

M E M O R A N D U M

TO: Council, SSC and AP Members  
FROM: Jim H. Branson  
Executive Director  
DATE: May 16, 1983  
SUBJECT: Herring FMP

*ACTION REQUIRED*

1. *Review NMFS concerns with AIC.*
2. *Final approval of FMP.*
3. *Preliminary report on 1983 fishery (see Agenda B-1).*

BACKGROUND

At the March meeting the Council approved recommendations by the Herring Workgroup. The PDT has incorporated those decisions into the FMP, and you received the revised document in the May 11 mailing. The Regulatory Impact Review (RIR) was mailed on May 13 as well. The FMP has been substantially edited and updated with 1982 harvest, biomass and economic data.

We have been informed by General Counsel that the Council must review and approve draft regulations prior to submission of the FMP to the Secretary. The regulations have not yet been prepared but will be presented prior to the July meeting for Council approval. At that time the Council can also sign off on the RIR and EIS so that the entire package can be mailed immediately.

NMFS and General Counsel have expressed concerns about the AIC provision in the FMP and have suggested making this a Prohibited Species Catch (PSC). The March agenda books contained a letter from Thorn Smith indicating the concerns, and a letter from Bob McVey was sent to Council members in April providing additional support for the PSC approach. The SSC and PDT have strongly supported the AIC concept in the earlier and current FMP drafts. Regardless of the approach chosen by the Council, the Herring Savings Area closure would remain the same. This might have significantly changed the foreign fishing patterns in 1982 if the FMP had been in effect. According to U.S. observer data, the Koreans reached their AIC level (i.e. 0.1% of their groundfish allocation) in July, and Japan reached theirs in early October. When a nation reaches its AIC it is excluded from the Herring Savings Area for the remainder of the calendar year.

APPENDIX  
# I

D R A F T

Minutes

Scientific and Statistical Committee

Anchorage, Alaska

May 23-24, 1983

D-2 Herring FMP

Draft FMP

The SSC has reviewed the draft FMP dated May 1983 for the Bering-Chukchi Sea Herring. The SSC continues to have major problems with the plan and the management regime which is established.

The May 1983 draft of the herring plan, in the view of the SSC, is internally inconsistent and is not scientifically supportable. The attached material is provided as a drafting service of the SSC in hopes to clear up some of the inconsistencies and to correct some of the scientific concerns. We recommend that the attachment and the plan be carefully reviewed by the Council in light of the following remarks.

1. The document includes a rewrite of the FMP objectives (page 11). In the SSC's opinion these objectives more adequately reflect the Council's desire.
2. The document contains a revision in the formulation of ABC (page 2). In this case the SSC recommends the removal of the Aleutian Islands/ Alaska Peninsula stocks adjustment. Current data indicates that the stocks being harvested in this area are, in part, the same stocks being harvested in the inshore commercial roe fishery. A statement has been added regarding the stocks which may spawn in these areas.
3. The wording in the OY section (page 7) has been modified and some additions made. These are:

- a. A statement has been added that the summer apportionment of OY should not be reallocated.
- b. The formula for calculation of the winter apportionment of OY has been modified by the removing of the division by 2. That reduction is covered in a separate paragraph along with justification and a review process.
- c. A subsistence adjustment has been added to the formula for the winter apportionment of OY and justification provided in the text.
- d. The wording for the limitations to the winter apportionment of OY has been changed and an attempt has been made to provide some rationale.

The Council should carefully review all of these modifications to insure they are in accordance with the Council wishes.

4. The management measures have been corrected to make them consistent with the rest of the plan.

The effort provided by the SSC should not be considered as an indication that the SSC supports the plan or the proposed management regime. The SSC is still concerned regarding:

1. the limitation placed on the winter apportionment of OY and the 50% reduction; and
2. the 2,000 mt summer apportionment of OY made independent of ABC.

The SSC still feels that the procedure that is used to establish ABC provides for sufficient protection of both the inshore commercial and subsistence fisheries. We do not believe that the additional protection that is provided by the reduction and limitations on the winter apportionment of OY are necessary. We feel that those limitations will lead to an underutilization of the resource.

The SSC has now become concerned with the 2,000 mt allocation to the summer apportionment of OY. With the SSC recommendation of the removal of the Aleutian Islands/Alaska Peninsula adjustment to the determination of ABC, this

allocation is now made independent of the ABC determination and inshore commercial and subsistence catch considerations. Additionally we believe some confusion may exist between the 2,000 mt and the state's allowable harvest for the fishery which has been set at 3,400 mt this year.

In addition to these modifications the SSC has also provided the Council staff with other minor modifications to other sections of the plan. This includes an updating of the marine mammal appendix and a rewrite of Section 1 to make it consistent with the main section of the plan.

#### Allowable Incidental Catch (AIC)

The SSC discussed the AIC application as now specified in the draft FMP. We have no specific recommendations but would like to point out the following.

As now provided in the plan, AIC is specified, as an incidental rate, 0.1% of the groundfish allocation. The plan specifies that this allocation becomes a part of the groundfish allocation under the Bering Sea/Aleutian Islands FMP. AIC is specified annually at the time the groundfish allocations are made and is provided to DAH and each foreign nation in accordance with the groundfish allocation. Herring caught under AIC may be retained.

When the AIC for a nation is reached, the Herring Savings Area or a portion of the Herring Savings Area is closed to that nation's trawl fleet and herring becomes a prohibited species and may not be retained.

The above applied to both the domestic and the foreign fishery.

The SSC's concerns are:

1. The incident rate used to determine AIC has been calculated using data from the foreign fishery. It may have no applicability to the incident rate that will be experienced by the domestic fishery.
2. The application of the AIC limitation to the domestic fishery may restrict the development of the trawl fishery.

3. Actions by a few domestic fishermen could cause a closure which will impact the whole domestic fleet.
4. To apply the AIC concept to the domestic fishery will require the implementation of a timely report<sup>ing</sup> system by the fleet. At the current time such a report system does not exist.

With regard to making herring a prohibited species the SSC would like to point out the following:

1. If herring <sup>is</sup> ~~are~~ made a prohibited species for all, the Herring Savings Area concept would not be enforceable for the domestic fishery.
2. If herring <sup>is</sup> ~~are~~ made a prohibited species for the foreign fishery, the Herring Savings Area concept will need to be reworked to define at what level of prohibited species catch the Herring Savings Area is implemented. The Council may wish to consider establishment of a level that is tied to some method other than the past incidental rate.
3. If herring is made a prohibited species for the foreign fishery and not for the domestic then, the Council will need to define its application to the joint venture fisheries.

2.2 Definition of terms (Page 2-3)

- b. Acceptable biological catch (ABC). ABC is a seasonally determined acceptable catch that may differ from MSY for biological reasons. It may be less than, equal to, or greater than MSY, depending on resource conditions. ABC applies to the combined state and federal management areas.
  
- c. Optimum yield (OY). OY is that portion of the biomass which is available for harvest in the FCZ.
  
- h. Allowable incidental catch (AIC). AIC is that amount of herring allocated to be taken incidentally to United States and foreign groundfish fisheries. It is not considered a part of the OY for the herring resources. It is considered a part of the OY of the groundfish fishery. The AIC is allocated to each nation's groundfish DAH or TALFF in accordance with the relative amounts of DAH or TALFF for groundfish species other than herring.

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#### 7.6.2. Acceptable biological catch (Page 7-40)

Because the herring population of the Bering Sea fluctuates significantly, the acceptable biological catch (ABC) in any given year must reflect current stock conditions to the maximum extent possible. Therefore, ABC shall be determined annually and may be adjusted during the year as new information becomes available. The ABC determined under this plan applies to the combined state and federal management areas. The method of determination is as follows.

##### 7.6.2.1 Spawning biomass estimation (Page 7-40)

Since 1977, ADF&G has performed aerial surveys along the western Alaska coast during the spawning period. The purpose of these surveys is to count schools of herring which are then recorded according to total surface area. Estimates of the spawning biomass are then obtained by applying a density factor to the total surface area of all schools recorded on the peak day in each spawning area. Using this technique, the spawning biomass in 1978 from Bristol Bay to Norton Sound was estimated to be 187,210 - 334,723 mt and estimates for 1979 were 258,079 - 637,583 mt (Barton and Steinhoff 1980). The estimate generated by ADF&G in 1982 was 116,000 mt (Table 7-7).

The spawning biomass estimate does not include any data from the Aleutian Island/Alaska Peninsula area or from the Port Clarence/Kotzebue Sound region. Reliable spawning biomass estimates do not presently exist for either of these areas. When spawning biomass estimates are available they will be included in the spawning biomass estimation used to determine ABC.

Despite the problems with the method, the spawning biomass estimates developed by aerial surveys are the best available. Until additional data become available through hydroacoustic surveys, spawn deposition surveys, or other sources, the aerial surveys shall be the basis for determining annual spawning biomass.

In the past, there have been times when ice and weather conditions have been such that aerial surveys could not be conducted to accurately assess spawning biomass. When spawning surveys are limited by these or other factors, the

primary stock assessment tool will be virtual population analysis (VPA). VPA is based on data generated from previous years' inshore and offshore surveys. The biomass of each year-class of herring is computed and subjected to an estimated annual mortality (a combination of natural and fishing mortality). An estimate of recruitment into the fishery is also computed. The current biomass estimate is then the sum of the computed biomass estimates for each year-class and the predicted recruit biomass.

If it is not possible to determine herring abundance by using aerial surveys or VPA, stock condition will be assessed by using commercial catch rates, the percentage of roe recovery, ratios of pre to post spawners from test net and commercial catches (both inshore and offshore), spawn deposition observations and any other available information.

It must be noted that when virtual population analysis or other methods are used to provide biomass estimates, those estimates must be reduced to a spawning biomass estimate before they may be used to determine ABC.

7.6.2.2 (not changed)

7.6.2.3 Determination of ABC (Pages 7-46)

Using the procedure described in Section 7.6.2.5, the Council shall annually determine ABC using the following formula.

$$ABC = \frac{\text{spawning biomass estimate}}{\text{MSY biomass}} \times 0.2 \times \text{spawning biomass estimate}$$

7.6.2.3.1 Spawning biomass estimate

Spawning biomass estimate will be determined in accordance with Section 7.6.2.1. The most current data available at the time of determination of ABC shall be used.



Spawning biomass estimates for the Nelson Island subsistence stocks will be excluded from the spawning biomass estimate. This exclusion reduces the ABC and is intended to provide an additional degree of protection for these stocks.

#### 7.6.2.3.2 MSY biomass

In accordance with Section 7.6.1 the best available estimate of MSY biomass is 243,560 mt.

#### 7.6.2.3.3. Limitations on exploitation rate

In accordance with Section 7.6.2.2. the exploitation rate may not exceed 20 percent. If the spawning biomass estimate divided by the MSY biomass is greater than 1, then the value is set equal to 1.

#### 7.6.2.4 Determination of ABC (new)

Annually by July 1, ABC shall be estimated by the Regional Director of the NMFS using the procedure described in Section 7.6.2.3. This estimate shall be reviewed by the Council and its advisory groups. The Council shall provide for public comment on the estimated values and procedures.

The Council shall on October 1 recommend a final value of ABC to the Assistant Administrator or the Alaska Regional Director, NMFS, who will specify the final values. The ABC so specified will be for the current fishing year.

#### 7.7 Allowable incidental catch (AIC) (Page 7-47)

A small incidental catch of herring unavoidably occurs each year in the groundfish trawl fishery of the eastern Bering Sea. Because of the great value of this groundfish trawl fishery, and the importance that is specifically ascribed to its development in Section 2(a)(7) and (b)(6) of the Magnuson Act, the utilization of this small portion of the herring resource in the Bering Sea groundfish trawl fishery contributes to the "greatest overall benefit to the Nation" within the meaning of Magnuson Act Section 3(18). This

unavoidable incidental catch of herring is thus part of the optimum yield of the Bering Sea groundfish fishery. Because the fishery is currently dominated by foreign participants, most of the herring taken in the fishery is currently taken by foreign vessels. As United States participation in the Bering Sea groundfish trawl fishery increases, a greater and greater percentage of the herring taken in that fishery will be taken by United States fishermen.

The amount of the herring that is allocated to the Bering Sea/Aleutian Islands groundfish fisheries is referred to in this FMP as the "Allowable Incidental Catch" (AIC). Like other components of the Bering Sea groundfish fishery OY, AIC must be apportioned to domestic annual harvest (DAH) and total allowable level of foreign fishing (TALFF). AIC is a function of the groundfish allocations to all foreign and domestic groundfish trawl fisheries. AIC is equal to the 1979-81 average incidence rate of herring times each nation's groundfish allocation. It is automatically allocated with and inseparable from groundfish DAH and individual foreign groundfish allocations. If a nation does not harvest its AIC allocation, the remainder need not be reallocated. Herring harvest under an AIC allocation may be retained.

The average incidence rate is based on observer data and catch reports from the 1979, 1980 and 1981 foreign groundfish operations. The methods used to calculate the incidence rate for each year are described in Section 8.3, along with an in-depth review of 1978-79. The computed incidence rate was 0.136% in 1979, 0.125% in 1980, and 0.04% in 1981. The average for the three-year period is 0.10%. The incidence rate used to calculate the AIC is therefore established as 0.10%.

The maximum expected Bering Sea groundfish OY is 2.0 million mt. Thus, the maximum expected AIC is 2,000 mt. In 1982 the calculated total AIC would have been approximately 1,400 mt.

The provisions of this FMP concerning AIC constitute a supplement to and are to be considered an integral part of the Bering Sea/Aleutian Islands Groundfish FMP, which is hereby amended to incorporate those provisions by reference.

AIC shall be determined annually at the time of the determination of the groundfish total allowable catch under the Bering Sea/Aleutian Islands Groundfish FMP.

## 10.0 Optimum Yield

OY shall be the sum of two components, a summer apportionment of OY and a winter apportionment of OY. These two components shall be determined as follows:

### 10.1 Summer apportionment of OY

The summer apportionment of OY shall be 2,000 mt, and shall be available for harvest south of 55°47'N latitude during the period of July 1 through September 30. In order to assure that this summer apportionment of OY does not cause the fishery to exceed historic levels, harvests in the inshore (territorial sea) fishery south of 55°47'N latitude from July 1 through September 30 shall be counted against the achievement of the 2,000 mt summer apportionment of OY. When 2,000 mt has been harvested in the FCZ and the territorial sea taken together, the FCZ south of 55°47'N latitude shall be closed to fishing for herring until the next apportionment is made. Any unharvested portion of the summer apportionment of OY should not be reallocated.

The summer apportionment of OY may be reduced if NMFS, in consultation with the Council and the State, finds a serious problem resulting from any of the following factors:

- a. the extent to which the subsistence and inshore commercial fisheries harvested or overharvested the ABC.
- b. condition of the spawning stocks of herring with special focus on the subsistence stocks.
- c. abundance of spawning herring and their spawning success.

- d. age composition of the spawning herring.
- e. recruitment to the spawning stocks of herring.
- f. the variation in exploitation rates between the spawning stocks.
- g. changes in the State's management of the inshore commercial fishery.

## 10.2 Winter apportionment of OY

The winter apportionment of OY shall be determined as follows:

$$\text{Winter Apportionment of OY} = \text{ABC} - \text{Inshore Commercial Harvest} - \text{subsistence adjustment} - \text{AIC}$$

In the event that the winter apportionment of OY as calculated is less than zero, the winter apportionment of OY shall be set equal to zero.

The winter apportionment of OY is further reduced by 50%. This reduction of the winter apportionment of OY is due to the social and economic importance of the subsistence and inshore commercial fisheries. This reduction insures that the winter apportionment of OY will remain conservative to protect these priority fisheries. The Council will review this procedure for determining the winter apportionment of OY within three years after the implementation of this plan.

The winter apportionment of OY shall be available for harvest throughout the management unit from October 1 (or the date which notice of its determination is filed with the Federal Register, whichever comes later) until March 31, the end of the fishing year.

### 10.2.1. Subsistence adjustment

The subsistence harvest of herring has been identified as a priority fishery by both the State of Alaska and the Council (see Section 3). The majority of this harvest takes place in the Nelson Island area. These stocks have already been provided an additional degree of protection by the exclusion of those stocks from the spawning biomass estimates. But it is noted that subsistence harvest of herring does occur elsewhere in the management area. To insure

protection of all subsistence fisheries, 500 mt is subtracted in the determination of the winter apportionment of OY in order to provide an additional degree of protection for all subsistence stocks.

#### 10.2.2. Inshore commercial harvest

The inshore commercial harvest shall be the total harvest taken from State waters between April 1 and September 30 and from the FCZ directed harvest between July 1 and September 30.

#### 10.2.3. AIC

The allocation of herring provided for an an incidental catch in the groundfish trawl fishery is subtracted in the determination of the winter apportionment of OY. The value to be subtracted will be the number determined for the current year in accordance with Section 7.6.2.4. This value is subtracted before determination of the winter apportionment of OY since it becomes an allocation under the Bering Sea/Aleutian Islands Groundfish FMP and is not considered a part of OY in this plan.

#### 10.2.4. Limitation of Winter Apportionment of OY

This apportionment shall be further limited as follows.

- a. If the amount so calculated is less than 2,000 mt, the winter apportionment of OY shall be zero. This limitation is to insure that any winter appropriation of OY will be large enough to insure that a directed herring fishery is undertaken, not just an increase of the incidental harvest in the groundfish fishery.
- b. If the current herring spawning biomass is less than one-half of the MSY biomass, the winter apportionment of OY shall be zero. This limitation is to insure that at times of low spawning biomass rebuilding of stocks is placed in higher priority than the offshore fishery.

- c. If the amount so calculated is greater than 10,000 mt, then the winter apportionment of OY shall be 10,000 mt. This limitation is to insure that any offshore fishing which is authorized is controlled in its development. The Council does not feel in light of the priorities for other fisheries established in this plan and the status of the resource that a winter apportionment of OY will be available in every year, and therefore the Council does not wish to encourage an offshore fishery to develop which is dependent upon this allocation.

The winter apportionment of OY as calculated may be further reduced if NMFS, in consultation with the Council and the State, find a serious problem resulting from any of the following factors.

- a. The extent to which the subsistence and inshore commercial fisheries harvested or overharvested the ABC.
- b. Condition of the spawning stocks of herring with special focus on the subsistence stocks.
- c. Abundance of spawning herring and their spawning success.
- d. Age composition of the spawning herring.
- e. Recruitment to the spawning stocks of herring.
- f. The variation in exploitation rates between the spawning stocks.

### 10.3 Determination of OY

Upon the estimation of ABC by the Regional Director of the NMFS, the Council shall develop and make available recommended values for the two components of OY. The summer apportionment of OY shall be made immediately available for harvest. The Council shall provide for public comments on the estimated winter apportionment of OY. The Council shall by October 1 recommend a final value of the winter apportionment of OY to the Assistant Administrator or the Alaska Regional Director, NMFS, who will specify the final values.

## 12.0 MANAGEMENT SYSTEM (Page 12-1)

This section prescribes the management regime for herring fishing operations in the FCZ of the Bering/Chukchi Sea. The subsistence and inshore commercial fisheries described in this plan will continue to be managed by the State of Alaska and are beyond the scope of this FMP and this management regime.

### 12.1 Objectives (Page 12-1)

This FMP has been prepared in accordance with the National Standards set forth in Section 301(a) of the Magnuson Act.

The Council has determined that the priorities for fisheries which utilize the herring stocks which are covered by this plan are as follows:

1. subsistence fishery
2. inshore commercial fisheries
3. offshore domestic fisheries

Based upon these priorities, the following specific objectives have been developed.

1. To conduct any harvest of herring in the FCZ in such a manner to insure:
  - a. Maintenance of the herring resource at a spawning level that will provide the maximum production of recruits.
  - b. Maintenance of the subsistence herring stocks and the subsistence fishery.
  - c. Maintenance of the herring resource at a level that will sustain populations of predatory fish, birds and mammals.
  - d. Development and maintenance of the inshore commercial fisheries.



2. Consistent with objective 1, promote full utilization of the herring resources by domestic offshore fisheries.
3. Provide to the extent possible a unified management regime between federal and state jurisdictions.

It is recognized that to achieve these objectives on a long-term basis it will be necessary to establish a conservative management regime for the near future. The rationale for support of a conservative management regime is that the abundance of herring declined sharply in the early 1970s and only recently has an increase become apparent. Although several hypotheses could be advanced to explain the cause of the observed decline, data are insufficient to establish conclusively a casual factor. Also, present knowledge of the resource is redimentary and inferences on many aspects of life history must be drawn from other more thoroughly studied populations. Since rapid, marked changes in abundance are expected to occur in the future, based on historic patterns in world herring fisheries, and as management and research are at an embryonic stage, it is prudent to manage the resource conservatively until basic management data become available.

#### Justification and Rationale for Objectives

Objective 1 recognizes the importance and priority established for the subsistence and inshore commercial fisheries. The objective is to insure that any harvest in the FCZ recognizes the importance of these other fisheries and of the herring resource to the Bering Sea ecosystem.

Herring managers world-wide have recognized the importance of maintaining a strong spawning biomass. In the North Atlantic Ocean, management is based on setting yield at or below the  $F_{0.1}$  level (see Section 7.6.2) to maintain a sufficiently large multi-age spawning biomass. In British Columbia, management is based on escapement where the fish surplus to spawning requirements are allocated to the fishery on data that egg survival is greatest at moderate densities and a maximum number survive to the critical larval stage.

At present, data are insufficient to determine the level of biomass that will produce maximum recruitment, however, assuming that MSY is an indicator of long-term average yield achievable at an exploitation rate of 20%, then at least average recruitment should be maintained at this biomass level.

The high priority placed on the subsistence stock and subsistence fisheries. The adjustment in determination of OY and the removal of the Nelson Island subsistence stocks from the annual biomass determination, are specifically designed to insure the maintenance of the subsistence fisheries. Additionally, the conservative approach in determining the winter apportionment of OY further insures protection for these priority fisheries.

Maintenance of the resource at a level that will sustain populations of predatory fish, birds and mammals is met since resource surveys will be conducted annually and deviation about the mean biomass level reflects changes in the survival of herring year-classes of which predation is a major component. If a strong predatory-prey relationship exists between herring and a mammal, bird or fish species, then managing herring to dampen strong stock fluctuations should also dampen fluctuations in the predatory species. Also, limiting yields to or below the  $F_{0.1}$  level should insure an adequate amount of herring for use by other species.

Development and maintenance of the inshore commercial fisheries is insured by the higher priority placed upon these fisheries and by the limitation placed upon the development of the offshore commercial fisheries.

Objective 2 recognizes that need to promote the full utilization of the herring resources within the limits expressed in the priorities and concerns of Objective 1. This objective is met to the degree possible by the plan through the formulation and allocation of optimum yield.

Objective 3 recognizes the need for cooperative management of these resources between the Council and the State. This objective is met by insuring that management actions which would affect the state's management activities are coordinated with the state and that the state is consulted on matters pertaining to the conservation of the resource.

## 12.2 Allocations to the fisheries (Page 12-4)

### 12.2.1 Fishing year

The fishing year shall be April 1 to March 31.

A fishing year commencing April 1 coincides with the migration of herring into coastal waters for spawning and is a natural division between the fisheries occurring on the winter grounds and those on the spawning grounds.

### 12.2.2 Summer apportionment of OY

Two thousand mt of herring is apportioned to the offshore summer food and bait fishery of the Aleutian Islands/Alaska Peninsula area. This apportionment shall be harvested only south of 55°47'N latitude, during the period July 1 through September 30. In order to assure that the summer apportionment of OY does not cause the fishery to exceed historic levels, harvests in the inshore (territorial sea) fishery south of 55°47'N latitude from July 1 through September 30 shall be counted against the achievement of the summer apportionment of OY. When 2,000 mt has been harvested in the FCZ and the territorial sea taken together, the FCZ south of 55°47'N latitude shall be closed to fishing for herring until the next apportionment is made. Any unharvested portion of this apportionment of OY should not be reallocated.

### 12.2.3 Winter apportionment of OY

Any winter apportionment of OY determined by the method established under Section 10.2 of this plan shall be made available to the domestic offshore fishery starting October 1 (or the date which notice of its determination is filed with the Federal Register which comes later) and will be available until March 31.

## 12.3 Management Measure and Rational for Domestic Fisheries (Page 12-5)

### 12.3.1 Inshore commercial fisheries

Regulations for the orderly conduct of the inshore commercial fisheries are promulgated by the State of Alaska.

### 12.3.2 Offshore commercial fisheries

- i. Provisions for allocation, see subsections 12.2.2, 12.2.3.
- ii. the FCZ will be closed to directed fishing for herring from the beginning of the fishing year, April 1, until July 1, south of 55°47'N latitude. North of 55°47'N latitude the FCZ will be closed to directed fishing for herring from April 1 to September 30 or the date on which notice of the winter apportionment of OY is filed with the Federal Register (whichever comes later). In the event the winter apportionment of OY is zero, the total management area is closed to directed herring fishing from October 1 to March 31.

#### Rationale

The FCZ closure from April 1 to July 1 prevents interception of roe-bearing fish during the spawning period. The July 1 opening south of 55°47'N allows continuation of the summer fishery which has developed in the Aleutians. The July 1 opening date allows fishing during a time when there is a likelihood that local stocks are present in this fishing area.

The 55°47'N boundary does not restrict fishermen from traditional summer fishing areas. This particular boundary is identical to the current boundary established by State of Alaska regulation, and will thus help reduce potential conflict.

The winter offshore fishery has historically occurred in October through March. Any winter apportionment of OY will be made as early as possible to allow this fishery to proceed as usual.

- iii. All or part of the Herring Savings Area as described in Section 8.4 will be closed to domestic herring and groundfish trawl fisheries by the Regional Director, if:
- a. the total DAH and domestic allocation of AIC have been harvested; or
  - b. the amount of remaining domestic allocation of AIC can be harvested within one reporting period (one week).
- iv. When the domestic AIC has been used herring becomes a prohibited species and may not be retained.

#### Rationale

To simplify the accounting of herring harvested as DAH or AIC, all herring caught in an area open to directed herring fishing will be charged against DAH. All herring harvested in an area closed to directed herring fishing will be charged against AIC. If no domestic allocation remains (either DAH or AIC), the Herring Savings Area Closure would be implemented to protect the feeding stocks against further harvesting by the winter fisheries. If there is a small amount of AIC outstanding that can be taken in one reporting period, the Herring Saving Area would be implemented by the Regional Director in order to avoid exceeding the AIC between reporting periods.

#### 12.3.3 Other regulations

Regulations in the Bering Sea/Aleutian Islands Groundfish FMP for time and are closures shall also apply to all offshore herring fisheries.

#### Rationale

Any herring trawl fishery in the FCZ most likely will be conducted in conjunction with domestic groundfish fisheries. The restrictions on groundfish fishing operations have been developed to protect incidentally caught

species and prevent gear conflicts. As herring fishing gear is similar to groundfish fishing gear (e.g. pollock), the herring fishery has potentially the same impact. Thus, the Bering Sea Groundfish FMP implementing regulations specifying time and area closures shall also apply to the herring fisheries to minimize adverse impacts and to maintain consistency of regulations.

#### 12.3.4 Statistical reporting requirements

All necessary information regarding inshore harvest and spawning biomass estimates can be obtained from the State of Alaska.

U.S. fishermen fishing in the FCZ and not landing their catches on shore are currently not required to report their catches to either state or federal authorities. Due to the vast area of the FCZ which may be opened to herring fishing and the unknown distribution and composition of offshore stocks, it is critical that the FMP provide for collection of harvest information. The need for this information increases with the magnitude of the offshore catch--if the FCZ harvest is small only total catch and general area information may be required. However, due to the lack of definitive data and uncertain impacts of mixed-stock offshore fishing, much more detailed information would be required for managing a major FCZ fishery. Without an adequate information collection mechanism, a major fishery could cause irreparable damage and should not be allowed. The type of information for management of an FCZ herring fishery includes catch, time, area and effort. Non-fishing "search" time might also be critical for detection of stock declines. Specifically, where information is not available from other sources, this FMP authorizes collection of the following statistics from domestic vessels harvesting herring in the FCZ:

1. catches reported by  $\frac{1}{2}$  degree latitude x 1 degree longitude areas; and
2. effort reported by gear type and vessel class by month. Examples of effort data include hours towed, number of landings, and number of trips.

### 12.3.5 Permit requirements

All U.S. vessels fishing in the FCZ of the Bering/Chukchi Sea must have on board a permit issued by the Secretary of Commerce or a State of Alaska commercial herring permit.

## 12.4 Management measures and rationale for the foreign fishery (Page 12-9)

### 12.4.1 Area closures

- i. Directed fishing for herring is not allowed within the management unit.
- ii. All or part of the Herring Savings Area, as described in Section 8.4, will be closed to a nation's groundfish trawl fisheries by the Regional Director if:
  - a. that nation has no remaining AIC; and
  - b. the amount of remaining AIC can be harvested within one reporting period (one week).
- iii. When a nation has used all of its allocated AIC, herring becomes a prohibited species and may not be retained.

#### Rationale

The U.S. industry has demonstrated the capacity and its intention to harvest the total optimum yield of herring. Therefore, the TALFF is zero and no directed fishing for herring will be allowed.

The purpose of the Herring Savings Area closure is to reduce the incidental catch of herring by foreign groundfish trawl fisheries when AIC has been reached. An in-season closure provision is necessary to allow the Regional Director to act within a reasonable amount of time to protect herring stocks from being overharvested during one reporting period.

This closure applies to trawl gear only. Longline, pot or other gear which are not utilized to fish for herring or catch herring above trace amounts (less than 0.001% of total catch) are exempt from this time/area restriction.

12.4.2 Foreign reporting requirements

The operators of all foreign vessels must maintain an accurate log of catch and effort information in accordance with the requirements of the implementing regulations of the Bering Sea/Aleutian Islands Groundfish FMP and other foreign fishing regulations, 50 CFR Part 611.

12.4.3 Permit requirements

All foreign vessels fishing for groundfish in the FCZ must have on board a permit issued by the Secretary of Commerce, as required by the Magnuson Act.