 subsistence herring surveys in Nelson Island area communities demonstrated the significance of herring harvest levels as in previous surveys. Approximately 126 short tons was harvested -- the second lowest recorded harvest since 1986, and the lowest for Toksook Bay and Newtok. This was the first complete herring harvest survey of Mekoryuk households. They obtained an estimated 4.5 short tons. Household participation rates in subsistence herring production were substantial in all communities, ranging from 51 percent in Newtok to 81 percent in Tununak (Table 1).

Declining numbers of herring affected fishing activities, especially those of Toksook Bay and Newtok families. This summer, many local observations of herring runs paralleled those made of decreasing herring stocks in the 1960s and 1970s. Several families on both Nelson and Nunivak islands did not fish for herring this year due to perceived declines in herring numbers and variable productivity. These families concentrated efforts for winter food on increased harvests of halibut, salmon, and Pacific cod. Augmenting harvests of other fish species was a strategy used in previous herring shortages during the 1960s and 1970s (Pete 1990).

Nightmute officials chose not to participate in the survey in 1990, with reasons related to current herring declines. As mentioned, they believe that policy-makers have enough evidence about the local significance of herring to make reasonable decisions. A traditional Yup'ik belief that inordinate attention directed at shrinking natural resources by presumptuous humans often results in further deterioration of wild resources. Deliberate hastened declines are sometimes effected by natural resources to remind humans of their place with natural resources. Rather than heightened absorption with diminishing herring numbers, they suggest that affected groups of people consider their interactions among themselves relative to the herring resource. Perhaps some of these interactive patterns need to be changed to help the Nelson Island herring resource. They wanted this message conveyed to policy-makers, instead of usual survey results.

There is widespread local concern for the Nelson and Nunivak Island herring resources, especially among Nelson Island families, whose main winter food is dried herring. Herring importance in the Nelson and Nunivak Island districts was underscored with its commercialization, because opportunities for wage employment are few and cost of living is high. These recent decreases in herring stocks remind Nelson Island people of past shortages and associated difficulties, which they hope can be avoided.

REFERENCES

Alaska Department of Fish and Game

1990 Preliminary Summary of the 1990 Pacific Herring Fisheries in the Kuksokwim Bay Area. Division of Commercial Fisheries, Bethel.

Andrews, Elizabeth F.

1989 The *Akulmiut*; Territorial Dimensions of a Yup'ik Eskimo Society. Alaska Department of Fish and Game, Division of Subsistence, Juneau,. Technical Paper Number 177.

Fienup-Riordan, Ann

1983 The Nelson Island Eskimo: Social Structure and Ritual Distribution. Alaska Pacific University Press, Anchorage.

Hamner, Helen

1989 Pacific Herring Stocks and Fisheries in the Arctic-Yukon-Kuskokwim Region of the Northeastern Bering Sea, Alaska, 1989. Report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries, Anchorage.

Lantis, Margaret

1946 The Social Culture of the Nunivak Eskimo. Transactions of the American Philosophical Society 35(3):152-323.

Nowak, Michael

1975a Subsistence Trends in a Modern Eskimo Community. Arctic, 28(1):21-34.

_____

1975b The Impact of "Convenience" Foods on a Community in Western Alaska. Anthropological Papers of the University of Alaska, 17(2):55-59.

_____

1977 The Economics of Native Subsistence Activities in a Village of Southwestern Alaska. Arctic, 30(4):225-233.

Pete, Mary C.

1984 Subsistence Use of Herring in the Nelson Island Region. Alaska Department of Fish and Game, Division of Subsistence, Juneau. Technical Paper Number 113.

Pete, Mary C. and Ronald E. Kreher

1986 Subsistence Herring Fishing in the Nelson Island District: 1986. Alaska Department of Fish and Game, Division of Subsistence, Juneau, Technical Paper Number 144.

_____

1989 Subsistence Herring Fishing in the Eastern Bering Sea Region: Nelson Island, Nunivak Island, and Kuskokwim Bay. Alaska Department of Fish and Game, Division of Subsistence, Fairbanks.

Pete, Mary C., Daniel E. Albrecht, and Ronald E. Kreher.

1987 Subsistence Herring Fishing in the Nelson Island District and Northern Kuskokwim Bay. Alaska Department of Fish and Game, Division of Subsistence, Juneau. Technical Paper Number 160.

Shinkwin, Anne and Mary Pete
1984 Yup'ik Eskimo Societies: A Case Study. Etudes/Inuit/Studies 8 (Supplementary Issue):95-112.

Wolfe, Robert
1982 Alaska's Great Sickness, 1900: An Epidemic of Measles and Influenza in a Virgin Soil Population. Proceedings of ht eAmerican Philosophical Society, 126(2):90-121.

Council Discussion of Amendments 21/16
North Pacific Fishery Management Council Meeting
September 26-27, 29, 1990

NOTE: To save time and space, the formality of seeking and being granted recognition by the Chairman has not been transcribed for each speaker.

CM = Council Member

September 26, 1990

Tape 17

Don Collinsworth (Council Chairman): We'll now moved to agenda item D-4(a). Under this agenda item we will deal with Amendment 16a and 16/21, discussion and review. Just for the information of the public in terms of public hearing again, we will divide D-4 into two segments for purposes of the public hearing. We will deal with D-4(a), again Amendment 16a and 16/21; we will have a public hearing. The staff will resume its presentation on (b), (c), (d) and (e); we'll take reports from the staff, AP and SSC on those four items and then we'll have another public hearing.

Clarence Pautzke (Council Executive Director): Mr. Chairman, Hal (Weeks, NPFMC staff) isn't quite here yet and I thought it might be best to have Helen pass out the report of the Ad Hoc Bycatch Committee which has appended to it, to their Monday meeting, Steve Pennoyer's letter concerning his bycatch arrangement for 1991 under 16. I think this would be a good starting point for discussion to determine what we're going to do with 16a and 16. We have that available right now, possibly Steve (Pennoyer) could lead us through.

Pautzke: So, you have two Ad Hoc Bycatch Committee reports, one is from September 6 and 7 at the Alaska Fisheries Science Center and it has various attachments to it. The main thrust of it is the program that will be put together for the amendment package that will affect the 1992 fishery. Then with your September 24th draft minutes, you have attached to it by the Region on Amendment 16, what is doable as far as the penalty box program and so on, that would be a good lead in for our discussion on 16a and what we're going to do for 1991.

Collinsworth: O.K., we'll just stand down for a few moments to give folks an opportunity to review the document while we wait for Hal. --------- O.K., let's come back to business. Hal, we're going to deal with D-4(a), Amendment 16a and Amendment package 16/21, so I'd like to cover all issues pertinent to that agenda item.

Hal Weeks (NPFMC Staff): Under agenda item D-4(a), the Council is scheduled to take final action on Amendment 16a. Just to briefly recap, this amendment originated at the April Council meeting where the herring chapter for the Amendment 16/21 package was remanded to the analysts for further work and the Council

requested additional analyses to address crab and halibut bycatch in the Bering Sea and Aleutian Islands. This work was done, it was presented to the Council at the June meeting, it was approved for public review subject to some further work recommended by the SSC. This was completed over the summer and the package was mailed out in late August. Plan team review, Council family review, and public review are all occurring concurrently at this time and the comment period ends tomorrow. In your notebooks under this tab, Mr. Chairman, are the executive summary of the analytic document, a synopsis of comments received through last Thursday, and the bulk of those comments. Essentially, the provisions of Amendment 16a for crab and halibut are three. One is whether to authorize the Regional Director to close bycatch hot spots in season based on in-season fishery information. A second is whether to authorize the Regional Director, through the Council's groundfish specifications process in the September-December time frame, to place a limit on the amount of the pollock TAC which can be taken with bottom trawl gear, or with other than midwater trawl gear. And then, finally, the Council should make decisions as to where to set the PSC caps and the analysis addresses caps at 50%, 100%, and 150% of the Amendment 12a levels. With respect to herring, the Council needs to make a decision in terms of whether to set a frameworked cap of herring bycatch as a percent of the biomass and selection of this cap and attainment of this cap by fisheries would trigger time/area closures, both on the north side of the Alaska Peninsula during the summer and a winter, either a small or a large winter savings area northwest of the Pribilof Islands from September through March. In a nutshell, that's Amendment 16a.

Collinsworth: O.K., thank you, Hal, is there anything on 16 and 21 that. . .or are we going to get that report from the Service?

Weeks: Amendment 16 and 21 was sent to the Secretary for review in early August; we would anticipate a decision, I believe, in mid-November and implementation prior to January 1, 1991. There are provisions of both 16/21 and 19/14, the roe-stripping amendment, which I think the Council may wish to assume that they will be approved, in setting its groundfish specifications, but on this specific topic I don't think that comes into the picture.

Collinsworth: National Marine Fisheries Service?

Steve Pennoyer (CM): Yes. Amendment 16, of course contains the penalty box provisions, 16/21 for the Bering Sea and Gulf of Alaska, and as you're well aware, most of the Bycatch Committee and the industry and the Agency have centered on the concept as incentive programs as being the best way to approve bycatch problems, to put back on the individual fisherman the responsibility of minimizing his bycatch to live within some particular management scheme that 's chosen. This is our first year of an observer program, this is our first year of looking at bycatch data from the DAP fishery, and when we originally got into the penalty box discussion we indicated

to you that we would be looking at the data, examining our capabilities, and report back to you on the implementation of some or all of the penalty box as proposed in Amendment 16. Amendment 16, as Hal said, is out for public review and comment and, of course, Council comment and I think we've got a suggested way of approaching it. We're going to report to you today that we're not able to carry out the penalty box program for a number of different reasons which we'll elaborate on as envisioned in Amendment 16. And, to start the discussion I'd like Russ Nelson (NMFS Observer Program) to give you a brief presentation on the Observer Program, where we are, where we have been and where we see we'll be able to go next year. I'll follow up with taking you through the letter that was attached to the bycatch committee report, if that's satisfactory.

Collinsworth: Thank you. Russ?

Russ Nelson (Observer Program Staff): In 1990, the Fisheries Service moved to implement the mandatory comprehensive data gathering program that was required by Amendments 13 and 18 to the fishery management plans for the Bering Sea and Gulf of Alaska. That data gathering program included both a mandatory observer program and a new reporting and logbook system for the domestic fisheries. Those two parts of the data gathering program provide the foundation and the basis on which the information that's needed to manage the fishery in season and which is used to a great extent to evaluate management problems and issues that come before the Council. For the most part this year I think the program has been able to meet the primary objectives of implementing the Observer Program and the logbook and data reporting programs. With respect to the Observer Program, at the Alaska Fisheries Science Center this year we've trained and deployed 555 observers. Those 555 different individuals have been deployed to the domestic groundfish program, they've been deployed to foreign and joint venture vessels fishing either in Alaska or off the Washington-Oregon coast in the Pacific whiting fishery and a number of observers also are being deployed to the high-seas driftnet fisheries. The data collected by those observers that has been used in season for the domestic fisheries in Alaska to monitor the bycatch quotas, determine when caps have been reached and closed fisheries, those basically were the objectives we started out with at the start of this year for the program. And though we've met those primary objectives, along the way we've also encountered difficulties and problems in carrying through on the program. A number of those problems and difficulties are the types of things that arise on a day-to-day basis involved with logistics and the implementation and operation of a large field program that can be handled on a day-to-day basis. A number of the problems are broader-based in nature. We've encountered problems this year involving timely debriefing of observers, that was influenced by available staff that we had to debrief observers as they returned from sea. Those problems were compounded by some extent by the concurrent return by domestic observers as well as a large number of observers from the joint venture fishery in Alaska and off the Washington-Oregon-California coast. We've dealt with those problems as of now to bring debriefing back into the normal five-to-eight day period of time. During the time that problems were experienced debriefing was taking about two-and-a-

half weeks. Other problems experienced throughout the year involved communications with observers, the receipt of information needed for inseason management of the fisheries from the observers and the flow of that information into the data system which the Regional Office requires to make their weekly estimates. We don't have a uniform and single source of communication with the wide range of vessels that participate in the domestic fishery. In the foreign fishery we had the Coast Guard as that focal point. We don't have that. We receive communications, the weekly reports from observers, via fax, via telex, via phone call. We don't have the capability at this point, it hasn't been easy for us to go back to get clarification when we've questions about the information that's been transmitted to us. It's a problem that we continue to work on and that there are potential solutions but it's a problem that's not going to go away. The importance of the communication problem is in the fact that our ability to receive the information from the observers and make that information available to the Regional Office for the inseason management of the fishery, we've experienced difficulties with that. It's created problems in terms of the quality of the data, it has resulted in some difficulties. . .[unintelligible]. . .we've had to produce those estimates. On top of communications and debriefing, a number of problems continue to arise, questions concerning the way the observers conduct their sampling, you've heard before you at different times members of the industry question whether the data they collected was collected in a unbiased fashion. The observers are returning, as we are able to debrief observers we have to address those questions. With those things in mind, within the program and within the region, we sat down this summer to take a look at the problems that have been experienced and what was needed to resolve those problems so that this basic foundation of information on which our current management and future management is based, could be corrected. The measures that are required to take care of those things are going to take staff time and resources throughout the remainder of this year. Most of these things are correctable and can be dealt with, but they have to be dealt with first of all before we move on to many major changes in the situation and the programs you began to implement this year. After looking at our current needs to deal with the problems encountered this year, we also took a look at the requirements that would be placed on the program and on the data information system needed to implement the incentive plan, or penalty box, that was proposed by the Council at their June meeting. That penalty box program depends, for the most part, on observer information and that information being available on a real-time basis. It depends on that information being right. The program calls for vessels to be sanctioned in season in the event that they exceeded a standard bycatch rate that was either an in-season floating average or a standard set ahead of time. Throughout this year, as I said, we've experienced problems with observers, both in the quality of the data received and our ability to debrief them. In order to be able to move forward and deal with an incentive program that takes place in a real-time fashion, those problems have to be resolved. We have concerns about the variability associated with observer data, how readily we can detect that a vessel has exceeded the fleet average, and the need to debrief observers on the spot so that actions aren't taken inappropriately without knowing what the data shows and having a reasonable expectation that information is going to indicate that the vessel did exceed those rates. The resources that we currently have available to us are stretched basically to their

limits. Those resources that the people involved with these programs, their efforts at this point are directed towards correcting some of the problems we've experienced this year and to add on top of that all the requirements that would be needed to implement the type of program proposed by the Council for 1991 exceed what we have in terms of capability available to us. I guess with that as a background, then, I'll turn it over to Mr. Pennoyer who will lead you through what we feel we can reasonably accomplish with regard to an incentive program this next year.

Pennoyer: Russ, thank you. I think that you touched on several of the items that need to be addressed and are addressed, I think, in the letter that was sent to Clarence on September 21st. This report was presented to the Ad Hoc Bycatch Committee at the meeting in Seattle in early September and the discussion result was that we all recognized that an incentive program was still probably the number one thing we wanted to get at and while currently we're still dealing with time/areas, gear, and so forth that, again putting the onus back on the individual fisherman to modify his behavior to achieve some particular bycatch result seemed the way to go. Given the constraints on the program that Russ has outlined, we looked at possibilities for next year and what we might accomplish if in fact we don't suffer some significant budget reduction and hopefully get some increases. The letter goes through those, points out that at the June meeting and even before that we had testified that we'd have to look at the penalty box situation and obviously our capability to carry it out was dependent on our resources. As Russ pointed out to you, the verification of observer data is not going to be timely enough to do in-season enforcement of incentive programs. The delay in actually debriefing the observers, verifying the data, getting it into a stage where we feel comfortable in a prosecution, for example, may take up to a six-month period of time and that makes immediate vessel suspension something that would be very difficult to carry out, and probably not effective. Another problem we ran into is that looking at the fleet average as the standard to prosecute or to sanction vessels individually adds another element of variability that's going to be very difficult to deal with. It's again something that would be computed well after the fact; there's a great deal of variability within that fleet average, and in fact trying to both iron out the problems with the individual vessel data and then apply it to a fleet average would be very difficult. In addition to that you're also having a difficulty in setting a standard for an individual because again the fleet average might not be computed accurately for a considerable period of time after the fact, so the individual doesn't have a very good standard to operate against. I guess, given that discussion, we're going to advise that fixed average rates observed during earlier fisheries, either 1990 DAP fisheries or historical JVP fisheries be used as a basis for acceptable performance standards in 1991. And as I get into the procedure we would go through here, this is something that, having given you that general outline, is going to take quite a bit of fleshing out and the staff I think under instruction would be prepared to do that and bring it back to the Council in December. We have to do further analysis of the observer data base before we can determine the extent of seasonal differences and bycatch rates and come up with standards that might be appropriate. We need to look at the variability in the data so we can describe to you the variation in that standard

under which we would be able to take action. I mentioned the vessel suspensions being ineffective. That much after the fact we have concerns that any suspension process might be applied against a vessel whose operator had already gone on to some other total activity; it might not fit in with the schedules of openings and closings of fisheries the next year, it's just a different concept than the one we had originally of immediate action being taken with a vessel that's currently in the fishery. We're going to recommend, however, that we do have a civil penalty action taken after the fact. This allows fines of up to $25,000 for each violation, permanent sanctions, or even vessel forfeiture. And this could be taken after the fact at the time that the data had been analyzed and we were secure in the action that would be taken. The other problem is the fact that we ended up with too many fisheries; we just have too many fisheries and too many categories to monitor under the proposed penalty box and I don't think that we're going to be able to handle anywhere that number. I think our position is that we ought to take the highest priority ones and attempt to carry out this post-season civil penalty, or post. . .[unintelligible]. . .civil penalty action against only those. And we had indicated to the Bycatch Committee we thought those would be the DAP flatfish fishery, the JV flatfish fishery, and the DAP trawl fishery for Pacific cod. So, in effect I think that what Russ and I have said is that we can't promulgate the regulations, or actually can't effectively carry out the program proposed currently under Amendment 16/21. We do, however, believe that an incentive program is possible. We concur and support its importance and want to put the effort into it to carry out some form of incentive program in '91, and I think the one we've generally described here would be feasible. That brings us to the problem of how to do this. Sixteen/Twenty-one is in front of the Secretary. **[Changed to Tape 18]** I guess what we would propose is that the current penalty box provisions under 16/21 be in essence rejected, disapproved, and the Council would then submit a revised regulatory amendment accompanied by the appropriate revised regulations to the Secretary. After the Secretary receives the amendment he must approve or disapprove the amendment within 60 days and promulgate implementing regulations within 75 days. Given that schedule, we could have the revised incentive program in place and implemented by April of 1991 and the specific actions that would be required are outlined on page 4 of your hand-out. September 1990, the Council receives notice of partial disapproval of Amendment 16/21 from the Regional Director, which you're getting, and directs staff to prepare a revised amendment package and proposed rulemaking; December or January meeting, the Council and public review draft of amendment analysis and proposed rule; pending public comment received at the meeting, Council directs staff to make necessary changes to analysis and/or proposed rule and requests that the revised amendment package be submitted to the Secretary for 60-day review and the revised amendment and implementing rule be effective 75 days after being received by the Secretary. I think that, again, we share the Council's and everybody's frustration with trying to deal with the bycatch issue. We remain committed to an incentive program as one of the best ways to approach it; perhaps the only way to effectively approach it, and we simply must develop that within the constraints of our capabilities. As Russ said, this is the first year of our observer program in the DAP fishery. We have not even had time to analyze the data, to really judge the standards we're trying to hold people to, and we haven't had time to get the program up to the point that we think

it provides as timely inseason management data as we would like. We're going to have to do all those things and we are in the process of doing them, but I think that means that we're not going to be able to implement any type of an elaborate inseason incentive program in '91. We would hope that what we propose would still have the effect of reducing bycatch rates in the fisheries that we deal with.

Collinsworth: Thank you, Steve. Are there any questions for Mr. Nelson or Mr. Pennoyer?

Wally Pereyra (CM): First, Russ, I want to publicly compliment yourself and the program for I think you've put together a fine effort given all the difficulties and so forth, large fast start-up here in getting a lot of observers out. One of the questions that I had has to do with the problems that you face. Is it one that you don't have the sort of system organized, conceptualized, as to how to carry this forward, or is it more a question of funds and personnel to implement this type of program that's in the 16/21 amendment?

Nelson: I think it's a combination of both to begin with. I think, to begin with, the concept of how the whole system needs to work, including the incentive system, and by the whole system I guess I'm referring to our ability just to make sure and manage caps inseason and then the incentive program being the second step of that, needs to be improved. Under the foreign and joint venture program, over the years we developed a fairly detailed system that utilized both observer data and data reported from the fishery to make sure that our estimates of groundfish catch and bycatch of prohibited species by foreign fleets were as good as we can produce. This year we hit the street running with both the observer program and the catch monitoring program that utilized the new data coming from observers as well as from the fleet. And a lot of those checks and balances that were part of the old program didn't have time to be built into that. Those have to be done first. The first thing that we have to do is know how much bycatch has been taken, how much groundfish has been taken. So that has to be taken care of and that is in the process. In terms of the incentive system, I think, again, we have a concept of how it can work, of what the Council wanted; the difficulty we have is making the step from the observer providing the information and then legally having to be able to defend that information and make sure that information is sound before a vessel's sanctioned and laid up. To do that, we need to be able to debrief observers on the spot, to be able to look at that data and get a feeling for whether or not for the period of time that we're looking at a particular vessel the variability from the haul-to-haul type of information that's sampled by observers really does indicate that boat has exceeded the rate, or is it that that information can't tell us that statistically and wouldn't hold up if challenged. If the data shows that, has the observer collected in a proper fashion so it's unbiased and representative. We don't have the resources right now available to do that type of thing on a real-time basis. We know what has to be done, but it's going to take us some time to get to that point and it's going to take us more resources to be able to deal with those problems to implement than we currently have available. At present, it's everything we can do to keep this program running on a day-to-day basis and deal with the problems we've

already identified that have to be taken care of in the basic management of the fishery itself and we don't have what's needed to go the whole next step on what was proposed by the Council.

Pereyra: Following on to that, I view the incentive program, penalty box program, extremely important. The impacts of not being able to properly incenticize the system so that the fishermen will in fact have the incentive to avoid bycatch and thereby the target fisheries to be taken, the impact is substantial, both dollar-wise and job-wise and so forth. So, in that regard, has the importance of this within the whole NMFS system been recognized to the point where you have actually had re-programming exercises at the Center, at the Region, Washington, DC, to provide you with the kinds of resources that are necessary to implement the program?

Pennoyer: Well, maybe I ought to try that, Wally. We have some very good budget initiatives this next year and I guess our assumption all along has been this first year we're going to look at the information, find out where we were, and better organize the aspects of the program that needed to be organized next year. At this stage we have not undertaken those items you've talked about beyond. . .we have added some people in the Region and we have added some analytical help at the Center. Our assumption was that next year's budget was going to get us where we wanted to go although, again, building that staff into a operating program is not something that hits the ground the minute you get the budget. As you're well aware, right now I think the total budget question for next year, even the question of employee furloughs, is still up in the air and until that's resolved we don't know where that's going. If we get the funds that we had requested and which I think industry very ably supported our getting in efforts in Washington, we will not be in bad shape. But, again, it's something that we probably wouldn't have fully implemented before the first of the year and that's still just getting the people there and hired is something that would happen after the first of the year. I think there's. . .[unintelligible]. . .and I think it's not just at this stage staffing. It's looking at the data and being able to tell people that we can carry out 16/21 inseason. We do not have a track record of looking at the variability of observer data, how that's going to affect our ability to state exactly where vessels are relative to the inseason sanctions. We don't have that and. . .

Pereyra: I guess, and I don't want to get into a big debate here, Mr. Chairman, but I just wanted to clarify. I guess the question is, has there been any re-programming within the Region or Center, Bill(?), or within NMFS to provide additional staffing, additional funding, to help accelerate this, this program. Or have we just say, well let's see what we can do in the next budget cycle and we'll kind of leave it where she is and. . .

Pennoyer: We're in. . .I mean, this is the next budget cycle, starting in four days. So the assumption is that we're going to have additional resources. We just don't know exactly that's the fact.

Pereyra: How about within the existing resources that are already there? Has there been that sort of prioritization that's taken place?

Pennoyer: If in fact we do not get what we think we're going to get, yes, we'll have to do that. We have not. . ., within the Region we have added some people already and not enough, but we have a couple positions already; they're looking at inseason data. But in the Center we've added analytical capabilities, we've transferred people from other programs such as the aging lab to work on this, there have been transfers. They do not respond to a penalty box application; we have not done enough to carry out even probably what we're proposing here. This will still require additional resources and I assume they're coming and if they're not we're going to have to step back and take a good look at it because I think we agree with you and have stated we do, that there is very great priority to this within the Region. Nationally, everybody's got priorities and we'll have to go out and make some arguments.

Bob Alverson (CM): Steve, on page 3 of your letter you indicate to the Council that you or the Council would need to revise the amendment accompanied by appropriate procedures to the Secretary. At the meeting we had of the Bycatch Committee in Seattle when you initially informed us of the inability to carry out the full penalty box program, there were discussions on whether we could break out certain fisheries such as having a penalty box only focusing on bottom trawl cod, pollock fishery, or only on the DAP/JVP flounder operations rather than looking at it all. I don't see an option that you or the Service is suggesting in terms of a direction that the Council take. Is that what we should be asking the public to testify to in lieu of not having the funding to do it all, of which fishery should be focused, do you have a preference of where the biggest problem area is and what funding and personnel that you do have that we can orchestrate a smaller penalty box that looks at one or two of the problem areas in the Bering Sea.

Pennoyer: Mr. Alverson, a little farther up on page 3, under item 4 we make a couple of recommendations and I would assume from public testimony and the AP's discussed this, I know you're going to get some others or maybe some alternatives we should look at. But we had suggested looking at what's already in 16/16a and delays in seasons in some of the other measures that are in there, we figured that the DAP flatfish fishery, the JV flatfish fishery, and the Pacific cod DAP trawl fishery in the Bering Sea would be the important ones to deal with.

Alverson: Can you do all three of those, or. . .?

Pennoyer: Our suggestion was we would try to do all three, that's correct. In other words, we are proposing having an incentive program. It's just a little less timely. It's still a penalty box in effect, it's just less timely, less direct in-season action, and had been proposed for less fisheries.

Alverson: Follow-up question to Russ. In discussions I had with some people in industry and observer contract people yesterday evening on this penalty box, in all likelihood the penalty box is going to be implemented after an action takes place because of the delay. What do you see as a conflict, because I think I see one, but since you have to run the program and somewhat be responsible for these observers, if an observer is on a boat and during the time frame he reports something and two months later he's still on the boat and the word comes down that that boat goes in the penalty box and obviously the whole crew knows that observer's data base resulted in that action, I'd like your reaction.

Nelson: I think the. . ., I know within the program there's a real concern about the placement of the observer in that type of situation. Essentially what you're doing is putting the observer in the compliance role of making sure that that vessel adheres to some standard. We've been in those type of situations before to some degree under the foreign program. If you go back in time, Japan and the foreign nations would take the quotas and allocations that were given to them by the U.S. and they divided them among their fleet. Many times giving individual vessels unrealistic amounts of bycatch that they could harvest. What resulted was a hard job for the observers. A number of situations where people tried to bias samples, hiding sablefish under floorboards, and things like that. So, we're aware of that. By the same token, we're also very acutely aware of the need for an incentive program to deal with the issue of management of bycatch in the domestic fishery and to be honest I don't see a way around of not putting the program and the observers in that position. I think from our standpoint the most we can do to distance the observer from the individual action on the scene does help that to some degree, but it's not going to get away from it. To that extent, too, I think the people in the fishery this year, some of them do view the observers already in that position, that the data that they collect is used to close the fishery, the quotas they're taking, and though it's indirect it comes back to the individual observer on their boat. But, it's something we have concern about, it's something I know the contractors and the observers are concerned about, and it's something that I think that as we move farther ahead in terms of vessel-by-vessel management and compliance, we have to decide how far you take the observer in the program in those roles. But at this point I don't see any way around the incentive system.

Collinsworth: Mr. Cotter, do you have a question or are you going to make a report from the Bycatch Committee?

Larry Cotter (CM): Well, I'll do both.

Collinsworth: If you have a question, I'd like to take that first, see if there's any other questions, then I'll ask for the Committee report.

Cotter: O.K., I have two questions, Mr. Chairman. Steve, I think all of us are supportive of. . .I think all of us feel for you and the difficult position you find yourself in. What happens if your budget is not increased? Are we then. . .is it more likely than not that we will not see a penalty box program implemented.

Pennoyer: Well, you know I can't promise resources that aren't there, but I guess it would be our intent to try our best to get the resources to do the level of program we have indicated. That obviously is going to compromise the time involved and the delay in finalizing the data for prosecutions, it may impact our ability to handle certain fisheries, but first of all we need the observer data in season as timely and accurately as possible for management of TACs, management of bycatch caps. That's a given; we cannot. . .this program is not going to go away with reduced or no increases in budgets. Second, I think we all recognize the importance and priority of an incentive program and of getting a handle on bycatch management. This had not been an easy couple of years in dealing with bycatch and I don't think there's anybody from Washington, DC office to the Region to the Center that feels that this is not probably the highest priority program in the Region for management right now and second perhaps to the actual accurate monitoring of TACs and closing of fisheries from that standpoint. So I guess my answer to you, it may be a matter of degree but the program's not going to go away.

Cotter: The other question is, the proposed amendment approach that you're suggesting, are you suggesting an enabling legislation type of approach where we don't define those three particular fisheries necessarily but we provide the Regional Director with the authority to establish a program so that we could expand it or contract it in the future?

Pennoyer: I think that's exactly how we would go. For this season we would try and make the decisions and commitments with your assistance on which ones had the highest priority but certainly that would be preferable, to not lock it in because if we suddenly had windfall gains of some kind and could do 22 fisheries, we'd probably try to do 22 fisheries.

Ron Hegge (CM): This is to Steve. I was a little surprised in here on the recommendation by you that you go to civil penalties under this. I'd always envisioned this as more of sanctions, and this kind of takes on a whole new outlook, particularly where a vessel under certain fisheries would be subject to substantial fines and even forfeiture and yet other vessels in other fisheries perhaps having far greater bycatch would be subject to nothing. It troubles me, and also relating it to the observer program where the burden of proof is almost on the observer and some of the things mentioned in there, that vessel skippers will have changed and any number of things could have taken place, and yet this would be put on the vessel months afterward during debriefing or something of that sort. It kind of troubles me that it's a whole new outlook on the program for me.

Pennoyer: Well, I think, Mr. Hegge, that we would all prefer doing it in all fisheries immediately and that would obviously be the preferable thing, maybe not from an observer's standpoint, but would be the preferable thing in dealing with the industry and with bringing home to bear that everybody was being treated equally. We never assumed we'd even be able to do the vessel suspensions in all fisheries, so there was going to be some discrepancy there, and that's obviously a fairly significant penalty. I think the civil penalty allows us the time to verify the data and be firm on what we're doing and I think prosecuting based on what we saw. . .inseason, would probably not be possible. It'd be a paper tiger because I don't think you could really carry it out. The data is too variable 'til it's debriefed. Our experience this year, since we first devised this system, and dealing with data all summer long is that until the observers are debriefed and you've gone through the whole process they're not going to be very firm in pinning a specific rate for a vessel versus a specific fleet average rate. It's probably just not possible at this stage. Maybe with improved communications and more facilities to deal with it in the future you could do that, but now there's just no way. And you still have to overcome the problem that observer debriefings take place after trips are done and even if that's speeded up, unless we call people off the vessels on a weekly basis or something which would be a very difficult task, you're not going to be able to have this stuff in a timely fashion. And, again, we do not just have the fines; we also have permit sanctions available. There is a spectrum of remedies available to us which I could ask Lisa (Lindeman) to generally run through if you wish. But we would be prepared by December to outline to you kind of how that would be treated.

Hegge: Has the industry in any of the bycatch meetings or anything responded to this recommendation? Because to me it's different than that proposed in the past and. . .

Pennoyer: Well, I think they certainly have. The industry wants a. . .that comes through loud and clear they want an incentive program over as many fisheries as possible, with as much real-time implementation as possible and I think that's obviously what we want too, I just don't think we can do it. I know we can't.

Bob Mace (CM): I think we all feel for you and we recognize where the burden of proof lies, but what's perplexing, I think frustrating to all of us is that this $6,000 a month we spend for an observer is adequate to determine when to shut down a fishery when the bycatch is reached, but apparently it's not adequate to identify the main offenders that are responsible for that.

Pennoyer: I think you can identify the quote main offenders, I think even with most cases the variability of the data, and we would propose to send inseason that type of information out to the fleets so people would know what our best estimate was of where they were. But in terms of bringing somebody in and actually prosecuting them and stating this rate is thus and such, until that data is debriefed it's a difficult thing to do. The other difference is that when you're closing fisheries down you're doing it on aggregated data and it's a whole different sampling

problem, a whole different analysis question when you're aggregating a bunch of data and dealing with one vessel and one observer where you may have the type of variability that the guy didn't sample right, or the ways the tows were sampled didn't match exactly how that operation was carried out. You don't know until you've talked to the observer and until you've run through the debriefing process.

Joe Blum (CM): Yesterday we heard some very effective testimony in my mind that industry on very short notice with a strong felt need implemented a penalty box program that was effective because they were able to remove from the fishery, not fine them 25,000 bucks six months later, but remove them from the fishery and therefore reduce the high bycatch rate that that particular vessel or that particular operation put on the resource and on the fleet. Recognizing that you've got budget problems and we've all got budget problems, has there been any thought on the Service's part in sitting down with industry and seeing if there is some way, some combination of a voluntary program, a required program combining the resources of the Service and the ability of the industry to help in this type of situation through a voluntary program or a requirement from the Service that in order to have a fishing permit in 1991 you have to be a part of a industry penalty box program, or some way of mixing what government can do within its resources and what industry can do within its resources to accomplish the objective. I find the proposal from the National Marine Fisheries Service to be a budget-driven proposal as opposed to a solution-driven proposal to deal with an issue that we've all determined to be high priority. And I'm not. . .that may sound critical, I don't mean as that. I'm wondering if there has been an attempt to try to skin the cat one or two different ways.

Pennoyer: We have in the Bycatch Committee talked about pools, pooling, voluntary, and other sanctioned programs and I think the Service is perfectly willing to provide the data as we are in the DAP flatfish fishery for any type of voluntary program that people are willing to come up with. We are going to make available in as real a time basis as we can, data to associations and individual vessels on what our first estimate, not prosecutorial basis, but first estimate, of what their individual bycatch is and will do that through the season as much as possible. Most of the things come down to the fact, though, somebody wants to back up whatever that incentive is with federal sanctions and legal sanctions and it's not simply budgetary. It's driven by time, it's driven by ability to debrief data, to verify its accuracy inseason to the point that you're willing to take somebody to court on and that is one of the difficult things that we've got. Maybe at some stage we can do that.

Blum: What about the possibility of making it a requirement in 1991, if you want a federal permit you must be a part of an industry association that is in fact doing what the flatfish fishery did this year? And then, as our time lag and our legal system catches up with that, perhaps in the second half of 1991 there could be federal sanctions.

Pennoyer: Well, we talked about pooling and perhaps Larry would want to get into the discussions the Bycatch Committee has had on pooling. It's complicated--how many pools, what size do they have to be, what constitutes being part of a program, how do you enforce it? Somebody comes in and says, we have this program now and we're going to kick these vessels out if they don't behave, and O.K., that's good, here's the data; nobody gets kicked out.

Blum: They did.

Pennoyer: They did, and six or seven vessels. You have a high-powered rock sole fishery or cod fishery that goes on for a longer period of time with a lot of vessels, and that's fine. What they did is great; I applaud it. It was an excellent effort. They have shown that in fact you can make this thing work, and they're doing it. And we would support any type of program of that nature. The difficult is backing that program up with federal sanctions.

Rick Lauber (CM): I think that you will be able very soon to get a program where it can be effectively used for management. But, I really doubt considering the current financial picture of the government that any time in the near future you're going to be able to, using the traditional means that we have at our disposal, to get adequate funds to have a program that will support a civil penalty program. Let me tell you why. When we aggregate this information and based on upon managers and observer data to shut down a fishery the fisherman, the industry, is virtually powerless to overturn that type of a decision. Technically, I think, the burden would be upon the. . .practically, the burden would be upon the person bringing the. . .trying to overturn it, and the courts would probably not do that. But when you get into a situation where you're imposing, you can call them civil penalties, but they're really sanctions, certainly when you're talking about large fines or confiscation of a vessel or something of that sort, there's going to be a tremendous incentive to fight those and you're going to have to go into court and your **[Change to Tape 19]** burden is going to be substantial in order to get a conviction, and I think that you would need at the very least to have NOAA General Counsel enter into discussions with the United States Attorney as to exactly what you're going to have to have in order to have a case stand up in court. Let me give you an example. Yesterday we had testimony, and I think they were objecting to some observer data and the way it was collected and so forth. Now, of course, the fishermen were shut down and there was never any challenge to that. Now using this is to say that there some flaws in the system; possibly overall the pluses and minuses balance each other out and it may come out pretty close to being correct. But the testimony as I recall went something like this: that the observer, this was a longliner, they were making a set, and they can't make the set along the slope, so they have to start in shallow water and set in deep water. The observer was coming out and taking his sample off the first part as they were picking up and did that repeatedly, not sampling from the other end. If that type of thing continues and this individual was charged with overfishing and that went to court,

you're dead. There is no way that you're going to be able to get a conviction in a case like that. Your burden of proof beyond a reasonable doubt is substantial, and you couldn't in that type of thing, you couldn't even make a case with a preponderance of the evidence. So, if you magnify this. . .take for instance the method that is used to determine the catch of that, say trawler, and from that you're taking how much percentage of the bycatch there would be. If you think that going into court and having somebody look at that bag and say there's 'x' number of tons in that bag it's going to stand up, there's no way. I mean, to show beyond a reasonable doubt that this was the case? There would be all kinds of testimony that that was. . .or if you're going to take production data and back it out and this type of thing, there's great fluctuations in seasons, different parts of the time of year, and so forth. So I think that we had better be realistic about this and the path we're now following may not lead us to where we want to go, which is to have some type of a incentive program, because when we get to where we're headed it may not do the job and if that's the case, then I think somewhere in the relatively near future the Council needs to know that so that we along with National Marine Fisheries Service and others can try to design another method of doing what it is we need to do.

Nelson: I think you've done a very good job of expressing exactly what our concerns are with going ahead with the program and I think what we've proposed to do is to try to implement something this next year to see how that works, to see how far we can go with it. Everything that exactly you laid out is a very good example and that's why we're concerned with trying to do something with vessels in season. Even if it comes down to that individual observer and whether that observer did his job right aboard that vessel and whether you can prove it, and it's something that I think has been in our minds as we've gone through this and is basically a real concern.

Collinsworth: Are there any further questions for Mr. Nelson or Mr. Pennoyer? Mr. Cotter, would you like to make any comments as Chair of the Ad Hoc Bycatch Committee?

Cotter: At some point during the Council meeting I'll need to give a report. Would like me to do that now?

Collinsworth: Well, to the extent that it focuses on this agenda item, 16a or 16/21, yes.

Cotter: O.K., Mr. Chairman, relative to the letter and the issue before us, the Committee did receive and review the letter from Mr. Pennoyer. Like the Council here we weren't too happy with the situation, recognized though that it wasn't a situation that was really under anybody's control and after considerable discussion we decided to recommend to the Council that we proceed with the recommendations articulated by Mr. Pennoyer in the letter. There are other bycatch-related comments that I could make, could discuss status of our proposal for next year, which will get into the penalty box pool system; can do that now or wait 'til we get to groundfish proposals.

[decided to wait until discussion of proposals]

Collinsworth: O.K., thank you, Mr. Cotter. Is there anything further from the staff on 16a, bycatch herring, or 16/21 at this time, before we take the AP report?

Weeks: Mr. Chairman, I believe there is an ADF&G staff report on the herring elements of 16a. Do you wish to take that now or would you prefer to take it a little bit later on?

Collinsworth: I'd like to take it now so we have all of the staff reports before us before we have the public comment.

Pautzke: Hal, do you have a staff report on the analysis, 16a, I see Joe Terry there and everything, beyond just Fritz's part of it? I think you probably need to walk us through some of the summaries of the analysis for 16a that's been given to the SSC and the AP so far.

Joe Terry (NMFS-AFSC): There are three hand-outs you're receiving right now. Two of them will also be on the overhead. The first overhead lists the changes that were made in the bycatch model between the June meeting and the document that was sent out for public comment August 27th. The first model was expanded so we could find. . .[intelligible]. . .determine the effects of the options for crab, halibut and herring. So basically what had been separate models for crab and halibut and a separate model for herring were combined. The number of fisheries defined in the model was increased. Weekly time steps were substituted for monthly or quarterly time steps. The pre-season allocation of TACs is no longer made before the model runs start. Previously a matrix inversion was used to make those allocations. Now, fisheries continue until they're closed by either TACs or PSCs being taken and the catch that they've taken at that point determines the allocation of species by fishery. Finally, the programming language that was used was changed, changed from Excel spreadsheet to a SAS programming language. This was done to allow us to merge the two models in the time we had, to make it easier to check for errors in the model, and basically to make it more expandable in the future. This change has made the model a bit less accessible to the public. SAS is available on PCs, so we used it on a PC, but again there are many technical advantages in doing it in SAS rather than continuing with an Excel model. The model is intended to provide you information that can help you in making decisions. The results of the model are not intended to make the decisions for you. Next are the four basic assumptions in the model. The first is just that the bycatch rates, by fishery, by area and by month are constant. That is, fishermen did not respond to anticipated closures in a way that will change a specific bycatch rate. There are two ways a fisherman could respond to this closure. They could say, a fishery is going to close, it's time to catch our fish, and that may increase bycatch rates. On the other hand, it's possible they could get together and take actions to reduce bycatch rates. In 1990 we saw that

there was a limited ability to do the latter. The second is that bycatch impact costs are equal to discounted foregone exvessel value, so again in the later figures when we talk about bycatch impact costs we're talking about the estimate for the foregone exvessel value of earnings in the crab, halibut and herring fisheries. Again, and these are in the commercial fisheries, they're not separate estimates of the effect on subsistence fisheries. Third, the reduction in trawl catch will not be offset by increases in fixed gear catch. The model includes only the trawl fishery. Some trawl catch, for example cod, can be made up with fixed gear; flatfish catch is unlikely to be made up with fixed gear. If fixed gear were included in the model, two things would happen: the reduction in groundfish catch would be reduced; the savings in bycatch would also be reduced. The net effect is unclear. Finally, assume that all retainable groundfish catch contributes to groundfish revenue. In doing this, the four following numbers were applied to groundfish catch that could be retained; the catch that can't be retained is the catch that's taken after the TAC is reached and the groundfish becomes a prohibited species. For the JV fishery, price of $152 per metric ton of catch was used; for the midwater pollock fishery, a price of $660 per metric ton of catch was used, and I'll get back to that number in a minute; the number for the deepwater turbot-sablefish fishery is $1639, and for all the other bottom fisheries, the number of $774 is used. In reviewing the model, and these inputs in particular, it's been determined that the midwater pollock number of $660 is too high. Fortunately, the closures for halibut, the closures caused by the halibut and crab caps do not affect the midwater pollock fisheries and therefore the runs that look at halibut and crab caps, the results of those runs aren't affected by the error in that number. If there had been time, we would have kept track of these figures by fish or by species, but again there was not time to do that. The third overhead talks about corrections that were made to the model after the August 27th document was made available. Our plan after the document was made available was to make some additional runs to test the sensitivity of the model to changes in parameter values. During that process we identified some corrections that needed to be made to the model, and that's the four listed here. The mapping from quarterly to monthly data was corrected, and this is one thing that caused large differences in our projections of herring bycatch under most of the runs between what went out in the August 27th document and our current estimates. The second, the apportionment of the Tanner crab PSC limits among fisheries, was also corrected. Third, the unconstrained run, for the runs with increased bottom trawl pollock catch was also corrected. The same unconstrained run had been used for both pollock apportionments and that gave a misleading comparison, so that has been corrected. And finally, the estimates of bycatch impact costs for crab were increased to reflect lower natural mortality rates for king crab and Tanner crab. The natural mortality rates that are now used are approximately those that are used by the Crab Team; they are now age-dependent. What these suggest in my earlier comments, the model continues to be developed. The model I guess will be improved as time permits; at the current time the model provides us, I think, our best estimates of the effects of the different management options we're looking at. The next issue is in the model and the results, bycatch impacts and the bycatch control costs are measured in a little bit different way so this has resulted in some confusion and the confusion will be eliminated, but. . .[unintelligible]. . .the model looks at changes in net gross wholesale value for groundfish versus

changes in gross exvessel value of crab, halibut and herring. The estimates of bycatch impact costs used in the analysis of 12a, 16 and 16a have been based on foregone gross exvessel value. It's been demonstrated that this tends to overstate the actual bycatch impact cost to those who benefit from the commercial harvest of crab, halibut and herring. The cost information necessary to estimate bycatch impact costs in terms of foregone net wholesale value had not been collected. The tendency for foregone exvessel value to overstate bycatch impact costs has not changed the conclusions that can be drawn for the model results, or estimates. And, finally, efforts are underway to allow us to estimate bycatch impact costs in terms of foregone net wholesale value of crab, halibut and herring. Next we have figures that provide our estimates of the effect of different runs or different management options on, first, halibut bycatch. Run number one is the unconstrained run, that's no caps, and it's assumed that there's no vessel incentive program in place. The second run is with the vessel incentive program in place, but no caps. The next three, those steps going up, oh, and in both of the first two runs were assumed that in the pollock fisheries, 75% of the pollock is taken with midwater trawl gear and that assumption is true for the next group of runs as well. The next run, run 3, is without any herring. . .[unintelligible]. . .measures and the crab and halibut and crab caps set at 50% of the 12a levels. And then the next is using 100% of the 12a level and finally using 150% of the 12a level. The runs after that, the level ones, are with the addition of herring bycatch measures, so again we're assuming 100% of the 12a caps for crab and halibut, and starting and going across, it's herring closure B with 1, 2, 4, and 8% caps, and then herring closure C, with 1, 2 and 4% caps. The single spike is the unconstrained case as with no caps, assuming there is a vessel incentive program in place, but with a 50/50 split of pollock between the pollock bottom trawl and pollock midwater fisheries. Then the stair steps going up, again, are with that same 50/50 split on pollock with 50% of the 12a caps, 100%, and then 150% of the caps. And then the next two are if you add the herring closures B with caps of 1 and 2% of the herring biomass. So from this you can see that in terms of halibut, the herring closures do not affect halibut bycatch measurably, probably. . .[unintelligible]. . . . The next is for herring and, again, this is where there's some of the major changes compared to the estimates from the August 27th document. Before the estimates of unconstrained herring bycatch were significantly higher than this. And, again, that was due to an error in mapping from quarterly to monthly and weekly data. So, again, the first two are with no herring measures, they're the unconstrained case, first without a penalty box and then with a penalty box, or the incentive program. Throughout the models the assumption was that the incentive program would be applied to crab and halibut but not to herring so that's those two are the same in terms of herring bycatch. In going across, again, the next three are with only crab and halibut caps of 50, 100, 150% of the 12a levels and then after that adding herring measures starting with, again, closure B, caps of 1, 2, 4, and 8% and then closure C with caps of 1, 2 and 4%. And then, again, the single spike is again with the change of the apportionment of pollock between the two pollock fisheries, the unconstrained case first, and finally first with the crab and halibut caps of 50, 100, 150% of 12a levels, and then adding the herring closure B and 1 and 2% herring caps.

Pennoyer: Joe, what were the last two again?

Terry: They are herring caps of 1 and 2%, area B closures. Those again are in addition to 100% crab and halibut caps, 100% of 12a. So we can see that the change when you increase the amount of pollock that's taken on bottom, their herring savings, that's offset by increased bycatch of halibut that we saw in the previous figure. The next is king crab. And again, it's the same set of runs going from unconstrained without an incentive program to unconstrained with an incentive program, then only halibut and crab caps of 50, 100, 150% and then adding herring measures to 100% crab and halibut caps, again first for area B closure and then area C closure, and then finally the cases where we increase the proportion of pollock taken on bottom. And the last species is C. bairdi Tanner crab. And again, I think you all know the routine now. The two unconstrained cases without an incentive program, with one, then with only crab and halibut caps again 50, 100, 150%, then adding the herring measures and then the last group are with different apportionments to, increased apportionments, to bottom trawl pollock. The next figure attempts to summarize those effects in terms of dollars; these are the effects in terms of bycatch impact costs, again bycatch impact costs with an estimate of the foregone exvessel value in the crab, halibut and herring fisheries. The estimates of foregone exvessel value or revenue are based on estimates of the numbers of animals that would have survived between the time they're taken as bycatch and the time they would have been available to a target fishery and then the weight per animal in target fishery and the exvessel price in the target fishery. The foregone exvessel value is discounted to take into account the fact that there can be several years between the time of bycatch and the time the fish or crab would have been available to the target fishery. Basically a loss of $100 today is not comparable to a loss of $100 five years from now. I think we're all faced with that choice. If we take the loss five years from now because by putting less than $100 in the bank today you'd recover that loss in five years in, again, less than $100 today. The 5% discount rate was used in doing that. The next figure provides the same, but only for those cases where, again, in the pollock fishery, 75% is taken midwater. In looking at. . .studying the crab and halibut caps and looking at the herring measures, this is probably the appropriate comparisons to be made. So, again we start with the unconstrained case and no vessel incentive program, the unconstrained, or no cap case and a vessel incentive program in place, and the next three up are crab and halibut caps only 50, 100, 150% of the 12a level, and then adding herring measures to halibut and crab caps of 100% of the 12a levels. The next figure presents our estimates of the bycatch control costs. Bycatch control cost is the cost imposed on the groundfish trawl fleet by the control measures. In this case, this is a measure of the decrease in estimated gross wholesale value minus the variable cost. Where the variable cost is estimated as a fixed proportion of the gross wholesale value, and that was done for four types of operations, midwater pollock, deepwater turbot/sablefish fishery, JV fishery, and the other bottom trawl fisheries. Again, this is a place where a refinement could be made by breaking those out into additional bottom trawl fisheries but, again, there was not time to do that. In this case, an increase in bycatch control costs, that is the larger the stack, the worse things are. These are increased costs due to the options. On run number 5 where you see there's no change in control cost,

with 150% caps, the fishery is unconstrained; if bycatch is allowed then we estimate would be taken in the unconstrained case in run 2, and so the effects of 150% caps are estimated to be the same as the unconstrained case in terms of bycatch and groundfish catch. The next figure provides estimates in the reduction of net benefits; reduction in net benefits would be the measures provided benefit by reducing bycatch impact costs; they impose costs by increasing, I guess by decreasing, the net wholesale value in the groundfish fisheries. The estimates showed that in fact that the reduction in the net wholesale value in the groundfish fishery is greater than the reduction in impacts costs, so there are reductions in the net benefit. And these reductions in net benefit when you give the same weight to both the change in bycatch impact costs and the change in **[Change to Tape 20]** bycatch control costs, you give them different weights, you get different net changes. So, again, we go from the unconstrained case with no vessel incentive program. . .these are comparisons. . .in all cases now we're comparing what happens when you change from the status quo, which was defined as no caps, but a vessel incentive program in place, to one of these other alternatives. So, the first shows you the reduction in net benefits and when you go from again run number 2 to run number 3, that is the 50% caps on crab and halibut. And the next shows you what happens when you move from run number 2 to number 4, and when you move from run number 2 to run number 5, again there's no change because we have the same results for those two options. And, again, run numbers 9, 10, 11 and 12 are adding herring measures of closure B with 1, 2, 4 and 8% caps, and then runs 15, 16, and 17 are herring closure C with caps of 1, 2, and 4%. The next figure is a benefit-cost ratio. This is a ratio of the reduction in bycatch impact costs to the reduction in net wholesale value in the trawl fleet. And, again the benefit-cost ratios are what you have if you give equal weights to bycatch impact costs, the change in bycatch impact costs and the change in bycatch control costs. And, again, we're talking about benefit cost ratio when you change from the status quo, or run number 2, to these other options. And, the highest is just about equal to point one. . .[unintelligible]. . . The next figure, in public comments there was a question about crab mortality caused by trawl in addition to what comes up in the net, the possibility that in fact some crab are killed on the ground and don't come up in the net. To allow for that possibility, estimates of the benefit-cost ratios were made if you increased the estimate of crab bycatch by a factor of 10. I'm not suggesting that that is the difference, but just if you did that. And what we see is, again, the benefit-cost ratios are, if you weight the benefits and costs equally, in this case the benefit-cost ratio in several cases exceeds point 2, but does not reach point 25. Again, these results are based on the assumption that in many cases there will be reductions in groundfish catch that would reduce the net wholesale value of the groundfish. I don't have it in an overhead, but there's a hand-out, it's a single page, it's titled "Catch and Bycatch Trade-offs" with a one metric ton reduction in retained cod catch. In the model that was used that generated these results and estimates of changes in net benefits and the benefit-cost ratios, we have a number of assumptions about groundfish harvesting and processing costs and there were the questions raised about comparisons made between changes in net wholesale value in the groundfish fleet and gross exvessel in the crab, halibut and herring fisheries. So to eliminate some of those confusions, an example is presented here of estimates of what would happen if the retained cod catch was reduced by 1 ton and what the

effects would be in terms of, obviously cod catch, the exvessel and wholesale value of cod, the exvessel and wholesale value of crab and halibut. And so, at the top of the table we have basically the assumptions that are being used in the model. For cod, we're assuming ex-vessel price of the shoreside deliveries of 15¢ a pound, that's round weight, wholesale price of cod at $2, a product recovery rate of cod of 20%. For cod recovery rates, at 18-20%; the current cod price is a bit over $2, but these are probably fairly close. For halibut, using a exvessel price of $1.51, that's for just weight, wholesale price at $2.50, and going from the just weight landed to product weight, there's no adjustment; the product is frozen, there's no weight loss. Red king crab, we have an exvessel price of $5 a pound, a wholesale prices of $10 a pound, a product recovery rate of 65%, going from the landed weight to product weight, again recovery is 65%, roughly. For C. bairdi, exvessel price of $2.20 a pound, wholesale prices of $4.30 a pound, and again product recovery rate of 66%. Again, the prices, the recovery rates vary a bit, but I think that these are reasonable figures to use. Then, the next assumptions are about bycatch rates and foregone catch. The bycatch rates came from the 1990 observer program estimates and they're based on retained catch in a cod fishery. For halibut, it's .0118 metric tons of halibut per metric ton of cod, of retained cod, it's .9 red king crab and 4.6 bairdi per ton of cod. The next column are estimates of the foregone catch. These estimates were not discounted to account for the differences in years. . .[unintelligible]. . .the changes in natural mortality and growth are taken account of though. Halibut Commission estimates that there will be a 1.6 factor offset of halibut quotas over time due to halibut bycatch mortality, so if you take that figure of 1.6 times. . .[unintelligible]. . .you get a reduction in halibut catch, foregone halibut catch per metric ton of halibut bycatch, of about 35-whatever, 3530. For crab it's estimated that the foregone catch is 4200 pounds per thousand pounds taken as bycatch, per thousand crab mortality, bycatch mortality. And for bairdi, it's a thousand pounds per thousand crab. Well, using those assumptions, then we get the estimated effects at the bottom of the table. For halibut, again if we're going to reduce cod bycatch by one metric ton and we use the bycatch rate, then we can get what the reduction would be in halibut catch and this is a just weight,. . .[unintelligible]. . .so it would result in a 31-pound reduction in halibut catch with $1.51 as exvessel price, that's a $47 dollar. . .I'm sorry, these are increases, 'cause we're decreasing cod catch and increasing the amount of crab and halibut that can be taken in the future. There would be a $47 dollar increase in exvessel value in the halibut fishery and a 31-pound increase in the wholesale sales of processed product with a wholesale value of $77.50. For red king crab, there would be a increase in crab catch of 3.8 pounds, that would be about $19 exvessel, that'd be 2.5 pounds of processed product with a value of $25. C. bairdi would be 4.6 pound increase in catch at a value of about $10 exvessel; it'd be about 3 pounds of product weight with a wholesale value of about $6.60. And then we have the total of the increases in halibut and crab catch in value; increases in exvessel value, $76, increase in wholesale value is $109. That's offset, the other effect again would be the reduction in cod, we'd have roughly 2200 pound reduction in cod landings, that would be a $330 reduction in exvessel value, 440 pound reduction in product weight, again using 20% recovery rate for filets, an $880 reduction in the wholesale value of cod. Again, these numbers are for one fishery, the discounting wasn't used so they tend to overstate the increases in crab and halibut to some extent, but it gives you again, with

pure assumptions, some ballpark figures of the trade-offs. Again, these trade-offs don't indicate what you should do; it's information that you can use in making your decisions. The last set of hand-outs provide numerical estimates for the runs that can be compared in. . .[unintelligible]. . .different issues. I don't know that we want to go through them now but, again, they're for your information. The first one, table 1, can be used for looking at crab and halibut caps, so it looks at, again, run number 2 which is unconstrained but with a vessel incentive program and then crab and halibut caps at 50, 100, 150%, again with the vessel incentive program. The next table looks at first run number 4, with only crab and halibut caps at 100% of 12a level, and then what happens as you add herring measures. And finally, the last table, the columns in the last table should be compared in pairs. They're what happens when you change the apportionment of pollock between midwater and bottom trawl, and if you look at it in terms of pairs, all that's changing between those pairs is the apportionment of pollock. Again, the figures summarize information, for those who want more detail it is available here.

Collinsworth: Thank you. [Council took a recess] . . .Before we receive Dr. Funk's report, are there any questions on the presentation?

Alverson: I have several that would take some time and perhaps we could hear Mr. Funk's report and then take questions on the two of them.

Collinsworth: O.K., please go ahead.

Fritz Funk (ADF&G Staff): I don't have a full report; you've already heard most of the key elements of the herring analysis included in Joe Terry's presentation of the model and the analysis we did. I just want to point out a couple of key features about herring that I felt we needed to highlight. One is, since we talked to you last we've changed our estimates of the bycatch rate of herring in midwater and bottom trawls. You'll recall in the June meeting we had analyzed some data that indicated the bottom trawl herring catch rates were much higher than midwater trawl. We've gone back and analyzed that data and thanks to Dave Fraser's sharp eye we found a problem in the way the midwater trawl tows were being classified. Broadly speaking now, midwater trawl and bottom trawl herring bycatch rates in the same time and area cells are roughly comparable. The other thing I wanted to point out was that in your discussion and consideration of herring caps you'll note in the model's analysis where we set caps that are 1%, 2%, 4%; the herring bycatch is actually greater than that. For example, when you set a 1% cap with the herring winter savings area B, you actually end up with 2.3% bycatch. What our strategy was in setting the time/area closures for herring was to close the core areas of the herring distribution; there is herring bycatch that continues to accrue outside those areas and during the April and the June meetings we went through rather lengthy discussions in the AP to determine what the areas should be and we took into consideration locations where the groundfish fishery was fishing, in addition to the core areas of the herring

distribution. So it's important to consider that the cap is not necessarily the upper limit of the herring bycatch; herring bycatch will continue to accrue outside those areas. And you'll note in our figures in our presentation to ;you that we just went through that the control costs for the herring measures were relatively minimal except there was a noticeable difference, not much, but it was evident in the drafts for herring caps of 1% with the large winter savings area, area C, the reason why there's not much of a control cost under the herring alternatives is that these time/area closures are fairly small; there are alternative areas that the model can transfer fishing effort into when those areas close, so there's not that much impact in the model's calculations upon the groundfish fleet. It's contrast to the situation with halibut, for example, where you can close the whole Bering Sea and there is no place for the effort to transfer to. And one last point, in your deliberation of the herring caps and bycatch amounts you'll probably want to keep the 1990 bycatch in perspective. I'm not sure if you heard this in the NMFS report or not, but just to reiterate, 1990 bycatch of herring as of early to mid-September was 1,654 metric tons, that's both the JV and DAP components, that's 1.3% of the 126,000 metric ton herring biomass estimate that I reported to you in June. We will be revising our herring biomass estimates perhaps slightly; we come up with a formal herring forecast in November of each year, that's the number we presented to you in June after our inseason adjustments to herring biomass.

Collinsworth: Thank you, Fritz. Are there any questions?

Pereyra: In your calculations of herring biomass for Bering Sea, I apologize for not being totally conversant in what sort of method you use and so forth, those estimates are the total Bering Sea herring biomass, including all stocks, substocks, so forth?

Funk: That's right, that's the biomass of herring spawning from Port Moller up through Norton Sound.

Pereyra: O.K., how do you take into account the herring stocks for example along the Peninsula, in that area?

Funk: Port Moller area includes most of. . .the stocks that spawn there. . .there are some very small ones that spawn down the Dutch Harbor area out in there, they're not of a size that we have commercial fisheries on them. Port Moller is the furthest southwest along the Peninsula that we actually have a fishery on a stock that migrates along this route and into the herring winter ground in the Central Bering Sea. So it's Port Moller to Norton Sound.

Pereyra: Does that mean that there aren't any herring stocks more to the westward?

Funk: There may be; we've not identified stocks out there that are substantial enough that we'd have sac roe fisheries on. Obviously herring are a high-value product; when we see sizable spawning stocks we normally get requests from the industry to have sac roe fisheries on those stocks. Port Moller is the furtherest southwest sac roe fishery that we have.

Cotter: Can you provide a very brief overview of where this year's herring bycatch took place. Was most of it in Port Moller, did the shoreside guys out of Dutch take most of it, was most of it at sea?

Funk: I don't have a . . .Russ Nelson might be able to give you a little more detailed breakdown than I can, but the numbers that I've seen from him indicate that most of it comes from the Horseshoe area; of course this time of year we would not have expected to have seen much catch offshore; the herring are just now arriving on the wintering grounds and I'm not sure what industry's plans are for fishing out there. It's been largely the Horseshoe-Unimak Pass area fishing fleet. And you'll recall, of course, since we had bottom trawl closures, albeit there's some problems with the definition of on bottom and off bottom, most of it's been I guess what we would traditionally think of as midwater trawl.

Collinsworth: Any further questions?

Alverson: Mr. Terry, I have a series of questions to ask on the EA. I understand you're the primary author. On page (iv), a statement reads, "instead of having a mechanism that rewards each individual operation for its success in reducing bycatch, there is a mechanism that penalizes those who attempt to reduce bycatch and rewards those who do not." In the testimony and actions of industry that have been testified to before the Council, the DAP flounder operations that are going on under the current regime look like they will go the remainder of the year in terms of operating, and it would appear to me that the current mechanism has stimulated some useful actions of the trawl industry that benefit them, both in terms of significant gear modifications coming out of the gear industry, requests of this Council to change seasons to accommodate different bycatch rates. You refer in the next sentence as the current mechanism as being a "perverse mechanism." Is that a personal statement in relation to what the industry is actually doing? I see them benefitting from some of their actions.

Terry: I think in the document it states that if the industry can get together and act as one, then this problem goes away. The problem occurs when in fact the industry can't get together and can't control all its members and that has been the case during the 1990 fishery with this one exception. I think, again, this exception is for one fishery and they've been able to pull it off. Throughout 1990 overall they were not able to do that. Again, the mechanism that I'm talking about, during 1990 if a vessel, let's say it found itself in an area with high bycatch rates and decided well, it's going to reduce bycatch rates by leaving that area and finding another place to fish, that imposes

a cost on that vessel in terms of foregone fishing time while it finds new areas or moves to those new areas, so that will reduce the catch of that vessel. It will probably have little effect on the overall closures unless everyone else takes similar action, and the vessels that don't take similar action will be able to catch more fish than the vessel which you might consider well-behaved. Again, unless they can get organized, and they can in some cases, the fishery as a whole, it's difficult, as demonstrated in 1990.

Alverson: On page 2-2, you make a statement that, "for example, the cost of fishing either later in the year or at a lower pace to reduce bycatch or discard mortalities may be prohibitively high due to the race for fish." I did not see a data base to draw that conclusion. Would it be 'may or may not be'; is that more accurate?

Terry: With some species where in fact more fish are. . .I guess demanded by the fleet than the TAC provides, the fishery will not go throughout the year. If someone decides that they're going to reduce the bycatch rate by fishing late in the year, there may not be any TAC left for them to take. That would be a cost to that vessel.

Alverson: This cost refers to CPUE, and if CPUE is still larger than what the plant capacity is, you're still operating at maximum capacity.

Terry: That's correct. Again, if they fish in an area with lower CPUE and are not at their plant capacity, that imposes a cost, and most vessels would choose to fish in high CPUE areas just to reduce fishing costs whether they can maintain their plant or not. Again, there is the possibility that if you don't catch fish quickly, the whole amount that you can catch during the year will be reduced because the TACs can be taken, or the more important factor during 1990, the PSC caps are taken and the fisheries are closed.

Alverson: Lower on that same page you make the statement that "the marginal value of bycatch will remain a contentious issue. As a result the bycatch management decision process potentially will be less objective, more political, less equitable, and more likely to yield the wrong decisions." All of that based on a comment of the marginal value of bycatch. I'm not sure I see the supporting work for this conclusion. Is this a personal conclusion of your own, or. . .

Terry: No, it's not. If the objective of the Council is to minimize the problem of bycatch or minimize the cost of bycatch, there are in fact three components of that cost. There's the cost that's imposed on the crab, halibut, herring, salmon fishermen; there's the cost that's imposed on the trawl fishery in this case by controlling bycatch. It may be due to foregone groundfish catch or due to changes in fishing strategies or patterns, and finally the third component would be agency costs. So, again, from a national perspective the bycatch problem has these three components and minimizing the total cost of those three requires information on the bycatch impact costs, on

control costs and administration costs. If you do not have good estimates of bycatch control costs you cannot determine the right level of bycatch or the appropriate distribution of caps, for example amongst fleets.

Alverson: On page 5-1, in the model, the model is designed to look at the wholesale value of groundfish and then the conclusions that come out on page 6-5, top of that page, that analyze 100% of 12a PSC limits, there are numbers indicating gross revenue, gross revenue net of costs, etc., the values used for wholesale value of groundfish, whether the groundfish is landed shoreside or harvested at sea and processed, the halibut numbers are in exvessel price of iced fish. These gross revenue numbers of halibut do not include the gross economic benefit to the nation of the wholesale level of halibut, do they?

Terry: I addressed that earlier. Probably. . .[interrupted by Mr. Alverson]

Alverson: Does it include the gross wholesale value of. . .

Terry: It does not include the gross wholesale value.

Alverson: And it does not include the net additional value that is generated from the fisherman level through the wholesale value, does it?

Terry: Our preliminary estimates indicate that gross exvessel value overstates net wholesale value.

Alverson: This does not include the profits that the processor is generating in the wholesale value.

Terry. Yes it does.

Alverson: Of halibut?

Terry: I wasn't able to check halibut; I checked for crab and that is the case. There was an analysis, appendix in the RIR for Amendment 16. . .[interrupted by Mr. Alverson]

Alverson: So it does not include the net benefits at the wholesale value of halibut.

Terry: Again, our estimate probably overstates that. That's the best information we have. . .[interrupted by Mr. Alverson]

Alverson: What do you mean by overstates. How can you overstate the value if you haven't included that segment of the industry that's involved in the processing and sale at that level.

Terry: My statement is that if you look at gross exvessel, that is probably greater than net wholesale and where that net basically looks at wholesale value minus the variable costs of processing and harvest.

Alverson: That assumes that the people that the fishermen are selling their halibut to are losing money.

Terry: No, it doesn't.

[Change to Tape 21]

Alverson: In addition, in your analysis you indicate that the groundfish industry loses 143,000 metric tons of product under 100% levels of 12a PSCs. You have not included in the model alternative gear type harvest, for instance of codfish. Is that accurate.

Terry: That's correct, and I mentioned that earlier. . .[interrupted]

Alverson: And in this case, then, taking 1990 as an example, from the point of shutdown of the codfish trawl operations the alternative gears had been landing at the rate of about 2,000 tons a week. That would be an additional approximately 40,000 tons at $800 a ton wholesale, about $40 million dollars that alternative gears could harvest that your model would not have predicted for 1990.

Terry: There are two things. Most of the analysis has been done in terms of net wholesale value groundfish, so the 40 would be reduced considerably. The other thing that the model doesn't take into account are in fact the. . .[Alverson interrupted]

Alverson: Terry, this is. . .in terms of groundfish it gives all three. You give a gross revenue for basically the trawl industry, and if you're going to analyze this I assume it would be fair to present the gross wholesale value of what alternative gears will produced. And this understates what alternative gears would produce because it hasn't been included in the model, correct?

Terry: There are two things I'd like to say to that. One is in the analysis it suggests that there are number of measures and effects presented; the analysis in that document suggests that the appropriate one to look at is net wholesale value, not gross. Again, as I stated earlier this morning the model includes only the trawl fishery and

this had two effects and they go in opposite directions. It overstates the reduction in groundfish catch that could occur and therefore it overstates the decrease in net wholesale value. It also understates, I guess it overstates the reduction in bycatch as well because the fixed gear also takes some bycatch that's not accounted for in the model. The net effect is not clear. The fixed gear fisheries are not in the model at this time. I think the. . .[interrupted]

Alverson: You indicated that it overstates and understates a couple things; that assumes you know what the correct answers are. To what magnitude do these overstate and understate?

Terry: Many times you can identify the potential direction of error without knowing its magnitude and that's the case here. I think the one-page hand-out that you received this morning that makes a comparison in terms of. . .[interrupted by Mr. Alverson]

Alverson: Do you have an analysis of what it should be?

Terry: Of what should be?

Alverson: Well, you said it overstates and understates. I'm trying to focus the answer to what the variances, to what overstates and understates.

Terry: I think in many cases when we're talking about either biologic or economic parameters they're sometimes difficult to measure or there isn't time to measure them in as technically a precise way as we'd like and so we have estimates. Many times we can identify the direction of bias or error associated with the method we're using and, again, when you're making comparisons and the numbers come out close, and you can only identify the direction of bias and not the magnitude, you haven't done much. When there are larger differences it tends to be less of a problem.

Alverson: Joe, the model does not take into consideration normal discards of the non-PSC species. In 1991 the Regional Director will be required to take into consideration, in fact the Council in setting its TACs will have to take into consideration estimated discards in the trawl fleet and in the longline fleet groundfish industries. We've had reports from the National Marine Fisheries Service observer program in the cod operations at Port Moller that indicate potential discards of 40% of target species of cod, rocksole fishery discards of 35-40% of the target species of rock sole, and the Alaska Department of Fish and Game observer program showing discards ranging from 20-60% in different fisheries. If you're real conservative and assume just a 7% discard in the trawl fisheries, with our 2 million metric ton cap, that's 140 million metric tons, and if you look at page 6-5 of your analysis, at 100% PSC levels, a foregone 142,000 metric tons of groundfish. If we include any analysis of

discards its in all likelihood that it's the discards that will shut down these fisheries long before any PSC limits will shut down. . .is that accurate? The model does not include discard analysis, does it?

Terry: What the model does, it applies a fixed gross wholesale prices per ton of catch and those were on the second page of the hand-out and the overhead, basic assumptions. Again, for JV we assume that gross wholesale. . .well, in the case of JV, it's exvessel, but the gross return to the domestic fishermen in the JV operations is $150 per ton of catch. For the turbot and sablefish fishery, we assume that the wholesale value per ton is a bit over $1600 per ton. For all the other bottom trawl fisheries we assume it's $774; whether those numbers are correct or not, depend on a number of things. They depend on the wholesale price per pound, they depend on discards, and they depend on product recovery rates. For some of the bottom trawl fisheries, and again for the bottom trawl fisheries except for the deepwater turbot and sablefish fishery, they're lumped together and, again, if there had been time they would have been split out and we'd have better estimates. For some of the bottom trawl fisheries, this figure of $774 appears to be quite good; for some high, for others it's low. For that group of fisheries as a whole I can't tell you how high or how low it is.

Alverson: Joe, values of groundfish do not include any discount for discards. Example. Yesterday we had testimony from Dave Fraser talking about 85% usability of whatever resource he is talking about. There's no discount of the value due to discards in this model.

Terry: That's not correct. Again, what we do, we apply a price to catch; if that price is correct, when discards and product recovery rates are taken into account, the model's estimates are correct and again discards are accounted for. So, to the extent that the numbers are incorrect, they could be incorrect for one of three reasons: discards aren't properly accounted for; product recovery rate isn't properly estimated; or the price for product isn't correct. Again, it appears that for some of the bottom trawl fisheries the number is quite good; for others it's high, for others it's low, so it is implicitly accounted for.

Alverson: Joe, the EA speaks nothing, or very little, about conservation aspects of one fishery being shut down and another fishery being perhaps filling the void of harvest. For instance, on codfish. A recent report done by the Northwest Fisheries Center in conjunction with Norway Bergen Institute of Fisheries Technology out of Bergen, Norway, and the Alaska Fisheries Center, this was this year, draws a number of conclusions that in regards to codfish versus a fixed gear operation that there are a number of biological pluses for having the resource being taken by the fixed gear; in addition that the value of the resource is maximized by using the fixed gear. It would seem to me that these conclusions from the Northwest Fisheries Center in conjunction with the Institute of Fisheries Technology Research in Bergen, Norway, in terms of the biological impacts as well as

economic impacts are significant. Were you aware of this report out of your Center at the time you drafted the EA?

Terry: Again, we did not have fixed gear in the model, and so it's very difficult to analyze the effects of exchange of catch between the trawl fishery and the fixed gear fishery. Basically what you're suggesting is that this should be used as a measure to allocate cod between gear types. . . .[unintelligible]. . .the analysis did not address that.

Alverson: The analysis did not address that, but it seems that if the Center is aware of these types of studies and conclusions regardless of whether it's an allocative issue or not, it should be developed as part of a complete EA. Thank you for your comments.

Terry: I'd like to comment about fixed gear in the Bering Sea. It's my understanding that the estimate of bycatch rates for the fixed gear fishery are preliminary; the fishery hasn't fully developed. The question of when it will fully develop and fill any void caused by a decrease in trawl catches is unknown. It's basically difficult to estimate how rapidly, again, a reduction in trawl catch would be made up by fixed gear, and cod, it's much more likely than for flatfish.

Cotter: Joe, a couple questions. Did the model take into account the actions by the Council in Amendment 16/21 for a later flatfish opening and Greenland turbot to occur later in the year and then the hotspot authority and also the ability of the Council and the Regional Director to proportion PSC by season? Did the model take any of that into account?

Terry: It took all of that into account except the hot spot - that's part of 16a. It also assumed that there would be a vessel incentive program in place.

Cotter: If that portion, the assumption that a penalty box is going to be in place, if that is deleted from the model assumption based upon what we've been hearing today about the prospects for that occurring next year; would that substantially alter conclusions in the model?

Terry: It would result in a number of changes in the estimates. Obviously, the unconstrained case, the one that we showed you would be what we would define as the status quo which has higher bycatch. With higher bycatch rates, without the vessel incentive program any given set of caps would close the groundfish fisheries earlier. With a given set of caps, the total bycatch might not change very much, but the higher bycatch. . . is. . .there would be some increase but much of the effect would be in terms of groundfish trawl catch. With the vessel incentive program we're assuming that the 150% caps would not constrain the fishery. In the absence of a vessel

incentive program even 150% caps may constrain the groundfish catch. So, again, there would be changes in both bycatch and groundfish catch projected by the model. Those runs haven't been made, so I can't tell you exactly what they would be. The reason for assuming there would be a vessel incentive program in place is the industry has made it clear that they need one, the Fisheries Service has made a commitment to provide some sort of incentive system. The lack of one in 1990 appeared to be the source of a major problem for the trawl fleet. I think that there is a really good chance that there will be one in place.

Cotter: Lastly, Joe, you've been very open and candid about the number of assumptions and the variables that fit into the model. Indeed, on page 5-4 of the EA you describe the uncertainties associated with it and that some aspects of it are actually flawed. The real question, I think, for us is the veracity of any of the conclusions offered by the model runs, vis-a-vis the real world. Do you think that this model, that any of these runs are going to reflect the real world experience that might occur in the next year or so?

Terry: Well, I think there are two ways to simplify what we're looking at. I guess the first question is, do we think a particular set of caps will constrain groundfish catch. In 1990 the 12a caps did constrain groundfish catch. Going to the status quo for 1991 where we would have a delay of the flatfish fishery with the exception of rock sole, and the delay of the turbot fishery, it appears that those actions help quite a bit. So if 12a caps, if they're in place in 1991, everything else being constant, would not be as restrictive as they were this year. They would, though,. . .our best estimate is that they would in fact restrict groundfish catch. So the next question is, . . .and certainly the 50% caps would, I don't think there's any question about that. So the next question is, well if it does restrict groundfish catch, what sort of trade-off do we have. And, again, in the model there was an attempt to have more complete analysis of that. This one-page hand-out I gave you today is a very simplistic approach, but again with relatively low bycatch rates. If you actually constrain groundfish catch, you're giving up a lot of groundfish for the halibut and crab you save. Whether that trade-off is acceptable or not is for you to determine, but in giving equal weights to the either gross wholesale value or gross exvessel value of the different fisheries, giving those equal weight, and I'm not suggesting you do that, it's a questionable trade-off. So, again the questions are, will the caps constrain the groundfish fishery and, if they do, how much groundfish are we giving up compared to the crab, halibut, and herring we're saving. The model attempts to put together our assumptions in a way that they can be reviewed and commented on, put them together in a systematic and logical fashion, and you get the results. But, again, I think you can back away from the model and get some of the same conclusions.

Pereyra: Joe, from my perspective I'm not as concerned about the absolute numbers that may come out of the model, I'm more concerned about what sort of inferences I might be able to draw from the sort of "what if" kinds of analyses that are done as you go through the different runs. And following on what Mr. Cotter was just

discussing, the fact that it appears we're not going to have a penalty box program in place as was envisioned in 16/21, for 1991, and you mentioned that you did not have any runs without the penalty box in place except for the unconstrained run. I guess what I'd like to ask, is it possible for you, without a great deal of difficulty, to make a couple additional runs, say one that would have the 12a caps in place at 100% level and no penalty box, and then look at what they would be at 150% caps and no penalty box program. Would that be possible to do?

Terry: To answer that, I'll. . .first I want to say that there a number of us that have been involved in this project. Several people at the Center, including myself, and then Fritz Funk and Fritz is in the best position to answer that question.

Funk: It's possible, I'm not sure what time frame you're under here. If you intend to deliberate it and need that information this afternoon, I'd say no. Tomorrow, perhaps.

Pereyra: Well, we're certainly going to be taking this up again, I believe, in a day or two. I for one would certainly like to see this sort of a run performed because I think that's the real world, as imperfect as it may be, that's the real world we're going to be looking at and I would like to see it just to kind of get a feel as to how that might affect both the bycatch rates and the performance in the directed fisheries.

Pennoyer: Joe or Fritz, along the same line we've heard statements by industry in terms of bycatch rates that vastly increase before closures to industry incentive programs that have come out with a huge bottomfish/flatfish catch for very little halibut bycatch, and everything in between. We've talked about incentive programs that are penalty boxes in the 16/21 that when you went back and actually looked at the number of vessels sanctioned, did not have that dramatic and overall effect in reducing rates although the psychological effect of people wanting to stay out of the penalty might have another impact. It's difficult for me to sit here and quantify the relative value of the type of penalty box, either proposed before, or the one we are considering now, in reducing rates given the performance we've seen so far. Obviously they can be greatly reduced if individuals have the incentive to do it although at some cost. I'm not clear either how the original run was done relative to the penalty box versus non-penalty box, or what a new run would show unless I understand what type of weight you really give to that measure. I understand the presentation, Joe, very well, of the pound for pound what you end up with, or crab for pound, or whatever, but I'm not clear in terms of how we're going to predict the foregone groundfish catch at different caps without understanding that behavioral aspect a little bit better. Obviously the other measures taken do reduce it somewhat. We had 800 tons or so of halibut taken in the Greenland turbot fishery associated with a very small tonnage of Greenland turbot and if at least the preliminary rates we've looked at are characteristic, that would be dramatically reduced regardless of what type of cap the Council put on the Greenland turbot

fishery. So, I'm not clear what the penalty box run, with or without, is going to show us at this stage, or how you quantify that.

Terry: I think you're correct. Estimating how any incentive program will affect bycatch rates is speculative. I can tell you the process we use to estimate what bycatch rates would be with the incentive program that was envisioned two months ago. Basically we looked at 1990 data from the observer program on a vessel-by-vessel basis for a week, each vessel was put into a fishery based on its catch composition for that week for the whole Bering Sea, then we used the rule and we calculated the mean bycatch rate for halibut, king crab and bairdi crab for each fishery. Vessels that had more than twice the mean rate were flagged and then they were dropped from the fishery. It was a, I guess, a retroactive penalty. So then we had estimates of what the bycatch rates would have been for the year as a whole, by fishery, if the vessels with more than twice the mean rates had not existed, had not been there. In some cases, some of the vessels that would not have been there for the week, the week that they were over the rate by a factor of 2 (?). In some instances for some fisheries when we did this the bycatch rates for one of the species would actually go up and the reason for this is that a vessel with an excessive bycatch rate for one fishery may have had less than the mean bycatch rate for another species. So there's some trade-offs and that's one of the problems we're confronted with. It's a multi-species problem, both in terms of groundfish and bycatch species. Actions that are taken to reduce bycatch in one species can easily increase that of another and so there are tradeoffs between groundfish and bycatch and between different species of bycatch. Again, so the estimates of what bycatch rates would be with an incentive program are speculative. It's difficult to say how they will respond. We've seen in the past when vessels are given correct incentives they can do some amazing things in terms of. . .they can often do amazing things in terms of reducing bycatch rates. I think in terms of sort of the fall back incentive program that was discussed earlier today, in some ways in fact it may provide even an stronger, more effective deterrent to bycatch, or incentive for bycatch control than the penalty box. Again, I think we can make the run; again I think since the Fisheries Service and industry have identified a strong need for an incentive program there will be one in place.

Collinsworth: Any further questions? O.K., Thank you very much.

[brief staff report on the herring subsistence fishery at Nelson Island by ADFG staff]

Council took up discussion of this agenda item later in the day, beginning at approximately 4:20 p.m.

Tape 30

Collinsworth: O.K., returning now to 16a. Mr. Pennoyer?

Pennoyer: Do you want to do Amendment 16 first before you do 16a, which is the one already in process and has the decisions on the penalty box involved in it?

Collinsworth: I think that's a good suggestion, Mr. Pennoyer.

Pennoyer: I feel kind of constrained to make a statement here that I'd like to get out on the record, anyhow if I could. It deals with Amendment 16 and the penalty box, if you're ready to go ahead with that.

Collinsworth: Go ahead, Mr. Pennoyer.

Pennoyer: I think a lot of people have the impression, or may have the impression that we're not assigning a high enough priority to this program and that perhaps not applying enough resources and I suppose if you asked me I'd probably say the Northeast Region has more money than they need, or Headquarters has more money than they need, but I'm sure they wouldn't have the same opinion. Within this region we've scratched and clawed our way through this season, and that may sound dramatic but those who have called up and tried to find out information or wondered why things didn't happen as quickly as they should, the pressure on staff to get in regulatory amendments to deal with the analysis the Council wants on a myriad of different issues, the discussion of the need for survey data to be analyzed quicker so that we can get the stuff out earlier in the fall for the public to review, there are a myriad of demands. It is not something that we just have not tried to pay attention to. The observer program in Seattle and the regional staff that's tried to deal with that data inseason have really been stretched thin and so when we say budgets and personnel, it's not just a complaint that you might normally hear from a bureaucracy that is not getting funding it thinks it should get. This is a bunch of new programs with no increase in funding. As a matter of fact, with a rather steady decrease over the years, this region, and I'm including all aspects of it, have inherited a lot of new programs and a new fishery. This fishery did not really exist a couple of years ago. And the problems that come with it were not there. I think that's going to turn around unless the Gulf crisis or something else gets us, but we're faced now still with playing catch-up on problems that were in front of us this year, let alone advancing ourselves to a new program. We are committed to the incentive program. I like Bert's (Larkins) suggestion of getting together and taking another whack at this thing. We have another problem and that is that just technically, regardless of the data and regardless of people, we have a real problem upon reexamination of the data base and coming up with an inseason, real time, sanction program that would depend on an observer data base. It probably is not there unless we do things like call observers off vessels to debrief them in the middle of trips and that type of thing. So, functionally, I think we've got to look at the part of Amendment 16 that deals with the penalty box that's not implementable as designed. That doesn't mean that an incentive program is not implementable. But I think it does mean that we've got to get back and look at this thing and probably deal at least for now with after-the-fact penalties. Although, as Mr. Hegge pointed out, that

certainly doesn't have the degree of incentive of a guy who's on the beach next week. But the penalties may be substantial and I think as we work through this General Counsel at a future time will be prepared to talk to you about the general types of schedules; they're not light. They can include, depending on the Council and Secretary's decisions on the badness of a violation, clear up to vessel seizure and forfeiture. So I think we're not talking about not having an incentive program; we're talking about getting into one but not being able to jump into thirty different fisheries and multi species with an inseason, real time program starting January 1st. We're going to have to pick and choose. From a strictly technically bureaucratic standpoint in getting something done, if we take this amendment and we come up with the better idea, whatever that is right now and start to work on that immediately, my presumption is that maybe the Council could even, by conference agree to submission of whatever the better plan is to the Secretary with a review of that better plan at the December meeting. Now, I'm sort of. . .we need to do a lot more talking how we're actually going to structure that, but that's a possibility. That in normal process still doesn't put you in place January 1st. By the way, this is not just people to implement the program, that's going to include people to write up the analysis, people to get out the regulatory actions and submit them, and with all the other stuff you've heard going on, all the prioritization you're doing, everything drops something else off the other end. But I think this is a priority. The Council ought to recognize it as a priority, too, in terms of other workloads that may get shoved aside. So we've got two pieces; we have the wherewithal technically to do the program, which I think is going to come on, hopefully but maybe not as quickly as we would have liked, but we have an actual practical implementation problem with the program that's currently envisioned. So we are going to have to re-do the regulation; we are going to have to re-do the amendment, we are going to have to re-submit it. I think we can do that, and of course in December you could also, God help me ever proposing that, decide it was an emergency of some kind to add to the other five or six we'll probably end up submitting, and deal with it that way. I'm still not confident on a January 1st retroactive longer-term penalty type thing, but it seems to me we could proceed in that fashion. And if you chose after-the-fact penalties, and if we get the wherewithal I think we need we will certainly request the permission to get out from under the hiring freezes; we'll push every button we can to try and implement what we can, and that's about the assurance I can give you. It's not for a lack of people within this region not being reassigned to do this; we have been struggling to keep up with inseason TACs and monitoring of PSCs this season. We have reassigned people, we have not done other things we should be doing, and I think the system in general has suffered for all of that, let alone the penalty box.

Collinsworth: O.K., thank you, Steve. Well, it appears that the action the Council needs to take at this point is to acknowledge receipt and notice of a partial disapproval of Amendment 16/21 and then to direct the staff to prepare a revised amendment package and proposed rulemaking. Is there further guidance that is required, Steve?

Blum: Before we acquiesce to the Secretary, I think, with all due respect to Steve, that we ought not to let our respect for Steve and for the region and for the work they've done, cloud the fact that the system has let us down. I do not believe for one second that it has been this region that has let us down. I believe they have scratched and I believe they have clawed, I believe they have been creative and responsive. But somewhere in the system we have been let down and I'm not sure that it serves us well to simply say we give up. I think we should go on record with Dr. Fox and the Secretary that being let down by the system is unacceptable to the North Pacific Fishery Management Council. I think we ought to go on record as saying we think the region has done its job, we think the Council has taken an attempt to do its job and industry has been responsive and supportive. But somewhere the system has failed us and we do not want to tolerate that failure. What I am saying is, that we have an industry and we have a culture that we've just heard from a number of people that is in serious jeopardy based upon the inability of the system to deal with the management complexity that is necessary to do the job that was envisioned by the Magnuson Act. I think it doesn't do us any good; it doesn't do any other council any good if we don't face up to this issue and this time in a rather forceful manner. We don't have to be disagreeable but I think it is time that we disagree very firmly with Dr. Fox and the Secretary. I think we should say, dear sirs, we have read your response; we've understood your response; we reject your response. We are dealing with an industry, we are dealing with a culture that needs to be dealt with in a responsible manner. The states have given up authority over the last ten or fifteen years to the federal government to do the kind of job that needs to be done and now, once again, as with halibut, as with marine mammals, as with a number of other issues, we are not getting what we have agreed to be a party to, and we are not going to support any further that type of thing. I realize what I am saying is somewhat of a hero speech. I don't mean it as that. I mean that I really think it is time to draw the line in the sand. We have heard in the Fisheries Planning Committee and we have had great personal debate within the Fisheries Planning Committee that bycatch is the issue. Yes, we have inshore-offshore, yes we have moratorium, yes we have limited entry, but the realities of today are that bycatch is killing the industry and what we have heard this morning and this afternoon is bycatch is about to kill a culture, and I simply think we shouldn't stand for that. I think with support at the national level we can be creative and we can take some steps January 1st that can start to accomplish the objective we want. We're not going to get everything on January 1st, but if we get everything in '91 it will be because we have drawn the line in the sand and said we want it. And I would really urge us not to, because as I said earlier, of our strong support and respect for Steve and the region, to roll over this easy at this time, and I'm sincere.

Collinsworth: Joe, I think that perhaps the majority if not all of the Council holds your sentiments personally, but I'm not sure empirically and practically that we can do **[Change to Tape 31]** at this point to see a program in place in 90 days. I guess I would have one question, Mr. Pennoyer, before you may respond, and that is, have we received an official partial disapproval of the amendment from the Secretary?

Pennoyer: Mr. Chairman, I think you can take that as the letter we submitted to you, and I don't think. . .well, I'd like to go back a couple of steps. First of all, I think the plea for additional funding is a good idea. You've made that plea on several different occasions, one for economic data, analysis help, and some money was provided. Pleas have been made by several of the councils for additional help in running their operations. I can't tell you if the national operation is the problem. We have OMB, we have the Department of Commerce, we have a lot of other problems, and I think every area of the country has something. I grant you that we wouldn't think that their priorities were our priorities, but from TEDs in the Gulf of Mexico to vastly reclining fish resources in the Northeast Atlantic, they all have their problems and I think basically this is just symptomatic of a system that is underfunded with an awful lot of demands being put on it and I think I'd remind the Council, too, that in terms of what we have accomplished or not accomplished in analysis this year, as little as last Spring, bycatch was not the highest priority of discussion, and there are a lot of other things put out front that had to be done and a lot of this staff that spent analyzing, it was a high priority, but other things were also equally high priority, including sablefish limited access, the start of halibut limited access, inshore-offshore, all those things came down and were high priorities. As a matter of fact, at one time it seems to me I remember giving a talk about the problems we were going to run into this year and the fact that we couldn't treat 12a as simply something that we re-upped. We've never gotten past that point in terms of actually being able to commit a lot more resources to it. This is a new problem. I mean, I understand the frustration. I feel it very greatly myself. But this is not something that somebody's going through a federal budget planning cycle of two or three years to handle, and we're dealing with something that's not just a small amount of money to fix some unexpected thing that just popped up; we're dealing with a whole system that has a lot of demands. You want a lot of things done in a hurry and I think that's true. We've got overcapitalization, people wanted limited access, they want moratoriums, from week to week these priorities bounce up and just become overwhelming. We have requested additional funding; it's not here yet. I'm not sure the fact it's not here is Dr. Fox's problem. We have sea lions, we have other problems as well that become priorities that could end up really playing a major role in the management of this fishery. We're trying to address all of them. We've got extra sea lion research. . .money; the Council did make a point of the fact that it thought that was required; some of that was forthcoming. It's still short of what we will need to really do the fisheries-marine mammal interactions. I guess what I'm saying is, I would encourage you to go ahead and make your views known on the need, but I'm not sure that we can say that the Central Office just has not paid any attention to us; I'm not sure what their resources are. I'm sure they're hearing the same thing from a lot of different areas.

Blum: For, the record, Mr. Chairman, I said the system has let us down.

Pennoyer: Thank you.

Henry Mitchell: I would add my concerns to those of Mr. Blum, but it appears to me that we're in a situation where we really can't manage a number of these fisheries and particularly the ones that are having the largest impact in terms of bycatches which are affecting other fisheries and such, and if people aren't going to hear the message, and if we aren't going to get the funds and the managers and the ability to act quickly on these, I think the only step you necessarily can take is to say, we're going to manage those fisheries that we can manage, and I hate to say that, but we do have the ability by working with our available TAC and within that TAC to decrease those fisheries or even eliminate the opportunity for fisheries. If you can't manage those fisheries, if they're creating too many problems because we lack the staff, I think that's the only way to go for a while. Additionally, if we did that there would be a great deal of pressure put on our Congress to appropriate the funds necessary to manage those more difficult fisheries that are creating the problems for us.

Alverson: In listening to Mr. Blum's comments, we heard comments earlier from Bert Larkins and from Wally in regards to reprogramming funds and the need to begin to look at that with the limited amount of funds that the agency as a whole is allocated. And I think that perhaps at the end of this discussion under this agenda item we need to develop a statement to Mr. Fox and the Secretary that we advise that whatever limited fundings that are going to the region in Seattle and Juneau, that this bycatch issue is priority and if other programs need to be whittled down or maybe foregone, then that's the case. We have limited funds, all agencies do, and we're squeezed and we've got to get the biggest bang for the buck that we can, so I think that I would like to pursue an action that Wally suggested earlier and I think we need to draft a statement indicating just where this Council feels the financial priorities are with the limited funds that we have.

Pennoyer: Mr. Chairman, that's fine, but I'd like you to include a lot of the other Council priorities, too. The support of the Council in terms of research and surveys and so forth is something that is difficult to say, we'll do a little bit less on this survey and how much later is the information going to get to you, but the Council does have a lot of analysis requirements for a lot of major amendments that you've got in the hopper and a whole bunch more we're going to consider at this meeting. A lot of the folks that do this type of analysis, not the inseason data cruncher necessarily, but this analysis, are folks that are off on some of the other assignments, and I would encourage you to do that; I'd like to know just what it is.

Pereyra: When this Council was faced with Amendment 12a back at the end of '89 it was anticipated that the industry would somehow respond to the fact that there were caps and would adjust its fishing activity so that they would be able to live within those caps. Early on into 1990 we found that this wasn't the case. In fact, the bycatch was being taken at a very rapid rate and it was quite obvious that the fisheries were going to be shut down. It's quite obvious from the analysis that's been done and from our own observations the fatal flaw was the lack of any kind of an incentive program. So, in April the 16/21 amendment was put together with the

understanding that there would be a penalty box and with that the 12a caps were rolled over. Now we find that in fact it appears that we're not going to have the penalty box in there which in fact then leaves the fatal flaw in the system. So we are preordaining failure before we ever get started. Fred Yeck, I think, gave some very excellent comment on what's going to be happening, depending upon how the pollock fishery is prosecuted in early '91. We could have an entirely different fishery upon us that we have no idea how we're going to respond to it in a bycatch sense, but we do know that so long as we have this tragedy of the bycatch commons upon us, which is the fatal flaw in this system, we are going to be faced with shutting down fisheries before TACs are reached. Now, in all due respect to the comments that have been made about the difficulties in getting there, my own feeling is that if we as a council accept the premise that we somehow are not going to be able to put together a program for '91, I feel that we are taking on a second fatal flaw. And that is, we're never going to get there if we in fact don't set that as our goal. I for one don't want to be part of an exercise that says well I don't think we can get there, therefore let's not try. I think we should try; I think we should give it our very best effort with all the resources we can muster. We have an industry. . .I haven't heard one industry person yet come up who hasn't said that we have to have some sort of a bycatch incentive program in place. And with that kind of force behind us I think we can do it, and I for one would like to see us do it for 1991. Thank you.

Cotter: I share the concerns articulated by Mr. Blum and I think by everybody else on this Council and in the industry. We all know that we've got to have an incentive system; we've knownthis for a number of years now and have been working steadily to put ourselves in a position where we could get one. That was also one of the reasons why we did an observer program, so that we could have available to us tools to begin to better manage bycatch. I think that, you know, I look at last year and folks conclude that last year was a total failure. Well, fact is it was a failure, but it wasn't necessarily. . .well, there were things that happened last year that won't happen this year. We had a Greenland turbot fishery that had a bycatch rate of over 10% when it should have had a bycatch rate of 1% and that fishery took over 800 metric tons of halibut in a very short period of time. That is not going to happen this year because that fishery is now prohibited from occurring until late in the year. We have hot spot authority that is going to be in effect for next year as well, which will give us again some additional ability to address high bycatch when it occurs in limited areas. The yellowfin sole, the flatfish fishery, is also delayed until later in the year as well, which ought to have a reduction of bycatch at least in terms of king crab or halibut and perhaps other things. We have the ability to seasonally apportion bycatch by fisheries which puts us in a situation where we can ensure that whatever we do with pollock is not going to result in the P. cod fishery taking the entire, or any more that we would like to have to have them take, of halibut bycatch. So, there are things that are going to make next year different from this year and perhaps substantially so. In the meantime, we also have hopefully the ability of the industry, those decent capable people out there who are going to I'm sure use their best efforts now to fish cleaner than they have before because they've suffered the penalty of seeing what happens if they don't. All of that is just to lead us, I think, back to Mr. Pennoyer's letter and to the suggestion

that he offers in there and I think we ought to move ahead with those suggestions. I think we ought to. . .we're going to have to accept this disapproval, like it or not, and I think we ought to move ahead as rapidly and as expeditiously as possible to try and develop a program that might possibly be implemented January 1st or as early thereafter as possible.

Pennoyer: Not another speech, but just a technical correction. I think I can assure you that partial disapproval will take place. Technically, we can't actually give you a document until the cessation of the public comment period which ends October 29th. That does not stop you from going ahead and assigning workload and direction because I've already talked to NOAA General Counsel, both in our office and in D.C., and I think we're clear that the program as constructed, given the available information, probably is not going to work, so I can assure you of that, I can't actually give it to you technically until October 29th. But that doesn't stop you from moving ahead.

Pautzke: Steve, is there a chance that we might not get this portion rejected as far as the plan amendment is concerned? I hark back to the observer program where the actual plan amendment language, the changes to the plan were minimal, and yet we set the enabling legislation in motion so that you could come up with a technical plan. Is there a way that we could do the enabling part of some kind of a vessel incentive program for 1991 in the plan so we're no longer worrying about vessel incentive program plan amendments, but then we could reserve the regulations and try as hard as we can between now and December to do the regulatory part of it, and possibly that would facilitate easing in a technical plan with the regulations during 1991, rather than a full rejection of that amendment language?

Pennoyer: Well, I guess there are ways we could do that, the actual language in the amendment doesn't do disservice to something somewhat different than is currently in the regulations. Our assessment of the process was that by doing both you actually put the revised supporting regulations on a fast track because of the 60-day mandatory time limit for approval and review by the Secretary. So, what we were suggesting is not that the amendment necessarily as worded doesn't cover something else, but the system. . .it needs to have appropriate implementing regs with it and the fastest way to do it, we thought, was to just sector that piece out, re-do it as a partial and send it back, and it's required to have a fast-track of 60 days Secretarial review time after you re-submit it. It looked like the fastest way to do it even though it still didn't get it done until under the scenario we had before, April.

Cotter: I'm ready to offer a motion, or make an effort to offer a motion if it's desirable.

Collinsworth: I'd be happy to entertain a motion.

Cotter: I move that in the event the Secretary partially disapproves Amendment 16/21, that we ask the Regional Director to move as expeditiously as possible to develop a fishery incentive program and to present us with the analysis at the earliest opportunity to provide Council final action.

Collinsworth: Is there a second. [The voice of the second was unrecognizable.]

Cotter: When I said at the earliest opportunity, in the event that such a program and analysis is developed so that we could take action in November through a conference call or something like that, that the latitude is incorporated for that in the motion.

Alverson: Larry, the civil penalty concept is not what you're thinking about, is it, or is it not?

Cotter: What I'm trying to do is to leave an open plate for the Region, for the industry, to get together and address the particular array of problems and ideas that they may have and to come back to us with something.

Mace: Larry, do you envision this ad-hoc committee which the AP suggested and some of our testifiers as a part of this development? I think many of us are interested in seeing that pursued, and . . .

Cotter: I didn't address that specifically. My thought is that, and from conversations with Mr. Pennoyer, that this process is going to require some intense interaction between the agency and the industry and I don't know we formally need to form an ad hoc committee. I think that that action is going to occur.

Pennoyer: I think that has to occur and I fully agree with the statements made by Bert and others; I think it has to occur. I think in terms of Council vetting, we could do that and even bring it back through the Bycatch Committee for review before we bring it to the Council for discussion under a conference-call type arrangement. I think the direct contact between the industry and the agency has to occur in this case. I think we need a lot of ideas and as has been pointed out, we've sat down and talked about them and talked about them on the phone and discussed them letters, discussed them in meetings, but I think we need a work session. I would commit to do that.

Blum: Steve, I'm troubled that out of hand you reject what Clarence suggested as a possible approach. I don't know whether what Clarence suggested has much merit, but it strikes me that it did have, whether there's a parallel between when we approached that way the last time and this time I think needs some analysis, but to basically reject that. . .a part of our problem is the timing of approving of amendments and how long it takes for Secretary review and all of that. If we could get you and the Secretary to bend a little bit on that type of thing and

approve a partial approval of the concept and ask us for a regulatory package in a prompt timeframe that deals with the concerns that you and the Secretary have, we will have overcome hurdle A, which is the amendment approval and be faced with the regulatory package approval which I believe is a little faster time frame. I would be less unwilling, which is not to say more willing, to vote against this motion if there was a sense that the type of thing that Clarence suggested would receive a adequate review by you and your staff before rejecting it.

Pennoyer: Again, on advice of legal counsel, the amendment has to have the implementing regs attached to it at time of approval, and I think that I would commit to looking at whatever is the most expeditious way of doing it, and if the most expeditious way is getting people to quote bend a little, if that's possible, fine, but I guess our current opinion is that the way I stated it is the way we'd have to do it to get it done in an expeditious fashion.

Pautzke: But the amendment to the observer program had very little in terms of implementing regulations. It essentially said you were going to adhere to an observer program and the technical plan came out much, much later, and that's what I'm talking about, is enabling legislation here referring to some technical plan that you're going to put together and that would be available then in a much shorter time frame, like you did with the observer program.

Pennoyer: I think the impression is that's the fastest way to do it; now if there's a faster way we'll dig and see if there is, and I'm not sure you're disapproving any concept of doing a bycatch incentive program. I think everybody all up the line has agreed that if we can pull that type of thing off legally and logistically that's the thing to do, so I don't think we're doing a disservice to ourselves. I'm told that's the fastest way to do it; now if I can come up with a faster way and we discuss it over again. . .I wasn't rejecting something out of hand because I was trying to put us in a worse hole. My advise is that the fastest way to do it, and maybe even as early as the end of January without emergency action would be by the method we've proposed, and I'm not sure you're disadvantaged by doing it that way.

Pereyra: Steve, one concern I have is, as I understand it, the 16/21 package was put together as a solution to the problems associated with 12a. In that regard there were several elements of it. The 12a caps were kept the same, there was a penalty box in place, there were a few other provisions. If we have rejection, a partial rejection, of part of that amendment, for instance the penalty box, keeping everything else the same, do we somehow negate the corrective measures which were intended by the amendment itself, i.e., do you negate the entire amendment by doing that? Are you able to support it; are you able to justify it without the penalty box in there, keeping the caps the same?

Pennoyer: When we get into the discussion of 16a, that's what we'll end up discussing. We have a lot of other measures that Mr. Cotter pointed out that I haven't seen quantified yet, but they are taken in in Amendment 16, are taken in in Amendment 16a, including the hot spots. I can't tell you at this state, we haven't gone through the discussion; I'm not going to prejudge that discussion at this time. . .[interrupted by Pereyra]

Pereyra: I'm talking about 16; if you take the penalty box out of 16, do you have a viable solution to the 12a problems as a sequence of 12a?

Pennoyer: Well, one of the reasons 16a included discussion of caps and other things was to further discuss better implementing what was in 12a or in Amendment 16. Again, I think you'd have to look at those two things in combination. What we do with 16a and how we do it relative to 16; they're not inseparable, and I don't think we have a choice about taking the penalty box out. I think let's cross that hurdle first, then come back and discuss the aggregate amendment. The Secretary will have to look at the comments; there will have to be a decision made at a point after public comment, after October 29th, as to whether the amendment is approvable as it stands. I'm telling you this one piece does not.

Pereyra: That's what I'm quite concerned about, whether 16 is approvable without the penalty box in it.

Pennoyer: That's something we're going to comment on; you're going to comment on; the Secretary will have to look at after we get done with that and 16a, but all I can tell you right now is that I know one piece of it won't be approved because the implementing regs can't be implemented.

Cotter: Just two quick comments. You know, the penalty box wasn't the only thing in 16a that addressed the problems. There were other items in there changing fishery seasons and that type of thing. The other point is that the motion as I offered it I think provides for the flexibility to incorporate Clarence's approach as well in the event that Steve determines that that's a more expeditious way to move. So, we would have both sides covered.

Collinsworth: Further discussion on the motion?

Blum: I would encourage the Council to reject the motion. I believe we have to send a strong signal. I believe there are ways to do that. This motion I think does not do that and I think there are responsible ways of doing it, such as a letter to the Secretary asking that he not reject what we have proposed, because if he does we will have no alternative in December but to set ABCs and TACs for one quarter of the year only because we have no capability of dealing with a year-long fishery as we had in 1990 and we need a positive incentive program to manage this fishery and we are asking for his and General Counsel's understanding that what we are trying to do

is correct and we need perhaps some refinement during the next couple of months and the first quarter of the year, and that type of signal. There are other things, such as what Henry has suggested, that we only set ABCs and TACs for the number of fisheries that we can actually handle. There are several things that we can do that tells the Secretary that we are serious about this and that a rejection of our proposal is not acceptable, that we understand there are legal constraints; we're not convinced they're quite as severe a legal constraint as General Counsel is, and we want to deal with this. But I really think passing the motion is the wrong thing to do at this time.

Alverson: Steve, I've often wondered why if we know we're going to have a problem and this kind of manifested itself some time ago, before we had the observer program, when we were arguing in behalf of caps and people would say why have caps when we don't have an observer program. And we basically put in caps a couple of years before we could every manage it, really. Why can't provisionally the Secretary adopt the penalty box program, provisionally, stating that it will be activated or portions thereof will be activated when the Service is able? Why do we have to just throw it out completely and then go through the whole process of a plan amendment **[Change to Tape 32]** again?

Pennoyer: We've got two problems, one of which Mr. Blum has very ably addressed, and that's in terms of resources and certainly not rejecting something he does feel we should reject simply because of a lack of resources. But we have another problem, and the other problem is that frankly if you go forward with this, and if somebody approved it, you'd end up with something that just technically, even with resources, can't at this time be implemented. I mean, getting real time data accurate enough to sanction individual vessels in a real time, is just not in the cards, not gonna happen next year. I can't swear to you what might happen the following year; I'm not sure that after a year of examining the data base we can't come up with some degree of variability and come up with something. All the things that Rick Lauber pointed out that are difficulties in this program are difficulty in spades when you try to do it in season, in real time, with the current program. And I think what we're offering is in the penalty box, which may be greater or lesser depending on how we end up with the resource question, that will have a hope of working next year. And, I think going forward with this one just to basically tell people we're not happy with the fact it doesn't work, is not going to help, because it's not going to work. Even with more resources we are not going to sanction legally vessels in season in a real time basis against a moving fleet average. It's a problem; when we first devised this we weren't aware of how stringent it was going to be; we wanted to make something work, and frankly after looking at the data base and going through the adjustments that have to take place, because individual observers are still individuals, sampling out there under arduous conditions, and without debriefing, without talking to them, you have no idea how that's going to hold up in court and you sanction a vessel and bring him in, you've cost a lot of money and you need to be at least relatively sure, or sure enough that what you're dealing with in terms of information is correct. So, what we've offered, I think, as a

substitute that would get us into a penalty program, not a penalty box exactly, but a penalty program, the first year. I have no problem with the Council making it known that they'd like more resources devoted to all of the problems out there, and maybe even particularly this one, but that in this case is not the only problem. The problem is we've got a regulation that upon examination of the data base and living with it for a while, is not going to work. So if you do not choose to start the process to come up with a system that will work, whether it's a combination of voluntary and industry pools on their own hook with us providing some backup incentives through civil penalties, earlier or later, as quick as we can do them, I don't think you have much. I think we'd really like to have something in place in '91; I think this is the only avenue we've come to do it.

Cotter: I have no problem with sending a letter to the Secretary expressing in the strongest possible terms our concerns and that type of thing. I think that's well and good and perhaps we ought to do that and included in there we ought to urge the Secretary to make some language changes that would provide us with enabling authority in the future to implement. If we don't take action though at this meeting in anticipation of a possible Secretarial rejection, we may then find ourselves in a position where we are not able to implement anything in January or February or March or April; it may not be until much later in the year before we can do so because there will be a process that we are going to have to follow through to put some type of system into place and that's the crux of what we're dealing with right now. We have go to provide ourselves with a mechanism to develop a system and get it into place as fast as possible. And if the Secretary doesn't partially reject this program, and makes the change in the language so it's approvable, great. But Steve has said time and time again, we still have got to get together as rapidly as possible and develop a realistic system.

Mace: I think it would be nice to be able to say stick it in your eye and carry through, but from what I've heard there doesn't seem to be too much of a chance for that and I don't think that the timing will allow that. I think we have to get this thing going now and it's probably the least of many evils and so I think we ought to vote on it and I'm going to support it.

Lisa Lindeman (NOAA General Counsel): I'm just going to make one point of clarification. We discussed this with headquarters last week when this came up and I just want to make the point that while it might have been done in the past, and I don't know if it has, I'm not that familiar with it, but the Secretary will not conditionally approve a plan. So if the regulations cannot be implemented as drafted, the Secretary would disapprove that portion of a plan. That's the direction I've received from General Counsel.

Pereyra: Again, I want to express my deep concern that if we do have a partial disapproval we may actually result in a total disapproval of 16 and wind up with nothing at all and for that reason I think that Mr. Blum's points have some merit. Additionally, the proposed alternative where we would be starting out with something in April, I

don't think is going to be soon enough. I'm convinced that we're going to have a much, much different fishery next year than we had this year, given the fact that we're not going to have a Greenland turbot fishery in the early part of the year and the sole fishery will be later and we have hot spot authority, we are still faced with probably a 30 or 40 percent increased effort in the Bering Sea this year and that effort is going to participate in fisheries in a different way and I just think we're fooling ourselves if we think we're going to have some way of controlling that early season effort in a way that's going to leave some bycatch. The other thing is that I'm not convinced that in fact the budgetary process is going to provide the resources and then where will we be. If we don't have the resources, we might not have anything at all, so I like taking a much more proactive stance on this and charge forward with the very best job we can, recognizing we're trying to put together a full-blown program. In some respects this is not too dissimilar to what we face in the area of tax evasion. There are laws on the books I'm sure that are very difficult to enforce, but the fact that they're there and there's a probability that maybe I'll get stuck with something forces me to give second thought in doing some sort of actions that might be considered in violation of the law and I think the same may occur here. If we get a program in place, granted it's going to be an imperfect program, but the possibility that there may be some sanctions that may be very severe to me as an operator I think would give me second thought.

Blum: May I add to that just a second? Unfortunately, you and I and the people that Bob Mace represents and Steve get sued quite frequently and I have found, I don't know whether you share this, but I have found that the courts are willing to go with the manager if you haven't been clearly arbitrary and capricious and you've used the best information you have available and you're clearly attempting to manage within the realm of the present reality. We may have a technical problem that General Counsel has found that a law review would find flaw with, but I'm not sure we have a technical problem that a judge would find a flaw with if we have attempted to do the best we can with what we've got. We've put a observer program in place, we have involved the industry, in fact we have the very strong encouragement of the industry to do this. I'm not sure, having been on the receipt end of a lot of lawsuits, if we would lose if we follow the course of action that we're proposing. We might, but at that point we might have had a chance to do some corrections that if we don't go forward with this thing, that we won't be able to implement it January 1st. I think we ought to take a risk that a court would be as responsible as we're trying to be in addressing this really serious problem.

David Hanson (Pacific States Marine Fisheries Commission): I'd like to echo what Joe is saying. I think everybody's arguing for speed. The resource is often served by speed but often more by results. I would hate to see the Council pushed into a decision and that's what I feel this is, pushed into decision, for a second-class result. A system that acts way after the fact is not very effective. If you're driving from Portland to New York, it's not very effective if six months later you get a speeding ticket and the officer says, by the way last June you were going too fast. We all know what the laws are but I think probably most of us have met an officer or two

somewhere along the line. It's the immediate results that get people's attention. We've got an industry that's very much trying to work with us. I'm not sure but that. . .and there are some compelling reasons from the industry's standpoint to have a system on early obviously as well. But it seems like the resource is better served by doing the best job we can rather than looking for the quickest system that we can put in. And, with that, I think Mr. Blum is very correct. We need to pursue the best system. There's two goals for this. One is conservation; the other is not to have the fleet, the industry, shut down because of the actions of a few individuals. That second part is getting lost, I think, in this. I think we need to really take a good look at what we want in place, not what we want in place necessarily January 1, but what we want in place for the next few years, and not jump at something.

Alverson: Could we get a replay of the motion on the table?

Pautzke: You mean on the screen, or you want me to read what I think I heard was said? . . .In the event that the Secretary of Commerce partially approves Amendment 16/21, we are asking the Regional Director to expeditiously develop a vessel incentive program so the Council could take action at the earliest opportunity. The intent was even if it's before the next Council meeting, we would look at it. Three points were made from Mr. Pennoyer, that he would involve the industry in some kind of a work session on this, it could possibly be vetted through the Ad Hoc Bycatch Committee and then brought back to the Council.

Alverson: What precludes the Council from sending this message to Steve, even though he's sitting right there, and a similar letter that Joe has been talking about to the Secretary of Commerce? One is a long-term solution, the other one is an immediate one.

Blum: The motion basically says we blink and what I'm trying to say is that I think we ought not to blink. O.K., let's say we go forward with it, the Secretary goes forward with it the way we have proposed it. On January 5th, probably wouldn't be that early; it's February 5th, somebody has fished beyond that which we had hoped they would fish and so we ask Steve, Steve runs out there and pulls them off the water. With the broad support we have from industry, I'm wondering how that skipper will react to peer pressure if he or she says oh, we don't like the rules. I mean, industry has basically said to us, these are rules that we need in order to prosecute our fisheries in 1991 and beyond in a responsible manner. Peer pressure worked with a small group of fishermen this year, seven. One of them was pulled off the water by his cohorts. I'm not sure that industry is willing to let us be rolled by an individual fisherman or two that are not happy with the Secretary's actions under this particular amendment, if the Secretary adopts it. Hypothetical, but I think reality. I think industry is ready for this; I think if we blink we're blinkin' and we shouldn't. That's what I'm saying, Bob.

Cotter: May I ask a question, I guess of legal counsel, because what Mr. Blum says makes sense. But that's premised on the assumption that the Secretary will approve 16/21, which we're hearing is not likely. In the event that the Secretary does not approve 16/21, where are we then? And, we do not adopt this motion?

Pennoyer: At that stage if you've done no additional work, all you. . .you've put off a lot longer in implementing something that might work.

Cotter: So at the December meeting we would then come back and have a repeat discussion along these lines, and. . .

Pennoyer: That's probably what would happen.

Cotter: Just that further along. . .behind.

Pennoyer: I guess I understand what you're saying, Mr. Blum, and that could work; it might not. And the first few times it didn't, it would be difficult. We're not talking about getting sued, we're talking about picking people up, making a case and agreeing that the data will hold up in court for General Counsel to prosecute. And right now I'm just saying I don't think we can do that. Now, that's. . .you know, if people want to voluntarily do it, we have a lot of ways of having voluntary incentive pools, but we can not make a case on data that is as variable as undebriefed observer data as to the level of any type of accuracy we're interested in using in the amendment; that's my problem. It's not a lack of wanting to do it. I'm not even saying that maybe suspensions might not be part of a penalty program, but they'd have to be enacted rather late. It's not going to be inseason, it's not going to be real time. Maybe in the season in terms of that year, but it's not going to be within a week or two of the event, which I think was the original intent in some of these fast-paced fisheries. The concept of getting a late speeding ticket is a little bit different. In this case everybody's gonna be being watched. When you're out speeding you're always halfway thinking nobody saw you do it. But in this case everybody's going to have data. The data comes in; the observer may not have to be on site, be there when the vessel is sanctioned, but the data comes in; the observer's debriefed, the record is there. Sort of like logbooks are now; it's an after the fact prosecution. The observer program itself right now is because for the 30 percent class you don't have to have an observer on board every time somebody boards you. It's an after the fact thing but in fact the penalty will be there and it may be fairly substantial. It will be substantial.

Mitchell: This business of the reliability of data. It appears to me that almost all these vessels have the ability to. . .different forms of communication devices. And it would be very easy for us, through the Secretary, or the Secretary individually to require that the observer have access to this and if it needs to be a daily communication

and a debriefing every third day of that information, that can take place. We can require that, and that would give you the kind of reliability that you feel that you really need. And I don't think this is too great of an imposition upon the industry to make them. . .if they have to go out and buy any sort of special telephone and pay for the transmission of that; we've got a problem, if they want to continue fishing and they want to do this through this sort of incentive pools or whatever, that can be supplied. And you can have your people talking back to that observer about the information he supplied. Every day or every third day, or every fifth day. I don't see why that's so difficult.

Pennoyer: Well, I'm not a communications expert and we are working with satellite communications now; we are this year going to start experimenting with that, but I don't think you can as part of this amendment demand some piece of equipment as yet undefined to support some further action other than just the specification process.

Mitchell: The Secretary could demand that as part of the permit to fish in the FCZ and you don't need a plan to do that.

Hegge: We were at a exercise the last meeting or the last several meetings that a number of people got cold feet on and I guess I'm getting cold feet on this one. It looks to me like we're getting ready to adopt a plan just for the sake of adopting it even though there's a lot of problems in it, and this plan involves 18 different fisheries of drastically different types of investment, people, boats, you name it. I just don't see how on earth we're going to do it, and to jump in at trying to do it, we're going to have more problems than if we close the fisheries down. I really. . .I have more confidence in the fisheries I think than that. The Gulf of Alaska this year looks like they're going to keep their fishery going. We've done a lot of things. To me it makes sense to go into this with a little bit of caution and a little bit of control. In the ITQ thing everybody was afraid of throwing away the control and my gosh, we're throwing it all out the window here and just going in whole hog and I'm really concerned about it.

Hanson: I guess that was another concern. I like most of you have had lots of calls and complaints about the observer program through the past few months, the adequacy and the accuracy of it. The testimony, or the info we've had from NMFS to date has raised that level of concern among some of the industry folks I've talked to even farther. If the observer data is such that it can't even meet the civil preponderance of evidence, people are starting to wonder why are we even using it for management. I think our thrust here should be how do we improve the observer program; how do we make sure that data is good on a much more real time basis and ensure that those folks are getting the data that we need not just for enforcement but for management so that it can make the penalty box work, instead of sitting here talking about how poor the program is, instead of putting our efforts into those types of things.

Collinsworth: Well, I'm going to I guess reluctantly support the motion because it seems to me that it is the only realistic way of approaching the problem that we have confronting us. We've been told, I think, in very straight forward and candid terms that the Secretary will partially disapprove Amendment 16 and I believe what the service is telling us about the difficulties that they have with the observer program and the ability to actually move forward with the kind of program we would like to see early in the year. I don't know that. . .we can express as much of our frustration as possible, I don't know that necessarily solves the problems that confront the service at this time. We have an observer program that is really in its infancy. What we're asking is for the program to become very sophisticated very quickly. The maturation process has not moved that quick; we are short human and technical and fiscal resources, and I guess that all of the wishful thinking and talking that we can do to the issue is not going to make it well overnight. I mean, you can give me as much money and encouragement as you can and I'm not going to run a 4-minute mile. And so, I think that's where we are with this program. I'm a manager also and I am confronted occasionally with wants and desires from the Board or from the fishing industry and I have to say that we just can't do that because we just can't do it. And I think that's what I've heard Mr. Pennoyer and the staff say, we just can't do it, and I've got to believe them. I wish it were otherwise, but I think that that's where we are. I would hope that if this motion passes and, again, I'm going to vote for it, that Mr. Pennoyer would aggressively and very quickly take advantage of the offer that we have heard from industry to form a working group, get together with them and push the program as close as we can to the desired results that we would like to see but appears to evade us at this time. I think that while it may not be the whole cake, it my be a good portion of it and I think that we'll have to approach this in an incremental way; we'll have to refine it and approve it. We can certainly seek additional resources; we can certainly notice the Secretary and Dr. Fox of our deep concern and AdministratorKnauss and see if we can't push this thing forward, and I think that we ought to do that as well. But, I don't see that we have any other viable alternatives.

Pereyra: I'm going to have to vote against this motion in its present construction. The reason being that I think it's an acquiescence to the fact that the Secretary can disapprove the amendment and we've rolled over already even before he's even made his decision. He will look upon this motion as saying O.K., disapprove it; we understand, we're going to go ahead and try to put something else together. If the language in the motion referencing the partial disapproval of 16 were removed, maybe we can get to the same place but at least do it from a positive standpoint. In other words, having a motion put forward that expresses the desire of the Council to have the Regional Director move forward with greatest haste to put together the very best incentive program possible for the 1990 fishery without any reference at all to disapproval of 16.

Cotter: I think the deletion of. . .you know,. . .in the event that the Secretary disapproves Amendment 16/21, doesn't have any adverse impact on the purpose of the motion and so I would gladly, with the concurrence of my second, amend my motion to delete that phrase.

Collinsworth: Who was the second? [still couldn't hear who was speaking as the second] O.K., thank you.

Mitchell: Mr. Pereyra, how does that assist the situation? So you send the letter, but we're still not going forward taking a positive step to approve 16/21. I don't see how that's going to. . .we really don't have the vehicle at that point. .

Pereyra: Well it has us moving forward to try and put something togeth. . .

Mitchell: Not unless we positively approve it and send it forward.

Pennoyer: 16/21's already gone forward. It's just public comment period. You don't have to approve anything; it's there, you've already approved it for submission to the Secretary; it's on his desk, it's in the comment period. So, there's no positive action needed at this. . .the only thing needed at this session on any of these is if you have further comment on them, and so there's no positive action needed on 16/21. It's there, it's available for your comment, which you're doing. I might make one other point, too, that given some relief from some of the other work schedules we have people that can work on this analysis and 75 days from the end of the public comment period still puts you in early January and that requires a lot of pushing at the NMFS Secretarial level to meet that 60-75 day deadline because 75 days after it gets to the Secretary, I mean it goes through the whole NOAA structure first, but that's the type of place you'd need your priority, is to get that done and get it done in a hurry so it's effective early in the year. If we can come up with something that will work and we can figure a way to do it, and get that in the process, it would not be that late.

Mace: Having heard all this, I call for the question.

Collinsworth: Mr. Blum has asked for clarification.

Blum: I would just like to know what the motion now says.

Pautzke: The Council requests the Regional Director to expeditiously develop a vessel incentive program for the Council to review at the earliest opportunity.

Collinsworth: And with that were understandings with regard to the fact. . .commitment on the part of the Regional Director to form a industry task force and to bring back the issue, either vette it through the Bycatch Committee and then back to the Council at the earliest possible date. Any further discussion on the motion? Roll call, please.

Pautzke:	Mr. Collinsworth	Yes
	Mr. Cotter	Yes
	Mr. Dyson	Yes
	Mr. Hegge	Yes
	Mr. Lauber	Yes
	Mr. Mace	Yes
	Mr. Mitchell	No
	Mr. Pennoyer	Yes
	Mr. Pereyra	Yes
	Mr. Alverson	Yes
	Mr. Blum	No

Pass.

[Change to Tape 33]

Mitchell: I would like to move that in addition to that, the letter should contain a recommendation to the Secretary that he require that as a condition of the permit on all vessels fishing, that they have the facilities on board available to the observers to send and receive real time data so that the appropriate reporting can take place on a daily or other time period specified by the Secretary and that should be made a condition of the permit.

Blum: I'd second that.

Collinsworth: Is there any discussion?

Hegge: I think that's something that probably is in effect right now. When an observer comes aboard a boat he asks to be shown the radio and how to operate it. The fact of the matter is, though, that the radio time and somebody to answer him isn't there. We have difficulty even getting our weekly reports in over the radio so I think that any idea that you're going to do daily reports from the entire fleet is probably wishful thinking.

Pennoyer: Probably ought to refer this to Russ, but my understanding is it's not just a question of getting the data in. You've got to talk to the person, you've got to see how they sampled, you've got to run through their forms, they need to be debriefed. Yes, I'd like to have the communications just to get the data quickly on a day-to-day basis, but it seems to me that there's more to it than that and I'd ask. . .Russ is in the audience, he might comment on that. I'm not against, by the way, better communications. We need it; we need daily reports when we require them and that's something we are working on, but Russ, the question was in terms of verifying observer data, whether it was simply a question of getting daily observer reports from the boat or really a face-to-face basis to debrief them, to make sure the data is accurate.

Russ Nelson: It's basically a face-to-face debriefing with the observer. You need both things. You need to talk to the observer to find out did they follow the procedures correctly in the collection of the data. That's the first step; the second step then is to look at the data itself to find out if it can tell you that you can statistically tell the difference between that vessel's rate and the standard. If there's so much variability from haul to haul within the time period that the observer was aboard and sampled and you can't say that that mean is definitely different from the standard, you can't go forward with either, so it's both. You need to look at the data and talk to the observer.

Mitchell: If every observer is filling out the same sort of data on the same sort of form, I assume by now that you've provided a sample form to them, and he can transmit that to you, why is it that you if you want to debrief him while he's still on the ship, why is it that you can't contact him and talk to him there?

Nelson: Well, one, because not all of these ships have the same capability for being able to talk to the observer directly. Some of these vessels have the ultimate in communications equipment. You can make voice contact with them, you can transmit faxes back and forth, or you can telex information. Other vessels, you don't have all that ability. You have maybe one or the other. Some of these boats, we don't hear from the observer until that observer hits shoreside again after that boat's been out for ten days. Our ability to raise a boat on the high seas is difficult; we can often receive the faxes, communications from the vessels, but going back out to the boat to get the response to a fax, a request to talk to a observer, going back out, is very difficult and often takes several days. Now whether that's because the fax machine or whatever is off line, I don't know. But it's been a real problem throughout this year.

Pautzke: Just quickly, Russ, on your second point about the sampling variability. Could you write the regulation so to read that say the average of the hauls sampled would be compared to some standard. It seems to me then you wouldn't have worry about the variances of your estimate.

Nelson: Well, I don't know. I think some of that depends upon what would be allowable legally to go ahead with it. I think you could write any regulation you want, whether or not that would be a legal regulation and could be upheld, I think that General Counsel would have to. . .

Pautzke: I think you can write it so you don't have to worry about the variances.

Collinsworth: Further discussion of the motion?

Cotter: Can you read the motion back, restate it?

Pautzke: Yes, Mr. Mitchell referred to a letter that we would be sending to the Secretary of Commerce, and it would contain a recommendation that permit conditions for vessels operating in the groundfish fisheries would have to have the communications facilities necessary to transmit observer data on a real time basis for use by the Secretary of Commerce.

Cotter: A question, then. Henry, does that mean that the vessel has to have fax capability?

Mitchell: Not only fax capability. If they're going to do debriefing I guess they're going to have radio telephone capability also because it appears to me if you had the staff available that in most cases they could probably get through if they were really trying.

Pennoyer: Is this all sizes of vessels in all fisheries? I'm not sure what the cost of this equipment is or what people have faxes and which people don't. Seems to me this is something we could build into the discussion process we're going forward with, deal with it in a considered fashion, because right here I can't imagine exactly what we're talking about or how it's going to affect different sizes and classes of vessels and I'd like better communications, too, but I'd like whatever we say to result in better communications effectively. I'm not clear I have that feeling now. If you want to add that to the list of assignments maybe we can undertake that. . .

Mitchell: I think it's a start. The Secretary has the authority to do that and he can discriminate on the basis of which fisheries he thinks are the larger problems. He could say this is going to apply to boats fishing in such and such types of fisheries.

Pennoyer: The observer regs already require maintenance of effective communications. It's a contractor responsibility, but effective in dealing with a lot of different vessels wandering around in the ocean has been not effective from the standpoint of what we're talking about.

Mitchell: You know, the more talk about this, it's excuses and excuses and it appears to me that if we're going to be responsible that what we really need to do is to send, instead of a letter, we need to send a bomb. And later on in this meeting I'm going to make a motion on the preliminary specifications, because I don't think people pay attention to letters, but they do pay attention to letter bombs. Thank you.

Pennoyer: Mr. Chairman, I think letter bombs are fine, but I think if we construct the amendment we're going to send back to include communications as appropriate and develop that as we go along, it would be more effective than sending a letter back now that included that. We're not telling the Secretary now to disapprove the amendment, we're not telling him that we've got a substitute amendment, we're telling me to work on an

appropriate amendment that would be in place early enough in the season to be effective, and I think if you add to me the communications aspect, we can go ahead and do that. I'm just not sure what. . .right now effective communications is required by regulation. We haven't defined what we mean by effective from the standpoint of what you're trying to put in place. If we can come up with more effective communications and solve some of the problems Russ's program has by doing that, I think that would be appropriate, but I'm not exactly sure what those are right now.

Mitchell: Well, if a commander sitting in Anchorage can pick up a device and talk to a soldier on the front lines of the Saudi Arabian desert, I don't see why that same capability can't be used to help manage the fishery out there. I mean, it's just beyond me.

Pennoyer: Would you re-read the motion, please?

Pautzke: We'd send a letter. . .

Mitchell: I withdraw my motion, forget it; it doesn't make any difference.

Collinsworth: Even though the motion was withdrawn, I think it appropriate as you deal with industry, Mr. Pennoyer, in looking at the implementation of a program, one of the kind of technical elements that may be associated with that is the ability to receive and send instructions and data and if as a part of your work on this issue that becomes a technical need to facilitate the program then I would hope that you could advise us of such and then it may be appropriate to move ahead with some such motion as Mr. Mitchell had offered.

Pennoyer: O.K., thank you.

Collinsworth: It's 5:40 and we're about ready to adjourn. I would direct the Council's attention before I recess, not adjourn, but recess, that we have. . .we're somewhere along about where we thought we would be yesterday at about 2 o'clock, 3 o'clock, so we are about ten hours behind on our agenda, with many important and substantive issues. By mid-day tomorrow we will need to do an evaluation, I think, of our ability to complete this agenda and if we are going to set priorities and defer some action. I wish I could find a way to move this process more rapidly. I think the Council has done a good job in dealing forthrightly with the issues that we have dealt with on our agenda and I don't think we have wasted time, it just. . .I think it just shows the difficulties that we have in dealing with very complex issues and we'll just need to make sure that we keep our proverbial noses to the grindstone as we proceed tomorrow, the next day and into Saturday. But, we have a whole lot of work to do. As we take testimony I would ask the public members, the industry representatives that were going to provide

testimony, if you could on some of the issues, if you could get collective testimony together to reduce the amount of time that we have to spend in the public hearing process, I would greatly appreciate that. If you can develop any specific proposals on how to deal with issues and relay those to the Council, we'd appreciate that. We definitely have a need to move a bit more rapidly. Anything else before we recess?

Mace: One suggestion. I think it would help us all to focus on this if you or Steve or Clarence could outline the particular points that we have to zero in on tomorrow, in order, for this particular agenda item. There are four or five there and I think it would be helpful. We've done one, we've got a half a dozen more on this agenda item that. . .

Collinsworth: We'll try to develop a road map to carry us through not only D-4, but the rest of the agenda items.

Pereyra: Have we taken any action as a Council to send any kind of communication on to the Secretary of Commerce regarding our concerns for the implementation of a bycatch incentive program for '91?

Collinsworth: No, but I would be happy if you and Mr. Blum and Mr. Mitchell were to undertake a drafting effort.

Pereyra: O.K., fine.

[miscellaneous comments]

Collinsworth: O.K., we'll recess until 8:00 a.m.

September 27, 1990

[Tapes 34-35 were on different subjects; taken up just prior to the Amendments 16/21; 16a discussions on September 27]

Tape 36

Collinsworth: O.K., let's move to 16a.

Cotter: How do you wish to proceed through 16a, which subjects first?

Collinsworth: Do you want to go through that outline we had this morning? I guess the first area would be dealing with the issue that is. . .if you refer to your AP minutes, the first item in the AP minutes says, "With reference to crab and halibut bycatch measures, the AP recommends that the Council approve for Secretarial review the following: (1) Provide the Regional Director the authority to temporarily close limited areas inseason due to high bycatch rates." And that was a motion that was passed unanimously and that's what we referred to this morning in describing the road map in dealing with the hot spots.

Mace: I move that we provide the Regional Director the authority to temporarily close limited areas inseason due to high bycatch rates.

Blum: I second that, Mr. Chairman.

Collinsworth: Discussion on the motion?

Mitchell: Who decides what a hot spot is?

Collinsworth: The Regional Director, the management responsibility. . .

Mitchell: But is it based on some particular percentage of fishing activity, or do we issue any guidelines to help in determining what we feel that should be, or is it merely his call?

Pennoyer: We did not define those in that specific a guideline, Mr. Mitchell, and the reason is we have one year's experience. We know certain things popped up like the Greenland turbot fishery; we know that as we look at the observer data base this year other things are going to pop up that will show us there may be excessive, compared to the average, bycatch rates in certain areas and certain times which inseason next year we'll try to verify and take action, so we have not yet had the experience to very specifically define that, but there's a whole series of criteria that would be used laid out under item 3.3 EA/RIR which we could read through. They're qualitative rather than quantitative.

Mitchell: But you would use those as a means of determining what in your mind were hot spots?

Pennoyer: That's correct. And the purpose, of course, is to extend the groundfish fishery while minimizing bycatch so you don't reach caps, that's the purpose.

Collinsworth: If this were to be finally adopted and approved by the Secretary, this would give you authority that you do not have presently, is that correct?

Pennoyer: That's correct. This would be done in real time, inseason, by notice rather than a long extended rulemaking which is not possible inseason to handle this type of thing.

Collinsworth: What I intended to point out is this essentially provides you some field order authority that you have not had as a tool to use in the past . . . and therefore I personally think it's quite appropriate. Is there any further discussion on the motion.

Mitchell: Now, that's clear on the record I can support this.

Blum: I clearly support it. I would ask how this new authority inseason differs from what we were trying to do yesterday that you were advised you couldn't do because you didn't have enough information that was real and defensible to do, but now we can close areas inseason.

Pennoyer: It's quite different. What we were talking about yesterday was sanctioning individual vessels with penalties on individual vessels. This is simple management authority to open and close fisheries. It's aggregated data and. . .

Blum: Which sanctions the whole fleet.

Pennoyer: Yeah, it's quite different from sanctioning individual vessels from the legal standpoint.

Blum: So, it's O.K. without any information, any more than we've got, to sanction the whole fleet but to deal with individual vessels is a serious problem.

Pennoyer: That's not exactly what I intended to say. What I'm saying is we'd open and close fisheries based on preliminary information as the best available information, and that's a different standard than trying to bring a court action against an individual vessel based on a rate. In aggregate that data is accepted as management. . .

Blum: If you close an area and someone brings a court action against you, how are you going to have a defense on this that you did not have in what we tried to accomplish yesterday?

Pennoyer: I think because in fact we're doing it in fact not discriminately in individual vessels and I think it's a different standard.

Collinsworth: Any further discussion on the motion?

Hanson: I guess the question I have is somewhat the same as Joe's and that I raised yesterday. We heard that the data could not really be used until you had debriefings and what have you. So it sounds like there's going to be a delay of two or three weeks before this data could be used or are you going to be using the data instantaneously, or virtually instantaneously without any checks on the observer data accuracy?

Pennoyer: We use the observer data and the fleet reported data inseason to open and close fisheries now - fisheries, total fisheries, everybody's treated the same. That's quite different, I think, than taking an individual vessel and laying him up based on a specific assessment of an individual vessel's bycatch rate.

Hanson: I agree the legal standard may be different, but in fact you're still penalizing vessels that are fishing in that area that are going to have to pick up, move to other areas, there are going to be costs associated to individuals. While the legal standard may be different it seems like there are still effects.

Pennoyer: Well, that's true with a closure, too, though. When you hit a TAC and you close a fishery, there's obviously a cost even if later on you reassess your data and reopen it, which happens occasionally. There's a cost, but that's just part of the management process. That's necessary for inseason management.

Blum: Again, for the record, I support this and what I would like to see is National Marine Fisheries Service have the same type of attitude toward the regulation we tried to deal with yesterday that they have toward this one. I think the standard is the same and you will find, I know you found when you were working with ADF&G, when you close a fishery you are sanctioning the fleet and you're going to have people that are very upset about that and they're going to take you to task. You're going to have to meet the same standard that we were trying to get you meet yesterday that you were advised you couldn't. I think you're getting bum advice. I think you can do exactly what you want to do today, you could have done with what we were trying to get done yesterday.

Pennoyer: The other aspect here is that historical data will play a very large part in this and we do have the opportunity to analyze something from last year. Find that particular thing happened, verify if that fishery is

occurring in that area again this year, and we have some data base that's more solid. Mr. Blum, if I find out that the advice is bum on taking individual vessels in inseason based on the current status of the observer data, I would agree with you. I mean, that's something we want to do, I'm just relaying to you that from a legal standpoint there's quite a difference between sanctioning an individual vessel and taking him out based on rates and doing inseason management action that closes an area to anybody fishing. I'd have to have legal advice elaborate on that, but that's specifically the advice we have gotten.

Hegge: Mr. Pennoyer, would you clarify? You've said a couple times, to close a fishery, but actually you're talking about closing limited areas as part of a fishery, is that correct?

Pennoyer: It's closing an area to fishing by all vessels, not individual vessels. Yes, it's closing the fishery in that area for that time period.

Hegge: Not necessarily the entire fishery, though.

Pennoyer: No.

Collinsworth: Any further discussion on the motion? Is there any objection? Hearing none, the motion passes. The second issue recommended by the AP is to "Permit the Regional Director to set a limit on the amount of pollock TAC that can be taken in other than midwater pollock fisheries."

Pereyra: I'd like to offer that for consideration, with the exception that the last phrase, "midwater pollock fisheries," be changed to "pelagic trawls."

Cotter: Second.

Collinsworth: We now have the motion before us. Debate? Do you wish to speak to your motion, Mr. Pereyra?

Pereyra: Yes. I believe that this recommendation is appropriate. It gives the Regional Director the opportunity to look at the information that they're collecting on the composition of the fleet; how they project that the fishery would be prosecuted in the coming year, and be able to set a reasonable limit on the amount of pollock that could be taken in other than pelagic trawls. It also would give them the opportunity to make inseason adjustments to those amounts if they deemed that the fishery was being prosecuted in a manner which was different than they initially anticipated.

Mace: Is it understood that the qualifications proposed by the AP are also included, the pre-season specification and the authority to adjust this specification should it be necessary?

Pereyra: Well, I don't have any problem with the second sentence, but the first sentence gives me a little bit of a problem because on one hand we're giving him an authority and on the other hand we're taking it away. So, I don't know how you deal with that. If it's meant to be that he would specify that at the time we're establishing the annual TAC setting process, that's fine, but I don't think that the Council at that time can get in and start mucking with the numbers. We may give the Regional Director some authority, but I think if we give him the authority, which I'd like to see us do, then he should have the opportunity to utilize that authority.

Pennoyer: I think this was intended to be during the specification process, so it would be like your other specifications. You would advise the Secretary and the Regional Director on what needs to be done, we would then set it, but the idea is not that it would be an inseason action. At least the reserves are inseason; that would occur, there's flexibility in that. But the concept wasn't we would just sort of be changing this inseason; it was to be done in the specification process, giving you and I the authority to do it. You would advise us through the specifications process, like you do on ABCs and TACs.

Pautzke: That's explicitly spelled out on Page 3-2 there, that it is the annual cycle for setting TACs.

Collinsworth: That's correct. Hal, did you see us going astray--the reason you came to the table, or. . .

Weeks: No, sir.

Collinsworth: Oh, good. I was a little worried.

Weeks: I'm just here in case.

Collinsworth: Is there any further discussion on the motion? Is there any objection to the motion? The motion passes. The next item is to deal with the PSC specifications. Hal?

Weeks: Yesterday there was a request for some additional analyses and runs of the model. Those were done overnight and if the Council feels it would help them in their deliberation on this question we'll make them available.

Collinsworth: That was at the request of the Council and Mr. Pereyra, specifically. If you have that information, we'd be happy to take it at this time.

Weeks: I'd like to ask Joe Terry to come up and present the different model runs with you.

Terry: Again, two additional runs were made at your request. In the two additional runs I assumed that there was no vessel incentive program in place, so in fact we used the unadjusted bycatch rates from '89 and '90 and we looked at crab and halibut PSC caps equal to the 12a level and 150% of the 12a level. And, again, the first column is with no caps at all and it's the run that you saw yesterday. What you can see is that as you go from, in terms of impact costs, bycatch impact costs, with the unconstrained run the impact costs are just over 41 million dollars; with the 12a caps, they're 24.7 million; with 150% caps, they're 35.1 million dollars. The change in net revenue to the trawl fleet goes from 585 million down to 445 million with the 12a caps and back up a bit to 540 million with 150% of the 12a caps. If you look at the net benefits overall, that is the net revenues minus the bycatch impacts costs, they go from 544 with no caps to 420 with the 12a caps, back up to 505 with the 150% caps. With the unadjusted bycatch rates the 150% caps are constraining. They reduce. . .the model suggests they would reduce groundfish catch, compared to the unconstraining case, they would reduce net revenue in the trawl fishery and they would reduce the net revenue minus the bycatch impacts costs. The benefit-cost ratios going from the unconstrained case to the 100% caps or the 150% caps, are approximately .12 and .13, so they're in about the same range as the benefit-cost ratios we showed you yesterday. Again, assuming the higher bycatch rates, the base that we start out with in terms of estimated bycatch is higher, so we go down to close to the same level when we impose caps so there's a greater savings there, but there's also a greater cost imposed on the groundfish fleet in terms of foregone catch and net revenue.

Cotter: Joe, looking at the difference between run 1 and run 4a, the one in the middle, rock sole bottom trawl, for instance, shows a decrease in the harvest from 117,000 to 42,000. In your model did you. . .how much halibut and that type of stuff did you allocate to. . .how did you make the decision on how much to allocate to these different gear groups and why is that such a. . .perhaps you could answer the first question. How did you decide how much to allocate of everything to the gear groups?

Terry: The allocation by gear groups was based on the estimates of bycatch in the unconstrained runs. We totaled for each of the caps, again they're one, crab caps; two, bairdi caps [not sure of these words], in this case we're not looking at herring, and there were the halibut caps overall. [The previous sentence seemed mumbled and difficult to understand.] We looked at the total estimated bycatch for each of these aggregations of bycatch species and then gave each fishery a proportion of the total that it accounted for in the unconstrained run and then

applied those proportions to the actual caps. So, again, the alleged needs of each fishery was identified in the unconstrained run.

Cotter: And then things like Greenland turbot, you then, you didn't use last year's bycatch rate, I take it, you used a rate perhaps ten times less and had that fishery occurred during the summer, is that correct?

Terry: We used the rates that we think are appropriate for the summer, yes. The fishery was delayed. Yes, we used the rate that was again appropriate for the time the fishery would occur.

Cotter: And lastly, the halibut cap, was that 5300 metric tons, or. . .

Terry: Yes.

Cotter: We only show. . .I think it shows 5160 as being taken in that particular run. . .is there a reason why we didn't get to 53, or am I not reading this right?

Terry: O.K., it's because of the closures caused by some of the other caps prevent as much halibut being taken, I guess basically prevents the halibut cap from being taken. That doesn't mean that there aren't closures of the Bering Sea. . .one of the problems, and we've addressed this in the document, is again the needs are defined on the unconstrained runs. As soon as caps are constraining, fisheries are moved into different areas and their needs change and as a result of that, you can have a situation such as this where in fact closures can occur even though the overall cap is not taken.

Alverson: Joe, how much pollock quota did you use for the model?

Terry: We used the TAC that was set for 1990.

Alverson: What was that?

Terry: Just under 1.3 million metric tons.

Alverson: In these runs, if I'm reading it right under pollock bottom trawls and midwater pollock trawls, is there any other column that pollock is taken in? If not, it would suggest that you're not assuming that 100% of the pollock will be taken.

Terry: Pollock is taken as a bycatch in the cod fishery, [unintelligible] so it is taken in other places.

Alverson: I know that, but are those bycatches reflected. . .

Terry: Yes, they are.

Alverson: So you're assuming that 400,000 tons, no, about 300,000 tons is being taken incidental in the other fisheries for pollock?

Terry: It's not that much. I think we're assuming that about 20% of the pollock TAC would be taken in other than the pollock fishery.

Alverson: Well, the totals here come up to 900, close to a million tons, at least in run 4a. For instance, under pollock bottom trawl and pollock midwater, . . .I guess that leaves 300,000 tons that you assume is being taken in other fisheries.

Terry: Well, there are two things. O.K., we assumed almost 120,000 metric tons would be taken in other bottom trawl fisheries, in runs 4a and 5a the fisheries were constrained, so in fact the full TACs are not taken and that's part of the difference between the TAC and the totals.

Alverson: I'm a bit confused. If you subtract out in run 4a the close to a million tons that are in the two categories, bottom trawl and midwater trawl pollock, leaves 464,000 tons. . .367 of other bottomfish, including pollock, of which 300,000 tons you're saying is pollock?

Funk: For those numbers from run 4a were of a constrained run. We had earlier fisheries due to PSC closures there so we don't expect to attain the pollock TAC. Run 1 would be the place if you wanted to add these numbers up and see how they compared to the TAC, the place to do so.

Alverson: So, how much pollock are we short? If it's 20% of. . .are we only assuming of that 464,000 tons, perhaps 80,000 tons of it is pollock, if you're assuming 20% bycatch?

Funk: In run 1, the midwater. . .it's a little bit hard to go to run 4, again those fisheries closed early and so they really don't relate to the TAC. You could make a comparison between the catch in the pollock bottom trawl and the midwater pollock trawl for run 1 and the sum of those two fisheries is 120,000 tons short of the pollock TAC. That's the amount that in the model is allocated to other bottom trawl, flatfish trawl, and taken in other fisheries.

Alverson: I seem to remember in other models that there was the assumption that the pelagic trawl operations in the U.S. fleet are so massive that there would not be a problem taking 100% of pollock even though a portion of the pollock bottom trawl would be constrained. And, what I'm trying to figure out is, if there's another 200,000 tons that run 4a shows isn't being harvested of pollock, that's a considerable number and I'm trying to get a reality check because I don't think anybody believes in 1990 that we are not going to take 100% of the pollock quota even if 100% had to come in the midwater operations with as much effort we have out there. Can you tell me how much this is short of pollock in run 4a?

Funk: The model does make a assumption about how much that midwater trawl gear can make of pollock in a year and there isn't a mechanism there for pollock, I don't believe, to harvest the unharvested resource from another fishery above what the industry told us that they could take in those estimates that we used as a input assumption for the model, so that may be a limitation.

Alverson: What segment of industry suggested they couldn't take the pollock?

Terry: We went to. . .several occasions we've talked to people from the trawl industry and the way the model is set up, there is not a reapportionment of pollock between the bottom trawl and midwater pollock fisheries once the fishery begins. To the extent that any foregone catch in the bottom trawl fishery is made up, then the comparison will change, you're correct.

Alverson: It would be nice to find out what that number is, because at least in run 5a where there is a penalty box and it's showing a shortfall, there's another 150 or another 200,000 tons somewhere of pollock that in real time 1990 may be taken. It sure makes a difference in terms of where that comes up to 2 million metric tons as well as the other runs. . . .[unintelligible]. . .regardless of that, it would be nice to know what that shortfall is.

Pereyra: First I want to thank both of you, or three of you, whoever, for running this; this is very helpful on such short notice. I note in here that herring is not constraining at all; you have no herring savings measures in place, is that correct?

Terry: That's correct.

Pereyra: The amount of herring taken, run 4a, run 5a, looks like about a little bit less than 3, maybe 4% of the biomass presently measured. Is that correct? So, without any kind of herring **[Change to Tape 37]** restrictions, then, we would see an increase over what we've seen so far this year and what we'll probably see this year until the end of the year I would imagine.

Terry: That's correct.

Pereyra: Why is that?

Terry:. I think one thing that the model shows is that in fact the crab and halibut constraints as modeled [unintelligible] do move the fleet and those movements affect the bycatch of herring. Again, the complication with bycatch, is we're worried about in this case about four species and actions that decrease the bycatch of one species can in fact increase that of another. The difficulty in estimating how a management measure will affect bycatch or groundfish catch is that in fact the movements are hard to estimate. And, again, the net effects in terms of the different bycatch species cannot be easily identified. That's basically why we're using the model, to try to take into account as many interactions as possible.

Pereyra: You have a lot more familiarity with the model than I certainly do, and I was wondering if you might speculate what might be the result if we had some herring constraints in here and had the herring bycatch rates down with the area closures?

Terry: We haven't looked at that. In the runs that we gave you yesterday it showed that in general the herring measures didn't affect the bycatch of the other species very much. That's my recollection; you can look at those figures that we handed out yesterday. In only one case did they affect the groundfish fishery significantly in terms of gross or net earnings. That would be my guess but, again, without looking at the runs, I can't. . .

Pereyra: Would that be at the 1% level?

Terry: It was at the 1% level that the area C closure. . ., there was a larger effect on the groundfish fleet.

Pereyra: And the last question I have. In my cursory review it seems to be that the crab numbers seem to be quite constraining on a couple of fisheries. Is that a reasonable observation on my part? I'm thinking of the deepwater flatfish, the rock sole bottom trawl, . . .

Terry: Fritz can give you a more complete answer on that. One thing that we discovered, and I think I mentioned it yesterday, the allocation of the bairdi cap between zones 1 and zones 2 was almost constraining with a penalty box and 150% caps; that apportionment is constraining with the higher bycatch rates.

Funk: The two fisheries that Wally mentioned that. . .deepwater flatfish was constrained by halibut PSCs and the rock sole trawl fisheries were constrained by bairdi PSCs.

Pereyra: Thank you very much.

Alverson: Joe, I note that this run shows no income or harvest associated with fixed gear. They may well produce 50,000 tons of product this year, or more. . .[interrupted by Mr. Terry]

Terry: Yes, as I noted yesterday, the model does not include fixed gear, either in terms of net revenue or in terms of bycatch impacts.

Cotter: What bycatch rates did you folks use? In preceding EAs I think there was a sheet that went along with it that showed bycatch rates for assumptive purposes. I don't recall seeing that in this one.

Terry: Yes, in one of the tables in Section 5 of the August 27th document, 5.2a-d, they have bycatch rates by fishery, area and month.

Cotter: And, as I look that up, those rates are drawn from where?

Terry: From the '89 and '90 data, from the observer program.

Cotter: And in the case of JVP, yellowfin sole for instance, did you use the 1990 rates?

Terry: Yes, we used the most current data available.

Pennoyer: You may have said it, Joe, but where does Pacific cod appear in this under pollock, other bottom trawls?

Terry: It's primarily other bottom trawls. . .the other bottom is primarily cod, yes.

Collinsworth: I think the Council, just as a cautionary note, needs to take into consideration we had lengthy discussions yesterday about the modeling and the strength of the models, the weaknesses of the models, and what kind of conclusions you can make from the models, and I think that basically if you'll recall that the models are most useful in providing kind of directional information, increases and decreases, and so I think appending a lot of importance to specific numbers, this particular model as I recall when we were discussing the request to have this model run that we almost got to the point of not requesting to have it run because we had identified a number of kind of departures from the reality of how the fishery will be prosecuted this next year, so we can spend a lot of time going over these numbers and I'm not sure it's going to be greatly useful to us. I think it prescribes some

kind of directional information and kind of some outside some numbers, but to hang your hat on $2,977, for example, is just one of the figures I picked out here, that would be inappropriate to do that, so, just a cautionary note. Any further discussion now on the information that's been provided by Funk and Terry? All right, thank you very much. I think before we have a motion let's take a recess for a few minutes and then we'll start with a motion, and we'll recess until approximately 10 o'clock.

Collinsworth: We have a quorum? I'd like to introduce a gentleman who has joined us at the front table, a friend and colleague for a long time in other forums, Pacific Salmon Commission, Yukon negotiations and other fisheries activities who has recently been appointed to a new position in the State Department who has joined us today, Mr. Dave Colson, who is the Deputy Asst. Secretary for Oceans and Fisheries Affairs. Welcome, Dave. Dave, how would you set the PSC limits? [laughter]

[Miscellaneous comments]

Pereyra: For discussion purposes I would like to put a generic motion on the table regarding the PSC limits.

Collinsworth: The chair would entertain that motion at this time.

Pereyra: I would proposed that the PSC caps bet set as follows: for halibut, 100% of 12a, keep them the same; for the red king crab and bairdi crab, 150%; herring, 1% of the population; and the closures along the Peninsula coming into effect at that time, plus Area B for the Winter Savings Area.

Collinsworth: Mr. Pereyra, before we ask for a second; certainly your motion is appropriate. There have been some suggestions that, earlier on, that we might divide the issue and deal with the halibut and crab and then herring separately. If you don't find that unpalatable, maybe we could proceed that way.

Pereyra: Well, I'm a little concerned, Mr. Chairman, because as we've seen the way in which the model forecasts the impacts, these are not mutually exclusive events, so I think it's better if we deal with them as a whole rather than individually.

Collinsworth: O.K., we have a motion before us. Is there a second?

Mace: Second.

Pereyra: If I could talk to the motion. I feel the information we've been provided, the testimony that's been given, provides a strong basis for the motion as presented. Certainly, there's a lot of concern about halibut bycatch as are the other species, but the crab species in particular have shown a substantial increase as the minority AP report points out, since the caps were originally set in 1988. This means there will be increased interceptions, even with good practices to avoid crab. The concern I have is if we keep the crab caps the same we will be potentially closing certain. . .[tape cuts out. . .missed some comments]. . .which will force the fisheries into other areas where, for example halibut bycatch might be impacted. So, for that reason I think there's a strong justification for increasing the crab caps. As regards to the herring, I have a lot of concern for what's happening to the native people in Western Alaska. I think the Council has an obligation to do what it can to minimize the bycatch of herring in the trawl fisheries. The proposal we have before us I think can offer some relief; it's going to provide some constraints on the trawl fishery but I think the benefits, while they are not large in total dollar amount, I think in terms of their contribution to the betterment of those people and their subsistence lifestyle I think is substantial and so for that reason I would recommend the lower percentage in the range, the 1% percentage, and the Area B which is the smaller of the Winter Savings Areas. Thank you.

Collinsworth: Just as an observation, you notice Mr. Pereyra indicated he was offering a generic motion, I think basically with the understanding that the convention when we're dealing with interrelated issues such as we do when we establish ABCs and TACs and what not, that we have the broad motion before us and the way to affect the motion is through the amendment process and so that, I think, is the concept that we're dealing with here, although the main motion is before us and the chair would entertain any further discussion now of the main motion.

Cotter: I'd like to offer a generic comment, followed by an amendment. I appreciate the work that's gone into developing the model and the EA. I am concerned, though, that the level of veracity that might be applied to the conclusions by reviewers subsequent to our action, in Washington, DC, may have an adverse impact upon whatever it is that we send back. Conclusions that show losses, potential losses in the neighborhood of 200 million dollars, etc., etc., and I think I'd like to read a couple sentences from the EA. They're on page 5-4, reads as follows: "The temporal and spatial variability of bycatch rates and the uncertainty about future TACs and their distribution among fisheries, time and areas, introduces large amounts of uncertainty in the analysis of the effects of the alternatives on catch and bycatch. The variability in product prices, CPUEs and other factors that determine the gross and net values per unit of catch has a similar result with respect to the estimates of economic performance. Similarly, the variability of the factors that determine impacts, costs, per unit of bycatch result in uncertainty concerning the total bycatch impact costs associated with each set of bycatch management measures. Finally, the method used by the model to apportion the aggregate PSC limits among individual fisheries is flawed." End of the sentences in the EA, and I appreciate the fact that these sentences are in here because I think

that they're there to point out that there are high degrees of variability and uncertainty that accompany the use of this model and I just think when the Council sends this package back to Washington, DC, we need to make it very, very clear that the model is perhaps at best indicatory of what might happen but in no way does it necessary reflect the Council's perception of the real world. Having said all that generically, I would move to amend the halibut PSC cap to 4,500 metric tons of catch.

Mitchell: Second, for discussion.

Collinsworth: Do you wish to speak to your motion, Mr. Cotter?

Cotter: Yes, Mr. Chairman, I understand the concern that we all have with trying on one hand to attain maximum harvest of our TACs while on the other hand minimizing bycatch. 1990 was not a good year for bycatch; we all know that and we all hope to avoid a repeat performance in 1991 and in future years. We have taken steps to begin to address some of the problems that occurred in 1990. I outlined them the other day, but I'll do so again briefly. We took steps this morning to send off to Washington, DC a measure which would provide the Regional Director hot spot authority, authority to move in and to close fisheries in areas where overly high bycatch rates are occurring. That is a significant tool for the Regional Director that should allow us to reduce bycatch rates. The yellowfin sole and other flatfish fisheries, aside from rock sole, now have later opening dates. That similarly should have a impact on reducing halibut bycatch rates. We have seasonal apportionment authority now for PSCs which provides us with the ability to identify which times of the year may cause higher bycatch rates in particular fisheries and will have the capability to use that information to impact the level of halibut bycatch in 1991 and hopefully to correspondingly to cause those fisheries to occur in time periods where they can take higher PSCs. The Greenland turbot fishery which last year was unfortunately prosecuted earlier in the year has now similarly put back to the summer. Along those lines I might point out that it is my understanding that in 1990 the Greenland turbot fishery in particular took about 805 metric tons of halibut mortality. They did that at a bycatch rate that was ten times greater than the rate that has otherwise been experienced in the summer months. Now that that fishery is going to be prosecuted during the summer months it would seem to me that one might be able to conclude that that fishery might take approximately 80 metric tons of halibut mortality as opposed to 805 metric tons which would leave a theoretical savings of 720 metric tons or so. Added to that, again, if you recall, there were problems with the yellowfin sole flatfish fishery and high bycatch rates, the fishery was pushed into an area last year where very high bycatch rates occurred. Indeed, some of the vessels attempted to lay up in order to avoid fishing on those stocks where they were incurring high bycatch rates. They were unable to do so and the high rates continued. That is not going to be the case this year, either. As a result, we should experience reduced halibut bycatch rates in those fisheries as well. I did not take the proposal down to the 4200 metric ton level as proposed by the IPHC simply because I thought that 4500 metric tons of catch is something that can be justified

and that can be accomplished in this year. I might note again, just for the record, that halibut stocks on at least adults are in a declining mode. The directed fisheries have in fact seen fairly substantial reductions in the past few years, even as the bycatch rate is continuing to increase. In fact, I understand that the IPHC says that in 1989 23% of the total removals in the United States and Canada from commercial, recreational, Indian, and all total removals, came from bycatch. We know that the Bering Sea is the primary nursery grounds for halibut for the entire coast. You know there are other nursery grounds outside of the Bering Sea but they pale in significance to the Bering Sea and I think that the industry can meet 4500 metric tons of catch and I think the Council and the Regional Director has the ability through our new authorities and through what we all assume is going to be some type of penalty box program, to provide them with the ability to get there. So, I think this is something that we need to do, we can do, it's rational, and I think we ought to do it.

Collinsworth: Further discussion on the motion?

Alverson: I would feel more comfortable if you're going to reduce this number, Larry, if it was tied to a penalty box program such that one season following implementation of a penalty box program, a reduction of some magnitude or this magnitude would take place. I'm not going to support this amendment. I feel that we've had one year under our belt; I frankly think that the industry may do better than this, but I'm not satisfied with imposing a mandatory reduction without the tools of the industry to accomplish that reduction. The same thing is happening in the Gulf of Alaska in the hook and line fleet where we've had a massive problem with bycatch and the system is pointing the gun at them and saying clean up their act, but they don't have the tools to do what they need to do because they've got too damn many boats on the edge. And I feel that this type of mandatory reduction from the 100% level is a similar burden on the trawl fleet. I probably could rationalize it in saying that there were two significant abnormalities that took place last year in the bottom trawl component that caused the overage, and one was the movement of the yellowfin sole fleet into Area 2H, and the turbot fishery. Those are two abnormalities that had not taken place in the fishery prior to the 1990 season. Without those two occurrences we probably would have been at 4500 ton, so I probably could justify this at this point, but I think it's premature to begin racheting this thing down for 1991 without a penalty box program.

Pereyra: I'd like to second the excellent comments by Mr. Alverson regarding the reasons why it probably is premature to be talking of movements of this size, we're talking a approximately 20% reduction in the cap. As I mentioned yesterday, we are in a very dynamic time in the development of fisheries in the Bering Sea and there are going to be changes next year that we have no concept of at this point. Just as there were changes in 1990 that we could not anticipate in 1989. So, I would like to certainly see the sense of the Council reflected, that we

want to bring these numbers down, but I think the time to do that is when we have the penalty box in place and we can actually sit down and work out a plan that will assure that we will be able to reach these target numbers. I heard my colleague on the right using the modifiers--should, hope, maybe, and so forth--I think that reflects a certain degree of uncertainty on this issue and the impacts from erring are substantial as we saw this year, so I would hope the motion would be turned down.

Blum: I would very much like to support the amendment, but since we were unable to deal with our end of the equation by instituting some tools that would allow industry to have a chance to meet what the Halibut Commission has suggested they would like to see us do, I think it's unfair to ratchet down industry and say we heard your offer, we're unable to do it but we think you ought to meet your part of the obligation. I think it's an unfair request. I do think, and I think the record's fairly clear that I am in support of reducing halibut bycatch and reducing bycatch in general. I would very much like to support this. If we would have done our part yesterday, I could have. We haven't, and therefore I can't.

Pennoyer: For all the reasons Larry stated, and a few that Bob knows very well, too, in our obligations in the halibut fishery, I would like to see the halibut bycatch go down--no question about that. This year we didn't [not sure whether he said "did" or "didn't"--muffled] live within it and still harvest the OY of groundfish. There were various reasons that Larry stated that I think lead me to believe that we have a chance to live within that cap next year and still harvest the OY of groundfish, but the model, or its. . .[unintelligible]. . .shows halibut to be constraining in nearly every instance. It is the cap that closes the whole Bering Sea for certain types of fishing. I think we're going to try and develop an incentive program; I don't quite agree with Mr. Blum, I think we are going to try to develop one. We're going to try and have something in place next year in some limited number of fisheries, but we don't know how it's going to work yet. We won't know until after we're done. We haven't been through a full year of observer data; we don't know what the data is yet, even. And for all those reasons I think we should really do our best to get back together and figure out how to live with this number and then start to decide on how to reduce it. Maybe with these pushbacks in seasons and modifications, plus hot spots, plus the, uh, whatever we can do in terms of an incentive program next year, we actually will reduce it. But there's enough uncertainty there and enough cost that right now I don't feel justified in setting that arbitrary reduction at this time.

Collinsworth: Further discussion? Roll call vote, please.

Pautzke:	Mr. Hegge	Yes
	Mr. Lauber	No
	Mr. Mace	No
	Mr. Mitchell	Yes
	Mr. Pennoyer	No
	Mr. Pereyra	No
	Mr. Alverson	No
	Mr. Blum	No
	Mr. Collinsworth	No
	Mr. Cotter	Yes
	Mr. Dyson	No

Fails.

Collinsworth: Continue discussion on the main motion. Mr. Pennoyer.

Pennoyer: For the balance of the motion I'd like to get some information from Mr. Pereyra and maybe from staff. In nearly all the cases, the halibut bycatch was the constraining issue. Now, I heard from the modelers that in one case Tanner crab would have been constraining and this year it really was not. The total numbers of Tanner crab are really not, at least in our view and our experience this year. I know there will be possible shifts in emphasis this year. We may well have a larger flatfish fishery, I think that's probably in the cards, we may very well have a larger rock sole fishery, or attempt to. We haven't yet allocated PSC between fisheries. We have the ability to allocate a separate PSC to the rock sole fishery. I'm not sure that the crab caps by any comparison are constraining. In any case, the other issue is the status of the stocks of the PSC creatures. Now, I know that bairdi has gone up since the time we first implemented 12a and I think red king crab has to some degree as well. If I'm not mistaken, red king crab population is still at a very, very much reduced level than it was in more optimal times, let's say. So, where there may have been some percentage increase in red king crab **[Change to Tape 38]** I think it's relatively minor compared to the decrease in the stock we've been seeing up to now. I guess I'm not sure that Tanner crab really is constraining and I might like some further comment as to why it's viewed as constraining in the model. The model shows the rock sole fishery at 117,000 metric tons and I think we took something like 30,000 this year and I'm not clear at what level the Tanner crab actually became constraining in that model. So, that would be a question to staff, Joe or Fritz.

Funk: Mr. Pennoyer, were you interested in the no-penalty box situation that we were discussing with Mr. Pereyra this morning, or the penalty situation we discussed with you more yesterday.

Pennoyer: My assumption is that relatively between the runs the reaction would be the same. The numbers might change, I guess it doesn't make any difference to me. Let's say, without the penalty, how constraining is the Tanner crab cap? You mentioned it constrained one fishery and I'm not sure the relative importance of that as relative to the halibut cap problems we're looking at.

Blum: Steve, did you say without the penalty box?

Pennoyer: Either way, what is the comparison between. . .how important is the Tanner crab. I assume the penalty box influences all the bycatch caps in about the same way. Let's try it without the penalty box and see what it looks like.

Funk: In the unconstrained. . .again, dealing without a. . .wait a minute. . .[talking with Joe Terry; muffled]. . .in Zone 1, at 100% of the 12 a caps, bairdi is constraining to the rock sole fishery. The unconstrained bairdi catch in Zone 1 is about twice the cap. . . .[muffled words to Joe Terry]. . .Perhaps another measure of how that is constraining, in run 1 the rock sole achieves their TAC, this is an unconstrained run with no caps, the rock sole fishery would achieve their TAC on March 22nd. With again no penalty box and 100% of the 12a caps, the rock sole fishery would be excluded from fishing in Zone 1 on February 8th and they would be excluded from fishing in Zone 2 on February 15th. That might give you some sort of feeling for how much the bairdi PSCs are constraining. Another comparison I'm just trying to work out in my head that might help you would be if bairdi wasn't constraining, what the next constraint would be. There may be a halibut constraint that would enter, but I don't have that particular combination of tables in front of me.

Cotter: What level of the TAC are you assuming that rock sole will take to reach that conclusion.

Terry: It would be the TAC that was set this year and we've heard I guess testimony in the last two days that it's possible it'll be higher. . .well, you'll determine whether it'll be higher for 1991 or not.

Cotter: What was that TAC set for this year?

Terry: 60,000 metric tons.

Cotter: But the actual harvest this year was 17,000 metric tons.

Terry: Just under 32,000.

Cotter: According to the NMFS report. . .

Funk: With JVP, the rock sole catch so far this year has been 31,679.

Cotter: DAP was 21,000. So that would assume a doubling in the harvest of rock sole by all sources next year and if that doesn't occur, then would C. bairdi be constraining?

Funk: Looking at the duration of the season, again this is with a 100% cap, roughly halfway through the season bairdi was constraining, so I would approximately say no. If the catch rate was constant throughout that time period, they would be about at the bairdi cap when the TAC was reached if the TAC was half the level that we assumed.

Pereyra: My concern for the C. bairdi caps is directed at the rock sole fishery. This next year we're going to have a ban on roe stripping, we're delaying the opening of the yellowfin sole fishery; we're delaying the Greenland turbot fishery, there's a certain segment of our fleet that will be very impacted by this kind of a closure. Furthermore, the rock sole fishery is a fairly high valued fishery, so we're not dealing with something like yellowfin sole here and for that reason this kind of a constraint has me concerned, particularly when we see the bairdi stocks now at almost record population size. So, from an impact on the population I don't think we have a concern; we shouldn't have too much of a concern. But certainly the interception rates are going to be higher, so I think there is good justification for some relief on those caps and that's the reason why I proposed them. The other thing is that if we do have a premature shutdown of the rock sole bottom trawl fishery we're going to be leaving again a significant amount of fish in the ocean that will not be harvested and we will have vessels then going into other fisheries where we may be impacting secondarily, for example the halibut bycatch and that I look upon as a negative, so I think there's some real benefit to be derived by allowing a relief on the crab cap. Thank you.

Pennoyer: I guess I must confess to some surprise that the bairdi closed the rock sole fishery instead of red king crab. I would have thought that it would have been red king crab judging from last year's general experience and catch rates. Any comment? Is it close? I mean, if bairdi would have shut it down and one day later red king crab would have done it anyway? What are we talking about.

Terry: Unfortunately we don't have the details to answer that question. I guess if that were the situation, then increasing the bairdi cap would have little effect because there would be a follow-up closure by red king crab. I don't know that that is the case, though. Again, the apportionment of Zone 1 and 2, the apportionment of the overall Tanner crab cap between Zones 1 and 2 may be part of the problem.

Pereyra: That is another issue and I think there's a need for maybe some inseason authority for the Regional Director to make those changes between Zone 1 and Zone 2 depending on the area and fisheries operating and how it's operating, but that's another issue.

Mace: I seconded the motion. I've long felt that there's a real need to have some flex in the bycatch limits based upon the health of the stocks. You know you can make as good a point for holding to a level cast in concrete when you have a conservation problem as you can for increasing when you have an increase in stocks and I think that the interception opportunities with an increase in bairdi, for example, are going to be much more, it could be constraining, and I think it makes sense to have a floating cap.

Alverson: Well, as I understand the motion this isn't a floating cap, this is 50% higher than what we had the last couple of years under Amendment 12. One of the three, if you could answer the question of which crab species pushed the flounder fleet out of Zone 1 earlier this year?

[Someone answered "king crab"]

Alverson: It was king crab? And this year did bairdi shut anything down?

Terry: We'll have to rely on the Region to answer that.

Pennoyer: The Region is conferring on your first question about transfer of crab between areas, I think. The question was did bairdi shut anything down, and I think we went over in one area after the fact, so to speak, but I don't think it actually shut any fisheries down.

Alverson: How about. . .obviously, you say red king crab closed Zone 1, is that accurate? [Yes]

Collinsworth: Further discussion on the motion?

Mitchell: Would you read the motion again?

Cotter: Mr. Chairman, I move to amend the C. bairdi cap to 100% of 12a levels.

Hegge: Second.

Cotter: To speak to the motion, I think that a floating cap is appropriate and that issue will be before the Council in June, that's one of the recommendations from the Bycatch Committee, to move forward with that amendment. Hopefully at that time as well, using arguments articulated earlier this morning, we'll have some clean fishing approach that we can put into effect for 1992 if something doesn't happen during 1991. One of the reasons why we've talked about increasing the bairdi cap is to reflect an increase in the bairdi population. Well, how come we

didn't reduce the halibut cap to reflect a very substantial decline in that population? It seems that's what good for the goose ought to be good for gander. There are tools that we have and I think we ought to use those tools. We can use the bairdi cap right where it is and the same thing with the king crab cap.

Pennoyer: We're still looking into that, but it's my impression that we can alter crab between Zone 1 and 2 if it's found to have been mis-specified. As to how that's done, now there's some discussion of that. I hear some discussion of that would be desirable, and we're still looking at that but I assume the Council could provide us some guidance on that.

Pereyra: I'm going to speak in opposition to the amendment. With regards to the use of floating caps, I strongly endorse that concept. I think it's a good way to go, I think it provides for the kinds of annual adjustments necessary to take into consideration the increasing and decreasing population sizes. With regards to halibut, I don't think we have all the information on halibut. We certainly know that the exploitable population is down but we don't have a good handle on the size of the population of the juvenile halibut which are the ones that are primarily intercepted by the trawl fleet. In fact, I think the Halibut Commission biologist spoke on that issue, not having been able to analyze all the survey data yet. I feel that, again, putting a restriction on the development of the trawl fishery of this nature, with a constraining bycatch of bairdi, is going to have negative impacts on the trawl fishery and it's going to have negative impacts on the bycatch of halibut, so for that reason I don't think the amendment should be supported. Thank you.

Cotter: Just another comment and that is, you know bycatch I think largely is a function of CPUE. Certainly population levels of the bycatch species and population levels of the target species enter into it, but essentially bycatch is a function of CPUE. The greater your CPUE on your target fishery, the lower your bycatch rate and what that speaks to again is clean fishing and with the efforts that I expect we'll see made by the Region, and I expect to see a far intensified voluntary effort by the industry as well. I think that they can stay within the bairdi cap and not be constrained.

Collinsworth: Further discussion on the amendment?

Mace: Would you repeat the amendment, Mr. Chairman?

Collinsworth: The amendment to the main motion is to amend the motion to show instead of 150%, 100% of the 12a for bairdi. Roll call vote, please.

Pautzke:	Mr. Lauber	Yes
	Mr. Mace	No
	Mr. Mitchell	Yes
	Mr. Pennoyer	Yes
	Mr. Pereyra	No
	Mr. Alverson	Yes
	Mr. Blum	No
	Mr. Collinsworth	Yes
	Mr. Cotter	Yes
	Mr. Dyson	Yes
	Mr. Hegge	Yes

Pass.

Collinsworth: The main motion has been amended. Continue debate on the main motion.

Mitchell: I would move to amend the main motion. In the case of herring, that the Winter Savings Area northwest of the Pribilof Islands be the larger area identified in Alternative 3 of Amendment 16a EA/RIR, Section 4, also known as Option C in the 1983 draft FMP. Additionally, to expand that area to include that area North to 60° North. Then, a Summer Savings Area, north of the Alaska Peninsula identified in both Alternatives 2 and 3 of the Amendment 16a EA/RIR, expanded to include that area West to 167° West, and additionally, to have another Savings Area located within the herring migratory route, to include those fishing grounds in regulatory reporting area 513, West of 167° West and those areas in Area 515, West of 167° West and North of 55°46' North. Additionally, just to make the record clear, that those dates in the area north of the Alaska Peninsula would be the first area which would be closed, June 15th to July 1; the second area to the West would be closed July 1 to August 15th. The migratory area would be closed July 15 to September 15th and the northern Area C with additions would be closed September 1 to March 1. I think that there's been overhead that's been drawn up on that and if I get a second I'll discuss those.

Cotter: Second.

Collinsworth: All right, we have a motion and a second. I think the motion is complex enough that we do need a visual aid and. . .Mr. Mitchell, is your motion in a form that can be reproduced?

Mitchell: Yeah, I think so.

Cotter: Point of clarification on the motion, Mr. Mitchell. When you outlined the areas that would be closed you said they would be closed, you mean they would be closed in the event that the cap is reached?

Mitchell: When the 1% cap would be reached those areas would be closed during those dates. And I guess that, based on the 1%, I don't know exactly what the figure would be that the first closure would take place?

Funk: Using the current biomass level? [Right] 1% would be 1,260 metric tons.

Mitchell: Right. Now my understanding is that for instance if the closure took place and the first area closure, you'd already gone past that time, of course the boats could go back into that area and the same would be true. . .what you're doing is closing areas as the fish go north. The reason I extended the area north to 60° is it's my feeling that in the latter part of the winter those herring are going to be pushed up against the ice edge there and it needs protection. Now, if people had a large objection to that I think what you could do is sort of framework dates in that northern area. What you want to do is protect those herring in the latter part of. . .as they move farther north and get up along the ice edge, you want to make sure that there's the ability to close. And I'd also be willing to let the Regional Director handle that with his hot spot authority. But I think that the middle area needs to be included in those dates. There is on occasion evidence of fairly large bycatches of herring. I don't think that it's going to make any particular difficulties for the industry. I think they'll be able to get their herring outside the areas, and I don't think that any of this is going to create increased bycatch on other species and I think the analysis that was done using the model which I realize some people believe is made out of Silly Putty, but the analysis there I believe was that using option, or Area C, did not result in industry having significant difficulties.

Alverson: At the June Council meeting we voted and debated a emergency request on herring; I don't think it went through because of it was deemed not to be an emergency, but we dealt with areas and area closures similar to this. I believe the Council voted a compromise vote on something less restrictive. Can we get a copy of what we voted on in June and the dates that are associated with those closures?

Collinsworth: Are all of the dates for those zonal closures along the Peninsula and then the migratory path and into the Winter Savings Area, are those dates, I mean I don't see all of those dates on the graph or if they are maybe they're too small for me to read.

Mitchell: I don't know if they put them all on there, I didn't prepare that, but the. . .

Collinsworth: If we took a short recess, could we get that information on the overhead?

Mitchell: We can write it on right now.

Collinsworth: All the appropriate zones now are highlighted in blue to describe to perimeter, is that correct?

Pereyra: In order to fully appreciate the impact of this particular proposal, would it be possible to also maybe in another color, maybe superimpose the other closed areas that the trawl fishery would be subjected to--the pot sanctuary area, the Crab Area 1, the Crab Area 2, and the halibut areas so we can get a true feel for just how much of the Bering Sea is actually going to be open.

Collinsworth: I don't know if we. . .is there another overhead that you can overlay that one with? There isn't? O.K., let's take a recess for about ten minutes and allow the staff an opportunity to get this picture before us.

Collinsworth: We have on the overhead now a chartlet, whatever they call those things, chart. It's fairly busy, I guess, in terms of what's on there. Hal, could you kind of lead us through on what we have now on that overhead.

Weeks: [Speaking away from the microphone; can't pick it all up] Areas 511, 512, 516 comprise Zone 1; Zone 1 is closed on attainment of a red king cap, a bairdi cap, or in combination with Zone 2H. . .[unintelligible]. . .a halibut cap. The large area outlined in orange is Zone 2. There is a bairdi cap for Zone 2. . . .[Now at microphone]. . .The Council's requested emergency motion in June was to close Area C, the dark hatched area, on September 1st if 600 metric tons of herring were taken from Area A [interrupted by Pautzke]

Pautzke: . . .taken from Area C, which is the bigger area, would close Area A on September 1st. The catch is counted against the bigger area and closes the smaller area.

Weeks: Thank you. Area A is the red hatched area here; Area C is the blue hatched area south of the "x"s.

Cotter: There was reference at some point to previous action by the Council as well at the April meeting to also extend the closure along the Peninsula west of 167°. Did the Council take that action?

Funk: The Council's emergency action, Summer Savings Area along the Peninsula extended to 166°30'. The analysis in the 16a document we have before you went to 166°. The model, basically the smallest time/area unit it can deal with is one degree of longitude and we couldn't analyze that particular option. So the line that's up there is drawn at 166, your emergency action this year actually went to 166°30'. That is 15 miles difference.

Pennoyer: I see the difference and the times and I guess I'd come back to some questions on what we're trying to accomplish here and what the data actually shows us. The runs in the model didn't show very great differences

between all these different options, certainly in terms of herring catch, and some difference in groundfish catch. Now they didn't include this central migratory area and I have not seen an analysis as to what that does to either groundfish catch or herring bycatch. Fritz, I've got a couple of questions. I think we've all seen the status of Bering Sea herring stocks and we're all concerned about it, lack of reproduction, reduction in biomass, generally what's happened, the subsistence needs in Nelson Island, and I think we all want to accommodate them. I'm not sure how best to do that. I think on the other hand we also probably all would like to see some type of limit on what bycatch can be, just in terms of rational resource management and distribution of harvest. But I'm not clear what the 1% and the closed areas are doing for us in these regards. For example, if the biomass of herring went up to 200,000 tons and every fishery inshore was prosecuted at full exploitation rate, you'd still have a 2,000 ton closure in the trawl fisheries under 1% that at least in past recent experience would trigger most of those closed areas. Matter of fact, I think that 1% probably automatically **[Change to Tape 39]** in recent experience, maybe even the average experience triggers the Area C, or the Winter Savings Area. I think that's a given; that's going to get triggered unless we really find a better way of avoiding herring bycatch with gear. Even going back to the average JV days to where I think the average rate was 2% of the biomass, you're going to trigger the Winter Savings Area. I guess what you've done here, we're trying to get herring to a specific part of the coast; we probably don't know how to do it, so we're sort of putting a fail-safe mechanism in place and the assumption has to be that the herring are mixing and I guess that the difference between Area C and Area B in terms of savings as I recall from looking at the graphs is a couple hundred tons of herring, which if you go down to a 3% part of the population is six tons. It's going to be difficult to show how we're delivering anything to. . .I can see the overall concept of putting some fail safe into effect, to limit the bycatch, some restrictive way by putting a percent on it and then closing certain areas, but I don't see a lot of difference in delivery, particularly the areas we're particularly concerned about, by the different closures. I know the summer closing areas discussed earlier, the fish are probably still segregated in a migration path and you don't know which stock you're getting or not getting, but there may be some reason to assume your risk of hitting a particular stock is greater along that route. But if they're in an area that's mixed, even if the risk was great, you don't know, if you're trying to protect a stock that's a few hundred tons, I'm not sure how you're doing that. I didn't see too much difference, as I said, in the runs between Closure B and C in the Winter Savings Area on herring. There was a little more difference in groundfish catch although not really dramatic. Could you comment on how you view the 1% relative to inshore management?

Funk: Your point is well taken there that the impacts on particular stocks depends on the degree of mixing. I think that's the correct place to focus attention and we think now that the degree of mixing probably increases along the migration route, certainly earlier on we have spawning going on at different times and at different locations and the degree of mixing is certainly high at the beginning of the migration. We really don't know how it ends up on the wintering grounds. They may still be segregated, they may not be; we don't have any scale

pattern analysis that we can use to try to make inferences about the degree of mixing on those wintering grounds. I think the situation we're faced with here in looking at this plan amendment is a little bit different than perhaps we were visiting in April or June when we were dealing with the stock status of smaller stocks we had concerns about along the Western Alaska coast, and we were trying to determine whether or not the situation met the conservation emergency criteria that met a particular emergency rule. The analysis we prepared here for 16a, of course, is a little bit different context if you consider not just conservation emergencies but broader social and allocative issues. We do have concerns for stocks besides those small stocks in the Central/Western Alaskan coastal communities. The Togiak stock is the largest stock in the Bering Sea. It continues to decline. Not as fast as we were worried about earlier this winter when we first came to you, but it is still declining. We have not seen major recruitment; recruitment is not at replacement levels; that stock is still declining; we are still worried about it. So, I think we are considering more than just the small stocks here. One other significant stock in the Bering Sea, in Norton Sound, is doing better than the other stocks in the Bering Sea and we don't have the conservation concerns for that stock as we do the other stocks, but basically we have conservation concerns for all the stocks in Western Alaska, so 1% I think, we're not looking at just what does a 1% herring harvest do to the small stocks now, but it's really to what does that 1% mean in terms of some of the larger stocks.

Cotter: Fritz, somebody? What. . .the overfishing definition, how does that enter into things now, and does it? You know, herring's not a groundfish, I don't know whether our overfishing definition applies to herring or not. It would seem to me that it probably ought to because fairly easily, if we have a exploitation rate inshore of 20% and if bycatch is occurring offshore, if you don't reduce that 20% to reflect the percentage that was taken offshore, then your exploitation rate is going to be in excess of 20% where you have fisheries and of course where you don't you might be overfishing. Does the overfishing definition enter into this equation at all?

Funk: No.

Pennoyer: I guess the other corollary would be if you had a herring management plan, where would you reduce that exploitation rate, too. [unintelligible]. . .still fishing inshore that you're expressing concern about at the 20% level and I understand capping it, I understand particularly the concern for some of those substocks, but I don't know what reaction the State's going to take relative to inshore stocks, on what point they would reduce the exploitation rate. I'm not arguing against the cap, I think it's needed. I'm trying to relate the cap to the areas and what's going to happen. I think under 1% you're probably always going to close the Winter Savings Area unless we really do discover a piece of gear that excludes herring. So, I'm just trying to put that in my context of what's going to happen relative to stock size and stock savings.

Pereyra: I wholeheartedly endorse some of the comments that Mr. Pennoyer made, in particular the fact that we are being asked to make some decisions here, we only have half a deck before us. I don't think we have all the information, about what the potential benefits might be from these sorts of closures, what all the impacts may be, and furthermore, I don't think we have all of the tools available to us as a Council to manage the herring stocks in such a way as to bring about some significant improvement in those stocks. I've seen information indicating that there's potentially the manner in which the harvest has gone on in Western Alaska that may have contributed to the reductions in some of the stocks up around Nelson Island, for example. These are things that concern me, and I think we may be getting to the point rapidly where we're going to have to again take a look at developing a fishery management plan, an FMP, on herring for us to look at. We can framework the State's management authority into that, but I'm becoming concerned. What I see up here, you know, we're talking about prohibited species, what's been going on. I think we're rapidly approaching the point where the American trawler man is going to become a prohibited species, and I don't think that's what we're looking for. My initial motion was one, I thought, of reasonableness, taking into the concerns for bycatch but on the other hand taking into concerns for the reasonable prosecution of these trawl fisheries so we can achieve the OYs as we are charged to do as trustees of the resource. So, at this point in time I would have great difficulty supporting this amendment and would hope it would be turned down.

Weeks: Mr. Chairman, to meet the information needs of the Council I'm advised by General Counsel that if the Council would like to consider this option it would have to remand the document to the teams for further analysis and review. The problem, Mr. Chairman, is that this consideration falls well outside the bounds of the analysis presented.

Cotter: In which regard?

Weeks: With regard to the areas which would be closed upon attainment of a herring PSC cap.

Cotter: Well, was not Area C something that was looked at as well in the analysis?

Week: That's correct. Area C was looked at the analysis, but a closed area along the migratory path was not assessed nor was the larger area along the Peninsula, or the larger than Area C assessed.

Cotter: So, to synthesize then, in particular the migratory area would be that which would need additional analysis at least. I think an argument could probably be made regarding the extension to 167, that we've had adequate analysis on that.

Weeks: I would have to defer to General Counsel for that.

[Evidently General Counsel was out of the room at the time]

Collinsworth: Where is General Counsel when you need 'em? Do you have any comments, Mr. Pennoyer, in that regard?

Pennoyer: Well, I think in regard to the migratory area and maybe even the extension of Area C, I can see where the problem would occur. I'm not sure what the analysis previously would do for you along the Peninsula. I'd have to see what the data was. But it's not currently in the EA/RIR in front of us.

CDR Kyle (CM): I would just like to in general state that we are strapped right now to enforce the time and area closures that have been in effect in the past and I just shudder to look at this up here and think that we have any ability to enforce it with our present resources.

Cotter: A question, then, for Commander Kyle. Even in Wally's motion? Do you feel the same?

Kyle: I put Wally's motion more in the context of what we've had in the past which I said straps us to enforce, and this confounding beyond that.

Alverson: The original motion Wally moved, can you go through what that does off of this chart?

Weeks: Mr. Pereyra's original motion would invoke this temporary time/area closure, this temporary time/area closure, and the smaller black hatched Winter Savings Herring from September 1 to March 1 upon attainment of a 1% cap of the herring biomass. Again, the cap would be apportioned among fisheries; when each fishery attained its cap, these time/area closures would be enacted for that particular fishery.

Cotter: Address the migratory area. It would seem that the fish swim through that migratory area and we know that the fish have been taken incidentally as bycatch in that area. If the purpose of this amendment is to reduce herring bycatch then it seems illogical from an analytical perspective if not otherwise, not to close that area as well in the event that the 1% of the herring has been taken before it reaches that area. I wish. . .well, Lisa is here. I guess I can understand a desire perhaps for some more model runs or something like that, but it's illogical not to close that area if your purpose is to save herring and that cap has already been reached. I'm not sure that we really have to have another analysis. Perhaps General Counsel can expand upon the need for that.

Pennoyer: Mr. Chairman, Lisa wasn't in the room, but the question was, basically, if we expand the consideration of the closed areas to those indicated on the chart which extend the closure down the Alaska Peninsula by half a degree, institute that middle square block along the herring migratory path and also extend to some degree, Area C, can the Council consider that. And I guess, conferring, if we can get some data in front of us that scientific data would lead you to believe you could evaluate the impacts and benefits of these alternatives, then I suppose you could even if it wasn't in the model run. I don't know that we have any data on relative herring bycatch in the migratory path, do we. Is that broken down that way that we can. . .what percent of the herring is. . .

Funk: We do have data on the distribution of herring bycatch comparable to the data we used elsewhere. It's broken down by 1/2 by 1 degree squares, by month, by target fishery. Just a little bit of background on perhaps where those areas that we analyzed and included in the document came from might be helpful to your discussion. Earlier this spring when we were talking about emergency rules there was lengthy discussion in the AP about what the shape of those closed areas might look at. I had presented an analysis of the joint venture and foreign herring bycatch rates that basically showed the distribution of the core area of the herring migration, changing through the summer and fall period down along the Alaska Peninsula. And, those areas were the result of discussions in the AP. The western boundary of that summer savings area was a particularly contentious issue. Just west of 166°, around the 167° area, the 100-fathom contour that we call the Horseshoe area is a very substantial concentration of fishing effort. So, the discussions in the AP where we arrived at this compromise reflected where that effort occurred and the need to protect herring along the migration routes. So I think that moving that boundary would reflect a shift of a substantial amount of fishing effort. I don't know that. . .I think I would be unwilling to predict what that would mean in terms of the model outcomes. I have the herring distribution data here and the bycatch rates but there could be substantial implications for shifting that boundary relative small amounts.

Pennoyer: So that migratory area is then that part of the Horseshoe that has substantial fishing effort and we at this time can't assess the impacts on the groundfish catch of closing that. Do you have herring bycatch data? How much of the herring bycatch in total. . .I remember the analysis in the old FMP days and it was all concentrated around this winter closed area and the size of it and I don't recall that there was dramatic herring bycatch in this area of relatively intense groundfish effort along the presumed migratory path. I think we need some idea of the weight of that importance relative to even the amount of groundfish effort that occurs there.

Funk: The herring bycatch rates, again, the data I used to examine the. . .both the migration routes and the bycatch rates in the model come from the foreign JV fishery data. The bycatch rates were high in the data that were used to prepare the closed areas for the herring after the old herring FMP. I think what's different now is

that we have a domestic fishery that's putting a lot more effort into that area than was the case back in the foreign fishery days. There's a lot more effort in the Horseshoe area as I understand it than there is off shore.

Pennoyer: So, at this time we don't know the herring bycatch in that centered square, what it might be, relative to the savings area, relative to Summer Savings Area, relative to the Winter Savings Area. How important is that area, I guess, is what I'm trying to get at in terms of. . .

Funk: Well, we pointed out in going over these model runs that, for example, when you place a 1% cap on the fishery in the model the herring bycatch actually comes out to be 2, over 2, 2½%, somewhere between 2 and 2½%. There's two places where that herring bycatch is principally occurring. The major one is in the Horseshoe area, to the west of that boundary around. . .in the area, neighborhood of 167° West. The other area is around the Winter Savings Area, a little bit on the north side; that's not as important as the Horseshoe area. The Horseshoe area is where the balance of the herring, the herring that's being caught over and above the cap levels, that's primarily where it's being taken.

Cotter: Just to follow up and clarify on that. When you speak to the Horseshoe area, are you now speaking to the extension to 167°, or are you speaking to the migratory path, or are you speaking to a combination of the two in terms of where the majority of that additional herring above the 1% cap would be taken?

Funk: The area between 166°, well, 166° to 168°.

Cotter: Now, does that. . .we're talking about going to 167°, not 168°. Does the area out to 168°, does that begin to encompass some of the migratory path?

Funk: 168° would be beyond the. . .that would be the outer edge of the migratory path, the western-most edge of it; 167° is getting into heavier areas.

Cotter: And just to make sure, trying to track this, because I see two blocks up there and the one in the center which I've been looking as the migratory path, and then the extension from 166° to 167°. Again, are we going to see that additional herring taken in that center block as well as the extension out to 167°, or are they the same?

Funk: Using the model that we have before us and the herring bycatch rate we have before us, the most important area, the area where most of the herring bycatch occurs now is in the cross-hatched area that's the western-most extension of Zone 2 to 167°.

Cotter: Can you just get up there and point to that?

Cotter: And, what are your anticipations for the center area, the one just north and west of that relative to herring bycatch and is it low because there's no fishing there at that time, or what's the rationale for determining that little herring bycatch would occur there?

Funk: It's a combination. . .obviously the herring are passing through there to go offshore. In the distribution data that we analyzed, we saw high herring bycatch rates in the Horseshoe; they were lower offshore and they got higher again even in the month of August, end of August, and certainly going into September. You see there's a peak of effort in the winter area and a peak of effort in the Horseshoe. The area is somewhat lower in between. Common sense would tell you the herring are moving through that area, bycatch rates are lower out there, however.

Pennoyer: Well, Fritz, when you say a peak of effort that indicates groundfish effort and it indicates preferred abundance of groundfish species. Is the implication herring are denser in those areas, or is there just more groundfish effort occurring, and then, secondarily, why does the model show so little difference between groundfish catch in these different configurations? Looks like a fairly sizable area. If you hit the 1% cap and you're closing all of that, both inside, well, you've got different time periods, of course, but then coming out through that area and up including Area C, looks like a fairly sizable part of the ocean and yet the model indicates relatively small changes in the groundfish catch. Any explanation?

Funk: There are always places the effort can transfer into where there is some herring bycatch, and these areas are not large enough to encompass the entire area where herring are located. Again, the scope and size of these areas were elaborated during the discussions in the AP during the April and the June meetings and those are the alternatives we came back to you in the June analysis and we went forward with that in this particular analysis. The philosophy was to encompass the core area of the herring distribution. There is herring bycatch that occurs outside those areas. And when one area is closed, fishing effort is transferring into the fringe areas surrounding the closed areas and some bycatch continues to accrue.

Pennoyer: I guess also in terms of groundfish catch, though, there's not a dramatic difference in change of groundfish catch between B and C, for example, even though C is quite a bit larger and that surprised me as well.

Alverson: I would move to amend the northern area that is referenced as Area C and extending northward to 60° North, to that area that is encompassed by the black-hatched area on the screen before us and having that area extend northward to 60° North.

Cotter: Is that Area B then extended north?

Alverson: That's it.

Collinsworth: Is there a second?

Pereyra: I'll second for discussion purposes.

Collinsworth: The motion has been moved and seconded.

Alverson: This area is very similar to the area that we voted on in June, the emergency area, except for the extension to 60° North and rationale of our actions in June and you can very well see what happens when these closures begin to take place. If the closure to the north takes place between September and March 1st, I assume that's the date of closure proposed for that area, at least what the little arrow points to, if you reach the cap of 1%. The Continental Shelf, though not exactly, but generally reflects the diagonal line that is part of the bairdi area, going up the west side. There's no. . .[unintelligible - tape seems to be hanging up throughout this part of the tape]. . .to prosecute a pollock fishery which is principally going to be targeted in that area anywhere except further south towards Dutch Harbor and the Horseshoe area which I've always felt was Area 515, where the Continental Shelf turns and goes out towards the Aleutian Islands. Any closure of that magnitude is going to push a horrendous amount of fishing effort with the fleet that we currently have in a very confined area that could exacerbate all the other bycatch problems as well as usage between the inshore and offshore components of our industry and this is one of the arguments I articulated in June and am putting it back on the table.

Collinsworth: Any discussion of the amendment?

Mitchell: I couldn't support that amendment. You have a very clear problem with herring, declining stocks. I think that they need an area large as possible; they're in the Bering Sea where they would be protected in their historic grounds. Even with this protection, should my original motion stay intact, you're probably going to end up with a bycatch of over 3 to 4,000 metric tons and. . .[unintelligible-tape problems]. . .this kind of protection. I don't want to see the groundfish area closed down, I don't want to see any fisheries impacted, but the fisheries that have been impacted are the inshore herring fisheries and subsistence fisheries, so I think we need to take that into account, too. And I don't think that necessarily is measured in dollar terms, so I would hope that you wouldn't reduce the scope of the original motion here.

Pennoyer: Clarification. Mr. Alverson, then you are modifying Area C down to Area B but leaving the migratory area intact, in the other amendments, or. . .?

Alverson: I only addressed the one area, Steve.

Lauber: For clarification. Does this motion leave the Aleutian areas intact and only addresses the Winter Savings Area?

Alverson: It would definitely leave the Aleutian areas intact; I don't know now to handle, based on what I've heard here, in terms of need to go back for further review in terms of the migratory area. I'm just trying to handle what we can before us.

Collinsworth: You are correct, Mr. Lauber. The amendment, Mr. Alverson's amendment, to the amendment would deal only with the Winter Savings Area by modifying B, extending it northward. Further discussion? Roll call, please.

Pautzke:	Mr. Mace	Yes
	Mr. Mitchell	No
	Mr. Pennoyer	Yes
	Mr. Pereyra	Yes
	Mr. Alverson	Yes
	Mr. Blum	Yes
	Mr. Collinsworth	No
	Mr. Cotter	No
	Mr. Dyson	Yes
	Mr. Hegge	No
	Mr. Lauber	Yes

Pass.

Collinsworth: The amendment to the main motion has been modified now, with a different Winter Savings Area which we'll call "B, modified" I guess. Further discussion on the amendment to the main motion.

Pereyra: I would like to amend the main motion, or amend the amendment, to eliminate the. . .I guess you'd call it the corridor area that's closed between, what's it. . .July 15th and September 1st.

Collinsworth: Is there a second to the motion?

[Misc. comments -" to what area;" "I've got to see it"]

Pereyra: Well, maybe Hal can point it out. That area there, yes.

Blum: I'll second that.

Cotter: Motion to delete it?

Pereyra: Yes, motion to delete that area. My reasons for amending the amendment to delete that area are that the pollock also are migratory. They are moving to the northwest at that time of the year. There is a significant amount of fishing that takes place at certain times in that area and I think that we are again constraining the fishery such that we will find ourselves exacerbating some of these other problems that Mr. Alverson raised. I think the most important savings will come during the winter time. That's an area where the herring reside for a substantial period of time. That's a very long closure, from the 1st of September to the 1st of March is a very long period of time and I think this additional area that's been added is excessive and is not needed. In addition, I have seen some analysis that suggests that the herring in the Nelson Island area in particular do not go south as is postulated here, but in fact tend to go directly west, so the kinds of savings we're looking for on those particular stocks may not be enhanced by this proposed additional closure. So, for that and other reasons I'd like to see the area deleted.

Alverson: Wally, you made the comment of a closure between September 1st and March 1st. Were you referring to this corridor area when you made that date?

Collinsworth: No, he was looking at the Savings Area.

Pereyra: No, I was referring to the Winter Savings Area, the B, modified.

Cotter: Speaking against the amendment. We're not just looking at Nelson Island and Nunivak. You know, Nunivak I think was below threshold this year and Nelson Islands is close. We need to bear in mind that we're also looking at Togiak. We're having a commercial harvest in Togiak now, that's accurate. But take a look at the distribution of age classes and strength and I think what you'll find is that there is very little recruitment, that the populations are aggregated in much older age classes. Indeed, I think the case is that some of these age classes are much higher, much older than folks have seen before. There's been some predictions that we're looking at an imminent crash from one year to the next in the Togiak herring stocks. Sooner or later those guys are going to die of natural mortality if nothing else and then we're going to find ourselves in a situation where the Togiak stocks, possibly this year, possibly next year, where those stocks are also severely depressed and maybe somewhat similar in biological status to what we currently see around Nelson Island. Those stocks of course have

some very significant marine mammal implications and we do know that they migrate through the proposed closed areas. So I really think that even though our focus emotionally is on Nelson Island, we intellectually realize that Togiak plays a very big role in this. The other thing that I'd like to point out is that herring bycatch doesn't generally occur like crab bycatch or halibut bycatch where you pick up so much per ton on a fairly regular basis and you may hit a spike or something like that. Herring bycatch normally occurs many, many, many tons at one time. A couple tows generally account for a lot of the bycatch and it is something that can be avoided. Fishermen can learn to do that. Having said that, if again we are seeking to limit the amount of herring taken as bycatch it really makes no sense at all to allow those critters to be subjected to additional bycatch exploitation as they pass through a corridor.

Pereyra: I'd like to respond, if I may. With regards to whether you can or cannot avoid herring bycatch, certainly I've been out on the grounds and fishermen make a very concerted effort to avoid, but sometimes while you're in a tow, you've moved slightly off the initial prospecting track that you took, all of a sudden there's a small spike of herring that shows up. You do not have the ability when you're in tow to avoid that particular spike. You can start hauling back at that point in time, but then it's too late. You're going to encounter those herring because of the large magnitude, depth wise, that some of these spikes occur. So, while I agree that the bycatch tends to be more of a large amount in one tow, sometimes you can't avoid them no matter how hard you try. The closing of that area may make the situation on herring even worse because the effort that would have been put into that area is now going to have to go elsewhere. A considerable amount of it will go northwest because the pollock are moving up into that area. That may in fact result if there are, if the Nelson Island stocks are moving out, that may result in actually increased interceptions on that particular stressed portion of the population, so I've got some concerns about the impact that that closure will have. Secondly, the pollock in the area being closed tend to be larger. You tend to have larger fish there. There are certain types of pollock operations that need larger sized fish, I'm thinking of filet operations. You may be disproportionately impacting that portion of the fleet and so that, I think, has to be kept in mind. Thirdly, with regards to the concern about the other herring stocks. If in fact they are in that critical a situation as being suggested, I have some problems understanding why any commercial fishery at all is allowed on those stocks. I certainly think that the fact that commercial fisheries are being allowed, and substantial commercial fisheries at that, indicates that while there is concern the concern is not to the point of the gravity that might be suggested.

Pennoyer: Question for Fritz. I guess as I understood what you were saying, the main area of concern for herring did encompass this extension of the area along the Alaska Peninsula. You were concerned out to 167°. I did not hear any real information on this corridor area, either in terms of herring concern or really in terms of what groundfish might be foregone if it was closed. So I guess what I was hearing from the team is that the Peninsula

area may not have been adequately configured; that we may have some real concerns out to 167°, but I did not hear anything very specific about this corridor area, either in terms of groundfish or herring.

Funk: The herring bycatch rates in that central area are definitely lower. Looking at the bycatch rate data we have, as I mentioned, there's a spike of herring bycatch in the Horseshoe area, round Unimak Pass, in the late summer, early fall, and there's another spike offshore. The bycatch rate is lower between those two. Obviously herring have to pass through that area but the observed data we have indicates the bycatch rate is lower; I don't know why.

Pennoyer: Maybe a dispersal.

Funk: Could well be.

Pennoyer: Again, the amendment is to delete that central blue box, that's the total sum of it?

Collinsworth: It's the. . .yes, what we're referring to as the corridor area, that portion that would be closed from July 15th to September 15th if a 1% of the overall catch were achieved.

Alverson: Joe, or Hal, you may know the answer to this. Where is the yellowfin flounder DAP fishery that is currently operating. If there's more than three boats, can you tell the general area where they're participating, relative to this closure?

[deferred to Region to answer]

Pennoyer: I don't have a map in front of me that gives that, but. . .Dave Fraser probably could point it out on the map right now; I don't have that off the top of my head.

[Dave Fraser (AP member and fisherman) goes to overhead; not at microphone; can't hear his comments]

Mitchell: Well, how much herring did you catch?

Fraser: [now within hearing distance]. . .I'm aware of none.

Mitchell: That's the point. It's irrelevant. They don't catch any in that fishery that I know of, but that's not the only fishery that takes place in that area. So using the example of the yellowfin sole fishery is the wrong example.

Alverson: This closure, as I understand it, is to all trawling, so it is relative. Obviously the herring are migrating and they don't re-materialize to the north without swimming some body of water between the Peninsula and up north. I do recall quite extensively over the last ten years of the catch reports, particularly in July, through August, of where the foreign fleet participated in their yellowfin sole fishery and it's exactly in the area where Dave Fraser has just pointed out where his participation is at this time of the year. It would be closed July 15th through September 15th and restrict potentially a very clean yellowfin sole fishery. I'm not arguing to throw the whole corridor out, Henry, I feel there may be an alternative area there, but I just wanted that information because I don't want to squeeze out the only area that can fish and potentially harvest a large amount of flounders at very low bairdi, or at least king crab and halibut, PSCs.

Collinsworth: We now have amendment to the amendment before us; any further discussion on the amendment? Roll call, please.

Pautzke:	Mr. Mitchell	No
	Mr. Pennoyer	Yes
	Mr. Pereyra	Yes
	Mr. Alverson	No
	Mr. Blum	Yes
	Mr. Collinsworth	No
	Mr. Cotter	No
	Mr. Dyson	No
	Mr. Hegge	No
	Mr. Lauber	Yes
	Mr. Mace	Yes

Failed.

Collinsworth: The motion fails. Now we have the amended amendment before us. It's approximately the noon hour, so rather than taking up another motion or getting further into debate at this time, we'll recess until 1:30 p.m. The Council will have an executive session.

Collinsworth: . . .We're still somewhere about on our agenda where we were supposed to be Tuesday about this time. What we have before us is Mr. Mitchell's amendment to the main motion which has been amended, but basically is now what is reflected up on the overhead. Continue discussion of Mr. Mitchell's amendment.

Alverson: I would move to amend the area that is designated to close July 15 to September 15 by eliminating the area that is incorporated in that bounded by 168°30' and 56°30'. . .or, does that line go across at 57° or 56°30'?

Mitchell: 56°30'.

Collinsworth: It's difficult to read from here, so could we get someone to point that out on the overhead there?

?: [barely hear]. . .this lower line is at 55°44', where the 511 (?) boundary intercepts this . . .[unintelligible]. .

Alverson: How about that purple line that goes across down at the bottom there?

?: . . .I think that's 56°30'; this line here is 56°30'.

Collinsworth: All right. Then your motion is to delete from what we're calling the Savings Area, that lower 25 or 30%, whatever it is?

Alverson: No, it would be 168°30' and it'd be the right-hand side of the top portion, 168°30', go down that way, to 56°30'. Yeah.

Mitchell: And to the east of the Pribilofs?

Alverson: Correct.

Mitchell: So, just half of that, or what?

Alverson: Yeah--no, no, no, no. [I believe someone is going to the chart . . . miscellaneous comments]

?: Start over again.

Mitchell: Which do you want to do; I still don't understand.

[Again, silence then miscellaneous comment while someone works on chart on overhead]

Mitchell: Well, I'll second for purposes of clarification.

Collinsworth: We have a motion to amend Mr. Mitchell's amendment.

Alverson: I have suggested the elimination of this primarily because of my concern of where the flounder fleet is going to begin operating I believe in April and I think a significant portion of their needs are going to fall to the east of the Pribilofs, just as the foreign fleet found in that time frame and as the foreign fleet found that there was significant low bycatches between July to late summer and early fall. I believe the data is not as well focused and developed in regards to migration pattern of the herring. It's obvious in some manner they do get up to the northern area, they don't catch Reeve Airlines and just jump over. So, I think there's some legitimacy in a closed area between July 15 and September 15, if the 1% level is obtained.

Mitchell: Question. Are you saying that the yellowfin sole fleet needs to operate in there at what time? . . .

Alverson: Well, I don't know what needs are, Henry, but I know that the past history has shown basically in that frame to the east, significant populations and concentrations of yellowfin sole that relatively can be harvested without significant PSCs of halibut or crab.

Mitchell: Was that in the spring or summer?

Alverson: It's significantly in the time frame that is proposed closed up there.

Pennoyer: We're commenting on the modification of an area that I don't think we've got any data on to evaluate in the first place and I'm having some trouble with that. We've heard some pretty good information on the efficacy of the Winter Savings Area, the effect on both groundfish catch, which wasn't that great, and herring catch which was potentially very high. We've heard some pretty good data on the savings to be had on the Alaska Peninsula, including some information on the extension which we haven't talked about very much but would seem to be in an area of high effort. I asked staff specifically whether there was any good data on significant catches of herring or data conversely also on the foregone catches of groundfish in that whole migratory path and we have had nothing presented on that that would lead us to believe we're going to have a significant savings in the green area, the brown area, or the cross hatched area, and I think this concept of lidding the herring bycatch given the status of the stocks and closing significant areas is important and I wouldn't want to lose it in the process of picking out a few areas we don't have any information on.

Pereyra: The concept envisioned here is some sort of sequential closing, and we're doing just fine until we get into the corridor area. Once we get there we then find that we have a one-month period, from the 15th of July until the 15th of August, when both the area that involves the Horseshoe and this corridor area are closed. So that means that for one month there we're going to have a fairly large area closed, and that gives me a little bit of concern. Likewise, from the 1st to the 15th of September we have both the winter closed area and the corridor

closed, so again, you've got a half a month when you have a fairly large area that's closed, and I don't know if that's really what we're trying to accomplish. It would seem to me it would make more sense to modify the dates so that you are in a true sequential basis.

Collinsworth: Further discussion on Mr. Alverson's amendment?

Funk: If I may respond to Mr. Pennoyer's comment on the herring bycatch data? I just wanted to point out that in the 16a package, figure 4.8, describes this herring bycatch rate data and the inshore peak in the Horseshoe area and the offshore peak in the wintering grounds that I was describing earlier. Figure 4.8, that's for the month of September and the preceding page, Figures 4.6 and 7 give the July and August distribution of herring bycatch rates.

Collinsworth: Thank you, Fritz.

Pennoyer: I'm sorry, Fritz, I didn't mean to say there was no data. There was no compelling data in terms of large peak of herring bycatch in that area. . .

Funk: . . .and I agree, what I was saying before, there's an inshore peak and an offshore peak and the rates are fairly low in between.

[Change to Tape 41]

Collinsworth: Further discussion on the amendment. A roll call vote, please.

Pautzke:	Mr. Pennoyer	no
	Mr. Alverson	yes
	Mr. Blum	no
	Mr. Collinsworth	no
	Mr. Cotter	no
	Mr. Dyson	yes
	Mr. Hegge	no
	Mr. Lauber	yes
	Mr. Mace	yes
	Mr. Mitchell	no
	Mr. Pereyra	no

Fail.

Collinsworth: Okay now the motion has failed. We have Mr. Mitchell's amended amendment to the main motion before us. Further discussion? No further discussion? Roll call vote, please.

Cotter: One question. Perhaps to the Regional Director and NOAA General Counsel. This amendment proposal does not provide us with the discretion to apportion a cap by area. Is that something that we could add so that we would maintain that flexibility in the future, in the event we decided to do so. And I'm not suggesting that we would want to apportion by area this year or next year, but I am suggesting that down the road when we may want access to that type of tool and this would just provide us that.

Pereyra: I want to speak in opposition to the motion for two primary reasons. Number one is, as I've mentioned before, I think this corridor area is quite excessive and secondly, I don't think we've had any information provided to us, analyzed, etc., on this proposal as to what the impacts may or may not be or what the beneficial gains may or may not be. There's a lot of speculation and so forth. So, for those reasons, I'm going to vote in opposition to the motion.

Pennoyer: We're about to vote on the main motion right, which is the amended motion of Mr. Mitchell's which includes all the areas and the 1% and the whole bit.

Collinsworth: Mr. Mitchell's motion is an amendment to the main motion that was offered by Mr. Pereyra. What you see essentially up on the board, the areas along the peninsula, the corridor area and the modified winter savings area, modified B, is the motion that is before us.

Pennoyer: Mr. Chairman, I guess my question is, a rejection of that would be to come back to Mr. Pereyra's motion which lacks that extension on the peninsula?

Collinsworth: That's correct.

Pennoyer: Would there be a way to bring up the extension on the peninsula separately.

Pereyra: Yeah.

Collinsworth: Yes, I believe that it's substantially enough different from this motion that it could be dealt with. Any further...

Blum: Mr. Chairman, I'm going to try an amendment. If you were to eliminate the psychedelic brown and green box, I would move that the amended motion be amended to eliminate that box yet retain what else is up there.

Collinsworth: When we dealt with the corridor area we were dealing with the larger portion that's underneath there that's patched in blue were we not?

Blum: Yes.

Collinsworth: So this is a substantively different motion. If you've offered that motion, is there a second?

Pereyra: Second.

Blum: I would, for the record, support basically what Steve Pennoyer has said on two or three occasions on this subject today and that is that we don't have a compelling biological justification for that while we do have for the hatch-marked area that looks like a seven. That's basically my rational.

Collinsworth: Further discussion on Mr. Blum's motion.

Lauber: Well, the Bering Sea Fishermen's organization testified yesterday and gave us a chartlet and I would consider they were trying to be the most protective they could of the herring fishery. On that chartlet, the portion that we are now voting on to take out was the portion that was in on their chartlet but the area immediately below it, the same area, was not on their chartlet but magically appeared this morning. Now all of a sudden as something that is absolutely necessary. I voted to take that whole area out but I think...I don't know what...it's hard for me to believe that they would not include that area, and this was the area they argued with the Advisory Panel and so forth, and was by the way rejected by the Advisory Panel overwhelmingly. As you will recall, the Advisory Panel voted overwhelmingly to go with the small area B which we have enlarged by going farther north than the green hatch mark and not containing any of the blue marks, hatch mark in the blue area, either immediately to the left of the older areas. ..(someone says they're confused)...that's right, that's what I'm saying, but see. . .[interrupted]. . .

?: They wanted that.

Lauber: I know but I'm talking about this area here. That's not on this chart.

Mitchell: Yeah, but that's because we've been told that there's a lot of herring bycatch in there.

Collinsworth: Let's direct the discussion to the chair. Mr. Lauber has the floor.

Lauber: I think we ought to, if we're going to do this, we should reconsider our actions on, I don't know whose motion it was, and take out both of these areas, go farther down as well as the Blum's current motion. And again, referring to what Henry just said, it really bends reason for me to believe that Bering Sea, all of it all of a sudden after battling this issue for years, have all of a sudden discovered a high bycatch in one particular area that somehow they have overlooked all these years. They would have contained it on this chart and tried to run it through the AP. This issue has never even been considered by the AP as moving this down to that line, the lower line below the one we're talking about now.

Mitchell: Below the boat, or whatever that is.

Alverson: Mr. Chairman, if I can ask Steve a question. If the Council were to ask that the area outlined by Joe and the area immediately to the south talked to by Rick, were to be taken out of Council action at this time and then to be analyzed for its importance for herringbycatch to be voted on out of sequence, perhaps I don't know when that would be, but this is my question. How soon could the Council act on this particular area. I guess the State's doing most of the work on it, aren't they?

Pennoyer: It would require rulemaking and it would take a normal period of time the regulatory amendment would take, unless in fact, we identified it through a very compelling evidence as a hot spot.

Alverson: Could the Council act on it at its December or January meeting?

Pennoyer: It depends on how much analysis you will need. As I said, it would be a standard regulatory amendment. It would require analysis and public review unless you identified it as a compelling information as a hot spot. Mr. Chairman, my question was and I believe I heard Mr. Funk say was that the area, the vertical bar of the 7 was the area that he was concerned about relative to herring bycatch. I didn't hear him talk about that horizontal bar. If he meant that in the discussion of the horseshoe and high bycatch rates, then I'd like to know that. So it's the vertical bar of the 7 that's the area of major concern and that's what was my original question - if we rejected the total motion could we come back and adopt that extension of the peninsula area to incorporate an area that the staff has told us is of high herring bycatch concern.

Blum: Mr. Chairman, I would withdraw my motion and have the pen cap rotate and eliminate, I thought you were talking about that Fritz as the area offshore. If you rotate the pen cap. . .[interrupted]. . .

Lauber: Point of order, Mr. Chairman. I think what we need is someone who was on the prevailing side on that last motion and move to reconsider because that issue was voted on and voted it...didn't we? [several individuals speaking at once]

Collinsworth: We haven't dealt with that piece of the building block. If I understand what Mr.. . .[interrupted]. . .

Blum: If you turn the factory trawler around [laughing]

[Many talking at once regarding whether or not they have dealt with it yet]

Blum: No, because we didn't deal with the blue hatched area beneath there, the 7 part of the 7.

Lauber: No, I understand that.

Blum: I withdraw my motion and if there's a prevailer. . .[interrupted]. . .

Lauber: Explain what. . .[interrupted]. . .

Collinsworth: If you'll remove the pen cap. Correct me if I'm wrong, but the corridor area that is now represented by the blue hatch, brown and green is part of the main motion. I mean that is part of Mr. Mitchell's amendment to the main motion. So that is before us and we have dealt with moving the whole corridor and we have dealt with removing the portion in green. We have not dealt with the lower one-third, or have we dealt with that?

[someone is speaking away from the microphone and hard to understand]

Pautzke: No, no we didn't.

Collinsworth: Oh, the three pieces together would have to be reconsidered.

Pereyra: Mr. Chairman, if I'm correct, I believe the westward vertical blue-hatched area in the corridor that also is part of the amendment to my motion. We have not dealt with that yet.

Pautzke: You tried to eliminate the whole thing, the whole corridor area and that failed.

Pereyra: That failed, correct.

Pautzke: Then you tried to eliminate the green and that failed.

Pereyra: No, the red.

Pautzke: The red?

Pereyra: No, green excuse me, the green.

Pautzke: Thank you, I'm wondering if we're seeing the same thing. Got a color problem here.

Collinsworth: What we have before us now is Mr. Mitchell's amended motion and it's as you see it there with the corridor area.

Cotter: Fritz, I'm looking at Figure 4.7 in the EA and you know that series 4.6, 4.7. There seems to be a bump building in 4.6 and it may not be a mountain but it's certainly a hill in 4.7. I take it the way you read this chart, does that reflect herring bycatch? The higher the bump, the higher the bycatch reported? So, you know it's not as if there's not evidence that there's bycatch in that area. It may be that it's smaller than the bump on either side, but there's nothing to suggest that that's the way it's always going to be. What year's data did you use to, did you use many years or one year?

Funk: This reflects an average of 1983 through 1988, JV and foreign data.

Cotter: Were there any years where, do you recall were there any years where the bumps in the corridor area were significantly greater?

Fritz: We haven't had time to do an extensive inter-annual analysis. This is just the average from '83 to '88.

Cotter: Mr. Chairman, I would just reiterate for the record that we do know that bycatch occurs there. You know the bump is there, it's averages reflected of highs and lows. There's bound to have been harvest levels that are higher than that bump during certain years. I think that's useful information and helps sustain a record to make a decision.

Alverson: Mr. Chairman, I'm going to move that the corridor area in brown, green and hatched be sent back to the process to be developed as a groundfish amendment as a closure between July 15 and September 15.

Lauber: Second.

Cotter: A point of clarification. Your motion in essence sets the stage for 16b which presumably would be before us in December for final action and implementation would occur July 1?

Alverson: Well, if we act on it before then, that would be fine. I don't know what vehicle we attach it to. I tried to get a time-frame out of Steve, but my fear is that by April after this thing has been sent bact to Washington DC we're going to have an April meeting and we're going to be told that this has been partially disapproved, this action that the Council is taking, and we'll be a full year behind the situation because the database is not completed sufficiently for the Secretary to approve. Granted there's a bump there in the database but the analysis hasn't been full and I don't want to lose the area if it's legitimate. I see this as a possible compromise to have a better analysis and act on it again.

Pennoyer: Basically, Mr. Alverson's motion procedurally would eliminate that portion from Mr. Mitchell's amendment.

Mace: Let me ask this question. How far would this be if it were eliminated for development of an amendment from the AP's recommendation?

Pennoyer: Sorry Mr. Mace, I didn't hear you.

Mace: I wonder how far it would be if that change were made from the AP's recommendation? The one-percent plus the small winter savings area plus the two areas along the Aleutian chain.

Funk: Mr. Chairman, I believe removing that would be identical to the AP's motion except that you already have an amendment to extend the winter area B to the north.

Pennoyer: The effect of Mr. Alverson's motion would be to eliminate the, Hal could you go there to the chart, would be to eliminate the blue-hatched and did you intend to include the. . .[interrupted]. . .

Alverson: The whole corridor. Blue, brown and green.

Pautzke: The stem of the seven all the way down. The whole thing.

Collinsworth: The whole thing is his motion.

Alverson: Wait a minute. [many members speaking at once] What the hell?

Mitchell: Mr Chairman, point of order. Mr. Alverson's motion is out of order. We voted on a substantial portion of that before and he would, in order to make this motion, would have to have a reconsideration.

Collinsworth: If that's your motion there Mr. Alverson, that's correct. The motion has been made and has failed.

Alverson: Mr. Chairman, I voted on the prevailing side I believe to eliminate that corridor and I would move for reconsideration then.

Collinsworth: Is there a second for the motion to reconsider?

Mace: Second. Now do I have to be on the prevailing side? I lost that vote.

Collinsworth: No, you do not have to be on the prevailing side. We have a motion to reconsider. Roll call vote, please.

Pereyra: Mr. Chairman, what are we reconsidering?

Collinsworth: We're reconsidering the motion to amend that would have eliminated that. . .[interrupted]. . .

Pereyra: Westward extension I believe also?

Collinsworth: No.

Pereyra: That was part of the original amendment.

Pautzke: I thought it was eliminating all of. . .[interrupted]. . .

Cotter: Point of order Mr. Chairman. The motion to reconsider has to relate to a motion that was previously made and passed. The motion that was previously made and passed dealt with the green, the brown and the blue.

It did not deal with the extension of 167, therefore, this motion for reconsideration cannot similarly incorporate the extension of 167.

Collinsworth: Let's stand down for just a minute. I think you're point of order may have merit. I'd like to consider it. I guess the part that the Chair needs some clarification from the record deals with the motion we had earlier and whether that westward extension of the closure zone the furthest west along the peninsula was considered to be part of the corridor or simply just an extension. The box west and north of the, I believe, is what we've been referring to as the corridor.

Pautzke: Mr. Chairman, I think you're right. I think the extension to 167 according to this motion that was handed out was part of paragraph C and I think that Mr. Pereyra was referring to the corridor which was part of paragraph D which is the other portion of it. It doesn't include the stem coming down.

Collinsworth: Okay, so we are talking about the rectangle then, that rectangle. So that motion failed.

Pautzke: Right.

Pereyra: Mr. Chairman, my original motion which was amended by Mr. Mitchell did not include the stem so how did the stem get in there.

Collinsworth: The stem got in there by his amendment. We have not voted on that yet, his amendment, we are going through a process of amending his amendment.

Pereyra: Thank you.

Collinsworth: To delete the amendment, the motion to delete that corridor failed.

Mace: Mr. Chairman, isn't the proposal to place this, the amendment cycle, a different motion. It isn't an amendment to the original motion, it's a different motion. ...[missed part of what he said due to several persons speaking at once] action so it wouldn't affect that original at all.

Collinsworth: We have an amendment. We have Mr. Mitchell's amendment before us and the motion that Mr. Alverson offered was to essentially delete that area now within the framework of Mr. Mitchell's amendment to the main motion and refer that back to staff for further analysis.

Cotter: Point of clarification, Mr. Chairman. The original motion to delete the corridor - that motion failed. If Mr. Alverson was on the prevailing side of that motion then he is entitled to reconsider it. And that motion for reconsideration would be properly before us at this time.

Collinsworth: The chair, before we had additional points of order brought before us, the chair since the motion to reconsider is not debatable had asked to move to a vote. We had some additional points of order. We now have a motion to reconsider. Roll call vote, please.

Pautzke:	Mr. Pereyra	yes
	Mr. Alverson	yes
	Mr. Blum	yes
	Mr. Collinsworth	no
	Mr. Cotter	yes
	Mr .Dyson	no
	Mr. Hegge	yes
	Mr. Lauber	yes
	Mr. Mace	yes
	Mr. Mitchell	no
	Mr. Pennoyer	yes

Pass.

Collinsworth: Now, we have under consideration at this point, the motion to delete this rectangle that is blue hatched, brown and green.

Pautzke: Right

Alverson: Not to delete it, but. . .[interrupted]. . .

Collinsworth: You're talking about deleting it from Mr. Mitchell's motion. I mean that's the effect of what you're saying is to delete it from Mr. Mitchell's motion and then subsequently you've added the qualifying remarks that you'd want to have that referred back for further consideration. But in dealing with the motion, Mr. Mitchell's motion which amends Mr. Pereyra's main motion that's the affect of what we have before us.

Alverson: I can't remember who made the original motion to delete the corridor but I would move that. . .[interrupted]. . .

Collinsworth: No, we have the motion before us.

Alverson: Right. Can I move an amendment to that?

Collinsworth: No. This is an amendment to an amendment and you could have that one amendment. So say me and Mr. Roberts.

Cotter: Despite the fact that I may have voted accidentally to bring this back up, I'm going to vote no seeing as you can't amend it.

Alverson: You've got to be kidding. We can't ask the, uh. . .[interrupted]. . .

Collinsworth: Our parliamentarian, that we appointed officially, has advised the chair that under the Robert's Rules of Order that you cannot have more than one amendment to an amendment.

Alverson: If this is to be voted down would you rule that it would be improper to put forward a motion that this corridor be sent back to the team that would develop it as a regulatory amendment for our next package?

Collinsworth: If the motion fails, then the corridor remains in the motion. Then that will be Mr. Mitchell's amendment to the main motion. The amendment would have to pass and the main motion would have to pass for that to become an action by the Council with regard to amendment package 16a. If the **[changed to Tape 42, balance of his statement is missing]**...further discussion. We now have the motion before us which will delete the rectangle which has been covered up by the megatrawler and that will amend Mr. Mitchell's motion by eliminating that area as a zonal closure during that time frame if a one-percent cap is reached. Is there further discussion on the motion? Roll call vote, please.

Pautzke:	Mr. Alverson	yes
	Mr. Blum	yes
	Mr. Collinsworth	no
	Mr. Cotter	no
	Mr. Dyson	no
	Mr. Hegge	no
	Mr. Lauber	yes
	Mr. Mace	yes
	Mr. Mitchell	no
	Mr. Pennoyer	yes
	Mr. Pereyra	yes

Pass.

Alverson: I would recommend that the green, brown and the immediate blue area to the south of it be sent back to the appropriate plan team for development as a groundfish amendment with the proper analysis to be brought back to us in a timely fashion.

Collinsworth: Mr. Alverson, I'm going to rule your motion out of order at this time because it is not pertinent to the amendment that we have before us. I think that would be a perfectly legitimate motion and one which I will support after we have dealt with the motion that we have on the floor. Now we have Mr. Mitchell's motion as amended which would include the zones along the Alaska Peninsula and the modified Winter Area B closure.

Lauber: Mr. Alverson attempted to include the now blue hash marks in his motion and you ruled him out of order.

Collinsworth: No, that's not correct. He didn't want to include that in his motion.

Lauber: Oh, okay.

Collinsworth: Further discussion on Mr. Mitchell's motion? Roll call vote, please.

Pautzke:	Mr. Blum	yes
	Mr. Collinsworth	yes
	Mr. Cotter	yes
	Mr. Dyson	yes
	Mr. Hegge	yes
	Mr. Lauber	yes
	Mr. Mace	no
	Mr. Mitchell	yes
	Mr. Pennoyer	yes
	Mr. Pereyra	yes
	Mr. Alverson	yes

Pass.

Collinsworth: Mr. Mitchell's amendment has been adopted and amends the main motion. Let's try to reconstruct and clarify where we are on the main motion. The main motion that is before us now, can you read that now.

Pautzke: This main motion has a halibut cap of 100% of 12A, a red king crab cap of 150%, a bairdi cap of 100%, a herring cap of 1%, plus the area you just voted on.

Cotter: I move to amend the motion to set the red king crab cap at 100%.

?: Second.

Collinsworth: Would you like to speak to your motion, Mr. Cotter?

Cotter: Mr. I'll just keep it very, very brief. I don't see any need for an increase in red king crab cap. We've got halibut which is declining which we chose not to reduce halibut and king crab is not in a heck of a lot better shape. If anything, king crab might go down but in the spirit of compromise and to move us forward I just suggest we leave it where it is.

Collinsworth: Further discussion on Mr. Cotter's amendment?

Pereyra: Mr. Chairman, I definitely cannot support this amendment. As the model has shown and as the performance this year in the fisheries has shown red king crab is definitely constraining upon the groundfish fisheries in the central Bering Sea. We had some early, we show some early closures this year and I would expect those closures to occur again next year. With regards to the state of the red king crab resource at the time the caps were set, I believe the harvest was somewhere around 7 million pounds. This year we've got a guideline harvest up more than double that so again this whole question of interceptions, interception rates and so forth, I think is very significant. We've now put in some expanded herring savings areas which are going to result in greater constraints on the operation of the trawl fisheries than my original motion envisioned. So to go any further beyond that I think is not warranted at this time. I would hope that these factors be taken into consideration, that Mr. Cotter's amendment be voted down.

Cotter: Just a couple of quick comments. You know the model, such as it is, used last year's JVP rate of king crab bycatch I think which was really rather high. Higher than we'd seen for quite a while. That doesn't need to be there this year. Additionally, it's not really appropriate to compare, to say that because the guideline harvest level for red king crab in the directed fishery may have increased that that's the reason why bycatch ought to increase because the animals being taken as bycatch in the trawl fisheries are not legal males but are in fact are sub-legals. King crab are depressed though some periodic increases and periodical decreases but the fact is that they have not significantly gone anywhere in quite some time.

Collinsworth: Further discussion of Mr. Cotter's motion? Roll call vote, please.

Pautzke:	Mr. Collinsworth	yes
	Mr. Cotter	yes
	Mr. Dyson	yes
	Mr. Hegge	yes
	Mr. Lauber	yes
	Mr. Mace	no
	Mr. Mitchell	yes
	Mr. Pennoyer	yes
	Mr. Pereyra	no
	Mr. Alverson	yes

Mr. Blum no

Pass.

Collinsworth: We now have the amended main motion before us once again for discussion. Is there any further discussion?

Cotter: I thought that Mr. Alverson had what would be a separate motion following final action on this.

Collinsworth: Yes, I would entertain one at that time.

Cotter: And the other thing, Mr. Chairman is personally I have some concerns with the model as I articulated earlier. I think this Council ought to append a letter to the transmittal of this EA document back to Washington DC that advises that even though the model may be the basis for the analysis in the EA that the Council finds that there are indeed great uncertainties associated with the results and we don't think that too much credence should be applied to the various model runs relative to real world experience. I just would hate to see somebody in OMB take a look at this thing after we pass this motion by a large majority, if not unanimously, and have somebody back in OMB start wondering through it and say, "take a look at this model run 16 and you know take a look at the costs here. We better disapprove this thing." I think we need to caution them that that may be an incorrect way to look at the analysis.

Lauber: Question to the chair. If we throw the model out just what is it we are going to base our decision on?

Cotter: I didn't suggest throwing the model out Mr. Chairman.

Collinsworth: I don't think we are throwing the model out. I mean the staff has advised us, the SSC has advised us that perhaps the most useful aspect of these models is they are difficult to project ahead. I mean even in a biological sense, the data that we have before us at this point without the new survey data coming in presently, even if you take the best available data and try to project it forward you run into some real slippery slopes very quickly. The staff has pointed out that these models are kind of the best approximation using the data that we have available to us to project general movement in some order in magnitude of movement and in what direction and what kind of distributional effects that that might have. I don't think that the staff is guaranteeing you that down to the last $100 that these models are accurate. I think they'd be the first to point that out. But the models are beneficial by recognizing what the bios(?) is and the direction of the bios(?) is and the general movement under the various regulatory alternatives gives you a sense and a feel. Then that has to be combined with what we've heard from the public and in written and oral presentations and then we have to make some judgements

about that whole calculus. We still have the main motion before us and I'd like to focus our attention to the main motion as amended.

Blum: Does that mean Mr. Chairman that Mr. Cotter's proposal is not on the table.

Collinsworth: Well, I think that Mr. Cotter's proposal doesn't, I think, is kind of an adjunct consideration to the main motion that we have and just as Mr. Alverson wishes to offers a motion after we complete the main motion here. If we wish to take formal action or just consensus action with regard to the concept developed by Mr. Cotter, would be appropriate then.

Blum: Mr. Chairman, I'm going to oppose the motion. I have no doubt I will lose, but I believe the Council needs to reflect upon its actions in the last 24 hours and I'm not going to bore you with a repetition of what I've been saying for most of the last 24 hours. What we are doing is saying to the industry, we think that 1990 is just fine. Candidly, Mr. Chairman, 1990 is not just fine. But we're telling them that we don't have the ability because of advice that we have received that we can't implement a program that they have suggested that might help them make 1991 just fine. And to show you how grateful we are for you coming forward and making a proposal that has some sense to it, we're going to tighten down our constraints on herring because it needs to be done. I don't object to that. And everything else, we're going to hold you hostage to. I certainly hope OMB takes a look at this entire action and tells us that it is time we start dealing with this fishery as we should be dealing with it. And I'm not out to wholesale slaughter the resource. I think folks know that, but I cannot sit here and remain silent when the industry has come forward with a proposal. We have rejected and we've turned around and make 'em eat 1990 in 1991. I will oppose it. I wish the rest of you would and we could deal with this issue the way it ought to be dealt with which is let's take a little bit of risk, let's take a little bit of creativity and put a program in place that we can allow these fisheries to go forward. We can allow the OY to be met. We can protect bycatch species and we can talk about some other subjects. Please reflect on it before you vote. This is not a Washington versus Alaska vote. This is common sense, common business sense, and common resource management sense to reject this and to go back and revisit yesterday's action.

Pennoyer: I think I agree with much of what Mr. Blum said in terms of the fact that we have to offer industry and the fishery as a whole a new way of doing business on bycatch. We're working toward that. We cannot do, and I know Mr. Blum disagrees with me, but I'm told we cannot do an enforcement program on a vessel-by-vessel basis in real time in-season. That's different than closing fisheries in a general sense where everybody's out of the action and it's not an enforcement action taken on an individual vessel. I have very high hopes that we're going to work something out in the workgroup approach that we've talked about. I think we have to work something out. I think we've not said we can't do an incentive program and we've said that we will try to do one

with an after-the-fact penalty which may be very substantial and severe. It may be enough working with industry to give the leverage to the groups of people who are going to pool together to tell their other members that you know you better shape up and work with this thing the way it's intended. Obviously, I can't promise how it's going to work out yet until we get together and discuss it. I don't think it's irresponsible to proceed down a track that has us trying to do that. I think that the other adjustments we have made have tried to address, at least in part, what happened in 1990. We are going to try and not have an 18 ton bycatch of halibut in association with the Greenland turbot fishery. We are going to try and not have a major JV catch of red king crab early in the season on flatfish, and there are other changes as well. They by themselves don't do it. We still need an incentive program. The gear and stuff we've talked about is obviously an advantage in terms of our enforcing mechanism and what happens after we reach a cap. We tried to address those, but I don't think it's irresponsible to go forward with a regime that does try to address it in that fashion. So I think I'm going to vote for this with the proviso that you've already given me that we go forth with industry and do our best to work out how to get a pooling, incentive, after-the-fact, however it's going to work, program in place as early as we can in 1991 and covering as many of the critical fisheries as we can cover.

Pereyra: Mr Chairman, I echo Mr. Blum's concerns. When I made the original motion there was a package motion. It was based on what I felt was reasonable. It was looking how, in my mind, how the various closures might affect the fishery. Now, we've made some significant changes in that motion by lowering the crab caps, by expanding the herring areas. I also am not comfortable watching what I think is going to be some very significant problems in our fisheries next winter and spring. As I said before, we are in a very dynamic situation now. There's a lot of additional effort coming into the Bering Sea shoreside and factory trawler/mothership type effort. I just think that the kinds of fisheries we have developing that, together with the changes in the bycatch populations, warrant that we provide some relaxation. Maybe the following year, once we get some sort of incentive program in place, we could bring about some of the ratcheting down of bycatch caps and be able to live within them. I don't think that is possible at the present time so I also cannot support the motion as it's presently configured and would hope others would do likewise.

Alverson: Hal, if this motion goes down and the Council decides not to pass some form of 16a, when do all the bycatch caps and regimes that we've put into place disappear?

Weeks: I don't think that they necessarily do disappear depending on the Secretary's decision on Amendment 16. Amendment 16 was envisioned to replace Amendment 12A that sunsets at the end of this year. You would presumably have those provisions in place.

Alverson: The action we've been taking are basically comments to the Secretary aren't they.

Collinsworth: No, this is 16a we're dealing with.

Alverson: You're contemplating additional bycatch management measures? Would we have caps in place by 1991?

Weeks: If the Secretary approves Amendment 16, yes.

Collinsworth: Did the regulatory gurus at the National Marine Fisheries Service agree with Hal? I think he's right.

?: The converse of that is true too. If he doesn't approve it, it's a wild and free FCZ.

Cotter: Until 16a goes into effect, in the event it does.

Collinsworth: Any further discussion on the main motion. Roll call please.

Pautzke:	Mr. Cotter	yes
	Mr. Dyson	yes
	Mr. Hegge	yes
	Mr. Lauber	yes
	Mr. Mace	no
	Mr. Mitchell	yes
	Mr. Pennoyer	yes
	Mr. Pereyra	no
	Mr. Alverson	yes
	Mr. Blum	no
	Mr. Collinsworth	yes

Pass.

Alverson: I would move that the area bounded by 170° 167° 56° or 55°45' and I believe it's 57° be reanalyzed for the Council for bycatch considerations surrounding herring.

Cotter: Second.

Collinsworth: Discussion to the motion?

Cotter: There was some concern expressed by the Regional Director and some other members of the Council that the analysis didn't necessarily go into any great detail as with regards to this area. I think intuitively we all know that herring migrate. Somehow they get from one place to the other and this apparently is the route. The big question in everybody's mind is whether or not they're subject to risk and the extent to which that may be the case

and what type of impact management measures may have on them. I think it's something we ought to take a look at. I would hope that the analysis is not going to be overly difficult and that hopefully Fritz can put it together, or whoever, and back and out in time for us to take final action in December which would allow implementation to occur during the summer this year in the event that we go forward with it.

Pennoyer: I think I concur with that in terms of the desirability. Additionally, we'll have some data hopefully from the observer program what the bycatch rates actually were in the corridor this year to look at. I'm going to have to defer that to staff. I know the workloads are such that they may have to qualify what they can do and we may have to get back and talk about priorities on all of this at the end of the meeting because we're assigning everything from new bycatch regimes to. . . I think we're going to have some staff reassignments. So I concur with the motion. The timetable would be as soon as possible given our schedule and the desire would be to have something analyzed we could decide if we wanted to implement it in 1991.

Pereyra: Mr. Chairman, I'm opposed to the motion for several reasons. First, the management biologists have shown that there really isn't major concern in this area. Granted, there are herring possibly going through there because there are some interceptions from time to time, but it's not one of major concern. So I think we're studying a non-problem in terms of the overall issue that we're trying to get a handle on here. Secondly, I'm somewhat concerned about the whole issue of where we spend our time and energies. We just went through a whole discussion of why we could not put a penalty box in place because we did not have the time, the people, the funds, or whatever to get this thing in place. Now we're going ahead and we're talking about directing the staff to spend time and energy on an issue that does not at this point in time appear to me to be one of major concern. I think that this would be an inappropriate direction for the Council to give the staff. I think we have just as much responsibility to prioritize what we ask the staff to do or ask the National Marine Fisheries Service to do, as we have asked the National Fisheries Service to do within their limited budget in terms of the things they're doing. I think it's irresponsible for us to not look at it from that standpoint. I would hope that we would take a very serious look at just how important this particular extension of this issue is at this point in time. I'm going to be against the motion. Thank you.

Alverson: Perhaps, the ultimate outcome of this motion is that it goes into the hopper of things to decide at the end of this week with all the other nice little goodies we have to look at. I disagree with you Wally. I haven't seen an adequate analysis of this area to draw any conclusions there are or there aren't resources of concern in that area. If we're going to prioritize let's not just axe this now, let's put into the whole group of things we're going to be considering at the end of the week and take the myriad of proposals from the public and prioritize them at that time.

Mace: Some of us sat through a PAGG meeting here awhile back and looked at forty-two proposed regulatory and plan amendments. Wally's going to bring them to you later in the meeting and it would be appropriate for me to defer this issue until that time and consider it as one of the package to prioritize time and manpower on. We've got a lot of big issues coming up. This may shake out to be the most important of the forty-two or forty-three if it's included. I think we ought to defer it.

Lauber: Mr. Chairman, I voted originally to take this out and that failed and on the reconsideration I voted to reconsider it. It isn't that I've changed my opinion on the issue but I think it would be less than fair for me to take advantage of the situation. On the reconsideration, there was the understanding of the maker of that motion and I was well aware of the fact that he intended to do this. I strongly suspect that if he felt we would not do this, he would have not made the motion and it would not have been taken up and it would still be in. Therefore, what I'm saying is, although I'm not jumping up and down for it, I think it would be a breach of faith to not grant the motion and allow it to be studied. So I'm going to vote for the motion.

Blum: I hope that included in the motion for analysis, if in fact it does shake out in one of the top forty-three things we ought to be doing, is not only the area review but the time sequencing. I believe there was a point raised concern about that. I'm going to vote against it but I'm sure it's going to pass and if it does pass, I'd like it to pass with the time sequencing as a part of it. Was that in your motion Bob Alverson?

Alverson: Well, the whole issue of that area. Both the area and the time.

Collinsworth: I'm not sure what the time demands on staff would be. There were some questions that were asked by in particular I think articulated well by Mr. Pennoyer that while there was acknowledged that there was some information regarding the rate of bycatch in that corridor that had not be coupled together with the information on the prosecution of other fisheries in that area and the timing and so on. I think that kind of information, you know we have an assertion from Mr. Pereyra that it's not a problem. The data may reveal that it's not a problem and then I think we can take comfort in the action that the Council has taken. If it is a problem, or potentially a problem, we ought to know that as well. Mr. Pennoyer pointed out that there may be some new data available from the observer program that wasn't included in the current analysis. I am concerned about staff time and laying it on the staff. **[change to tape 43]** I just don't know what would be required. Do you have any feeling Dr. Funk about what would be required to analyze, put together the information that you currently have on a race of bycatch perhaps incorporating any new data that the observer program produces from this time period that has just passed when the fisheries were actually being conducted in that area. Also, coupling that up with catch information from the fishery for the target species.

Funk: Thank you Mr. Chairman. The time period required I guess depends on how many twists we put in the analysis. If we want to look at new data, consider alternative time periods, of course that makes the analysis a little bit more complicated. I guess for myself, without consulting with my supervisors unless you choose to do that for me, I'm not sure I'm at liberty to speak for my time. I do know however that another key piece of the herring parts of 16a is the herring forecast. The caps are frameworked under that number and that I know is one assignment I have to complete between now and December. I'm not really willing to speak for my time without consulting with my supervisor. I think it's questionable at this point. Of course, we need to consider this I think along with the other bycatch assignments that we might be taking on.

Pautzke: Fritz, there has to be some wrap-up of this 16a analysis. Some of the areas have changed a little bit. So you're not free of that yet. How would you think that's going to cost you and the other analysts wrap up this herring section with the changes and finish that up. Is it a week task or is that a month? Since that has to be shipped off to Secretary review as soon as possible.

Funk: Roughly two weeks.

Pautzke: Two weeks to get it out. Okay.

Collinsworth: We now have Mr. Alverson's motion before us. You did not put a time frame in your motion did you Mr. Alverson?

Alverson: I think I said as expeditiously as possible.

Collinsworth: Alright. I guess we start adding definition to as expeditiously as possible as we take up the other issues at the end of the week and lay the requirements on the staff. And we would be cognizant of this particular issue as well. Any further discussion on the motion? Is there any objection? [several different voices objecting] A roll call please.

Pautzke:	Mr. Dyson	no
	Mr. Hegge	yes
	Mr. Lauber	yes
	Mr. Mace	no
	Mr. Mitchell	yes
	Mr. Pennoyer	yes
	Mr. Pereyra	no
	Mr. Alverson	yes
	Mr. Blum	no
	Mr. Collinsworth	yes

Mr. Cotter yes

Pass.

Alverson: Mr. Chairman I'd like to follow-up on a couple of comments that Larry made awhile back with regards to this EA. Just sending back our vote and recommendations attached to this EA is not going to be sufficient in my opinion. We need to append a letter indicating the divergence that we have come up with in the shortcomings of the model as well as some of the conclusions. Some of those, as the SSC pointed out, need to look at cost based on wholesale value across the board. Some of that, I saw a note come around here that indicated that maybe that's already been done. If not, it does need to be incorporated. There is the assumption in this EA that fixed gear operations in the Bering Sea are non-existent. Well, that's a tremendous omission of the EA. The EA fails to fully incorporate discards of the target species. There's a number of editorial conclusions without supporting evidence that I had mentioned on page 2-5 and on the introduction earlier this week, I believe yesterday, that I believe we need to comment on in an appended letter. I would request that the staff develop that letter and, before it goes to the Secretary, allow us to look at it before it goes out.

Pereyra: If we're going to be sending that sort of letter I would like to see it expanded slightly. That is to recognize the fact that while the line fishery, groundfish industry, pot industry is not included, that we also haven't looked at what the allocative aspects of these closures may be. What I'm thinking of here is that we've been looking at the impacts of the trawl fishery and one of the downside consequences of that from a trawl fishery standpoint is that it is resulting in a defacto allocation to the line and pot fisheries. I think that aspect also has to be recognized as being a shortcoming of the EA.

Alverson: To follow-up on Wally's comment, it's probably fair but in addition to that, the paper done by the National Marine Fisheries Service and the Institute out of Bergen, Norway suggests that the fixed gear allocation is superior both biologically and financially ought to be referenced as well. I think the main issue is we need to send an appended letter because the Secretary's going to ask us "you ran this model - why do you disagree with it?" And that's a fair question for the Secretary to ask and we have a responsibility of saying why we disagree with it.

Cotter: I see heads shaking around the table as certain people say certain things. I wasn't necessarily looking for a letter saying we disagree. What I was hoping that what we could do is append the letter that cautions, you know that the Council has analyzed the EA and finds that there are substantial variables incorporated in here and so on and so forth and incorporate the SSC comments, incorporate the comments in the EA itself and caution that the model results do not necessarily reflect the real world. Hopefully, I'm just trying to offer some wording that may be acceptable to most, if not all, Council members. The fear that I have is that somebody back in OMB is

just going to sit down and reach a conclusion that the model run represents the real world and then make a decision to disapprove our action here and I don't think the model ever has represented the real world.

Pereyra: I had made some comments earlier on how I viewed the model and I believe they paralleled yours. And that is looking at it from the standpoint of the trends and so forth and what-ifs interactions that are done. We're making our decisions based on the best scientific evidence available. This model is the best evidence we have available. I don't think that it's necessary to take away from that fact. I think it depreciates the kind of information that's being provided to us by the team and by the various research groups that are working on this problem. I think it's a very helpful set of analyses that they've performed. Considering the complexity of the issue, I think it does a pretty good job of giving us some handle on what these various trends may be. So from that standpoint, I would have a different opinion from Mr. Cotter. I would tend to look at it as something of a more useful nature. Not a negative sort of connotation but a positive connotation. Thank you.

Alverson: I still think that we need to send some comment to the Secretary of why we've come to the conclusion we have. The best scientific information, as courts have ruled, are not only what is developed by the National Marine Fisheries Service or in an EA. It's inclusive of all that the public presents to us. It's inclusive of private consulting firm's evidence through the public process, the Advisory Panel information, boat owners and processors comments to this EA. That constitutes the record and that constitutes the best evidence that we have before us. Based on past rulings, we can deviate from an EA. Based on the conclusions of this model that somehow don't even incorporate 200,000 tons of pollock that we know are going to be harvested, at least the model run we had this afternoon, we need to inform the Secretary that this is a model that gives broad ranges but here is where we think reality lies.

Collinsworth: I guess I wouldn't be opposed to adding an explanatory note along with our record of decision that simply identifies to the Secretary that caution should be exercised as the model is reviewed. These would be the ultimate decisions the Council has made. I don't know that we necessarily as a Council need to go through a line by line critique or start to critique any particular aspects of the model, but while models are wonderful tools they also carry with them many inherent problems. Particularly as you project into the future. We're very good at describing the past within the context of the models, but projecting the future is generally one of the weaknesses of particularly social science and natural science. Physical science is a little different. I don't have any problem with simply a cautionary note and perhaps we should do that and think that's probably about as far as we should take it.

Blum: I know what you're going to do when I say this, but I do not wish to be assigned to the committee to write the letter. I think the Council ought to see the letter in draft form before it goes out, not that I have a problem with

Clarence and staff writing letters, but if the Council is now having a little bit of cold feet about the actions they have taken, I think it's only fair that we all get a chance to see how that cold-footedness is being worded.

Collinsworth: That's not the [several individuals speaking at once]

Blum: Mr. Chairman, it's the first time in 20 Council meetings that I've been in attendance that we've taken an action that we've decided we felt so strongly about that we ought to write a little letter to tell them why we didn't do what we really should have done. I think that's cold-footedness.

Collinsworth: I do not concur in your analysis Mr. Blum. But we don't have a motion before us. What we have right now is a discussion about whether or not it's necessary to alert the reviewers in Washington. We have spent a lot of time discussing the model, its strengths and its weaknesses, and whether or not it's beneficial to advise the reviewers in Washington that the Council has undertaken a fairly extensive review of the model and have identified its strengths and weaknesses and that caution should be utilized in the interpretation of the results. I think that is probably somewhat gratuitous because I would think that the reviewers in Washington would already have that sense. But if the Council feels that it's appropriate to add that word of caution, I'm happy to do that.

Blum: Mr, Chairman, I think the best news about that is that it probably has a good chance of backfiring and causing OMB to take a deeper look at our action than any other thing that we could do. I think we ought to proceed forward.

Collinsworth: Is there any objection to following the general approach that I just outlined?

Pereyra: I object. [several others voice objection]

Collinsworth: We don't have a motion before us . Would someone like to make it in the form of a motion?

Cotter: Mr. Chairman, I move that the staff write and bring back to the Council before the conclusion of the meeting and. . .[interrupted]. . .

Pautzke: Not before the...before the conclusion of the meeting when we need to go through everything?

Cotter: I move that the Council append a letter to the EA as it goes back to Washington DC advising the Secretary to use caution in reviewing the model and its associated impacts. And in that letter - that's the motion.

Collinsworth: Is there a second?

Alverson: I thought it was already seconded.

Collinsworth: Was there a second?

Alverson: Well, I'll second it.

Cotter: Mr. Chairman, it would be my intent that in that letter that would be done as positively as possible and that it would reflect the SSC's statements and reference perhaps the language contained in the EA itself which draws attention to the variables associated with the model.

Blum: Again, Mr. Chairman, is it in your motion that we get a chance to review it before it goes back?

Cotter: Mr. Chairman, if such a letter could be drafted this week, I would be glad to try and put something together with Mr. Pereyra.

Pereyra: I don't want to be a part of that exercise.

Cotter: Okay, if a letter could be brought back to us this week that would be my intent. If not, then. . .[interrupted]. . .

Blum: Mr. Chairman, I think if a letter cannot be brought back to us it must be faxed to us so we have a chance to review it before it goes. I'm really concerned that there's a uh, I'm really concerned. I will take personal objection if a letter leaves this Council without the Council having had a chance to look at it.

Cotter: Mr. Chairman, I will attempt to draft a letter and have it before the Council in draft form this week.

Collinsworth: Okay. Any further discussion on Mr. Cotter's motion?

Pennoyer: I'll second what Mr. Blum said. I think the one thing you've established is a record over a considerable period of time here and you're going to try to synthesize down into a letter that's basically reestablishing the record. You've established a record. You took a vote on it. Obviously some people didn't agree there was a majority and minority on the record. I don't know if you can reflect that in your letter, whether the record is established on your discussions is something we use to accompany the EA anyway. What does go back there is

an explanation of why the action was taken. So I agree we should look at the letter because I think you're synthesizing a long discussion down to focusing on one piece of it. There were a lot of things brought out.

Cotter: Perhaps we should wait to vote on the - I can postpone the motion until I have a draft letter to bring back before the body. The body can look at it and then decide whether or not to act on the motion.

Collinsworth: You wish to withdraw your motion then?

Cotter: Yes, and everybody be forewarned, I'll try and draft a letter and come back.

Collinsworth: Mr. Alverson?

Alverson: Yes.

Collinsworth: Okay, what do we now have further on 16a.

Pautzke: I think we're done with 16a and I think we're on to ABCs, SAFEs and so forth.

Collinsworth: Okay, we have completed work now on D-4(a) and we need to proceed to D-4(b), (c) and (d). We've already taken care of (e). There was only one regulatory issue and that dealt with longlining of pots and we have dealt with that earlier. We'll take about a 10 minute break at this point.

Tape 85

Blum: Mr. Chairman, do we have anything left with respect to 16a?

Collinsworth: I've been advised that since the comment period has closed, there is no further action on 16a.

Weeks: Perhaps you were referring to the comment period on 16.

Pautzke: No, I'm referring to the comment period on 16a.

Weeks: The public comment period is now complete. It closed the day before yesterday, but Council is obligated to receive the draft plan amendment language and draft regulations and reaffirm its decision in light of those. I realize it's late Mr. Chairman, but this is a procedural obligation we're under.

Collinsworth: Then let's do it. What you're passing out is the tables that reflect the preliminary action of the Council earlier this week.

Weeks: What we're passing out, Mr. Chairman, are the language changes to the Bering Sea management plan and the regulatory language that would implement those changes with respect to halibut, crab and herring caps and authority for the Regional Director to close bycatch hot spots inseason, authority to the Regional Director to limit the proportion of pollock taken on bottom trawl gear, and the time/area closures along the Alaska Peninsula and the Winter Savings Area northwest of the Pribilof Islands.

Collinsworth: These reflect the action the Council has taken earlier in the week. It's just the language that . . .

Weeks: That's correct, Mr. Chairman. We've been through it. We believe we've been true to the intent of the Council and have tried very hard to do that. Certainly if anybody catches anything where we've slipped, we'd like to hear about it and it can be corrected.

Mace: Now, Mr. Chairman, we're going to do this in the next five minutes?

Mitchell: Mr. Chairman, I would move that the text of Amendment 16a which amends the FMP for the groundfish for the Bering Sea/Aleutian Islands areas which are outlined in Chapter 20 and Chapter 2 be adopted by the Council.

Lauber ?: Second.

Alverson ?: Third.

Call for the question.

Collinsworth: Any discussion?

Mace: Mr. Chairman, I have to point out that we did this one time in this same format, I don't know how long ago, and there was a mistake in it and we got hammered for letting the mistake go by. So I ask the question, do we have a little time to look at this or do we have to do it now?

Collinsworth: We can certainly take the time to . . .

Mace: What I'm saying in the next few days or something of that nature or does it have to be done at this meeting?

Collinsworth: It has to be done at this meeting, yes.

[Miscellaneous comments]

Mitchell: Mr. Chairman, I might suggest that if, in reviewing this, following this, that if there does appear to be a mistake that the Executive Director of the Council inform the Chairman of the mistake and that he basically poll the Council, if it's a mistake of substance, on whatever changes they might need to make.

Alverson: Is that part of your original motion?

Mitchell: Yes. Also, I'd like to additionally add, I think I can do it in the same motion, that the current 675 of 50CFR would be amended which establishes the regulations appropriate to implement the FMP of 16a in the groundfish fishery of the Bering Sea/Aleutian Islands. The same provision there, that any mistakes that would

be made would be relayed to the Chairman for a decision to call the Council members to make appropriate changes.

Collinsworth: I think the Council's actions were clear. What we have here is put in regulatory language, the actions of the Council. If at the point at which these are edited for final submission, if there are any errors that are required, I would consider them to be of an editorial nature carrying out the intent of the Council. I don't know that we would have to have any consultation.

Mitchell: You wouldn't unless there was a mistake of substance in that editorial. And I was only referring to a mistake of substance, not an editorial mistake.

Collinsworth: Okay, is there any further discussion on the motion? Is there any objection? Hearing none the motion carries.