AGENDA E-2
January 1982

M E M O R A N D U M

TO: Council, SSC and AP Members

FROM: Jim H. Branson
Executive Director

DATE: December 29, 1981

SUBJECT: Bering/Chukchi Sea Herring FMP

ACTION REQUIRED

Approve FMP for resubmission to Secretary.

BACKGROUND

In September the Council asked to have the Herring FMP withdrawn from Secretarial review so that the PMT could make wording changes to clarify certain sections, improve management flexibility, and ensure that the formulas worked as desired. The Team brought suggestions to the Council in December for preliminary review. The SSC asked the Team to re-evaluate certain suggestions and explain their rational. A series of questions were given to the Team, and these and the Team's response are included as Agenda Item E-2(a).

A brief description of the FMP policy and procedures is included as Agenda Item E-2(b). This review will re-familiarize the Council with the philosophy that has been developed over the past few years.

The recommended wording changes to the FMP were also distributed at the December Council meeting. These suggestions have been modified to include alternatives and are included as Agenda Item E-2(c).

A report on the status of herring stocks world-wide will be included as E-2(d) if available. Otherwise, it will be distributed in the next Council mailing.

A letter from Ron Skoog and Nick Szabo is attached as E-2(e). The letter states the preference of ADF&G and the Board to not submit the FMP to the Secretary.

Letters have also been received from Kemp Fisheries and the Halibut Producers Coop regarding the Herring FMP; they are attached as E-2(f) and E-2(g).

AGENDA E-2(a)
January 1982

RESPONSE TO SSC QUESTIONS ON HERRING FMP

Subsistence Stocks

1. What the SSC proposes is essentially what the plan does as presently written.

1 & 2. With regard to management of subsistence stocks, the PDT did not consider that these stocks should be unmanaged; rather that measures be taken to prevent commercial harvests from interfering with subsistence harvesting. It was understood that ADF&G would monitor the stock structure and biomass of subsistence stocks, but that ABC would be reserved for subsistence.

The PDT felt it was only possible to provide complete protection of subsistence stocks through the total elimination of commercial fisheries. The closure of areas of subsistence use to commercial fishing was felt to be the most practical means of protecting subsistence harvests while allowing commercial herring harvests in non-subsistence areas.

In April, 1980 the SSC and Council addressed the alternative of reducing the exploitation rate in situations where an offshore fishery was allowed. Both rejected this approach and affirmed that the conservative measures employed throughout the Plan were adequate to protect all stocks involved, and that reducing exploitation rate offshore was unnecessary. Further reduction of OY to address subsistence stocks would be no different in actual practice than reducing the exploitation rate offshore. No protection to discrete stocks would result.

As to what action should be taken should subsistence stocks decline is dependent on the nature of the decline. The time series on stock specific abundance changes is insufficient to observe any trends. The data available suggests that strong and weak year-classes occur coastwide. The experience in other areas has been that stock specific declines have occurred from overfishing when a stock was segregated on its spawning grounds. In the Alaska Herring Symposium (p. 266), it was noted that fishing rates are more evenly distributed at greater distances from spawning grounds and the likelihood of overfishing a small stock increases as stocks near the spawning grounds and begin to segregate.

The conclusion that follows from the above is that declines in subsistence stocks will be accompanied by declines in all stocks, and specific management measures to protect subsistence stocks will be of little value. However, special measures may be needed if these fish are heavily fished in other areas, i.e., on the winter grounds or other spawning areas. Since very little is known about herring offshore distribution or migration patterns, any discussion of this problem is speculative. The likelihood of impacting subsistence stocks in a fishery on the winter grounds is very small as long as these stocks are a small component of the total biomass (Wespestad and Francis 1980). The experience in the north Atlantic has been that stocks are fished in proportion to their abundance (Alaska Herring Symposium p. 265-266). However, if subsistence stocks comprised a major portion of the total biomass,

then it would be wise to curtail offshore fisheries. The possibility also exists that herring bound for subsistence areas may travel through spawning areas open to commercial fisheries. If this occurs, there are situations in which substantial harvest could be taken from subsistence stocks. If this did, or is occurring, it would be difficult to detect, given the current knowledge of migration and stock structure and equally difficult to determine appropriate management measures.

EXAMPLES:

	OY By FMP Procedure	OY By Excluding Nelson Island From Biomass	Difference
Biomass = 186,000 Nelson Island = 3,700 (actual 1981 conditions)	30,178 mt	29,618	560
Biomass = 186,000 Nelson Island = 10,000	29,205	25,743	3,462
Biomass = 186,100 Nelson Island = 40,000	24,570	19,719	4,851

Spawning Biomass

1. Alternative stock assessment procedures which could be used include:

   a. Spawning biomass estimation from spawn deposition and fecundity analysis. This would provide a rough idea of the size of the spawning stock with the level of accuracy dependent on timely and extensive sampling of all areas of spawn deposition.

   b. Hydroacoustic-trawl survey on winter grounds. This would require a large amount of vessel time due to the large area to be covered and time lost to weather. This is likely not a viable option since it is unlikely that adequate vessel-days will be available to conduct a survey.

   c. Using the previous year's aerial survey estimate.

   d. Using Virtual Population Analysis to estimate population size from catch statistics and test fish samples.

Maximum Exploitation Rate

1. The exploitation strategy set forth in the FMP is based on the assumption that MSY reflects a long-term average yield and that herring stocks will fluctuate greatly over time. Therefore, as abundance declines below the level that produces MSY, exploitation is reduced. Conversely, as stock abundance increases above MSY, exploitation should increase to harvest fish above the amount necessary to produce MSY. This strategy also encompasses the concept of surplus production or the general production model in which stock abundance levels above MSY produce diminished yields. Observation in British Columbia and Southeastern Alaska indicate that this concept applies to herring. Egg survival and subsequent recruitment are greatest at intermediate levels of stock abundance while at high levels of abundance survival appears to be reduced through excessive spawn deposition.

The rationale for limitng exploitation to below 39% is derived from yield-per-recruit analysis. The 39% exploitation rate is what is called the F(0.1) level which is based on the economic concept of diminishing returns. At the F(0.1) level, the yield that is obtained from an additional unit of effort beyond the F(0.1) level of effort is only 10% of that which was obtained from the first unit of effort applied in the fishery. This level of effort results in only a slight lowering of yield from the maximum obtainable while insuring a sufficient spawning stock (see FMP Section 9.6.2.2).

AIC Formula

1. Lower end should be zero; there may be times when AIC is not possible.

2. The PDT did not set an incidence rate because we had no idea of what the true rate was. Our concept was that it would need to be evaluated annually to insure that the rate set was the minimum required. This approach was taken to follow the Council's instruction to minimize AIC. If the Council now believes that there is some acceptable level of AIC, it may be possible to either set a tonnage figure or a rate in range based on herring abundance and OY, i.e. $IR = AVG(IR) \times OY \times \frac{\text{Herring Biomass}}{\text{Herring MSY Biomass}}$

3. The plan states that AIC will be apportioned to domestic and foreign fisheries proportional to groundfish allocations.

Other

The assertion made by one of the representatives of western Alaskan fishermen implies that processing companies know that under the herring FMP formulation (which is not yet in effect), the optimum yield of herring has to be taken in the inshore fishery, which has first priority use, or it would be available for other user groups. Processing companies would supposedly use this knowledge of pressure that fishermen feel to harvest the entire OY as a bargaining lever to be able to purchase herring at a lower price. The assertion is not valid for a number of reasons.

Processing companies operating in western Alaska do not have any guarantee of a supply of herring, due to the mobility of the stocks as they move inshore. They do know that the herring are only going to be available for a limited number of days. This situation is the same for both the processing companies and for the fishermen. They face uncertainty in the supply of herring that will be available during any year.

Having made the decision to process herring during any particular year, the company has to invest a large part of the fixed costs of production before ever beginning to process fish. Since they face an uncertain supply of herring, and face competition from other companies, they are not in a favorable position to be able to exploit the fishermen.

A second problem with this assertion is that inshore fishermen are not forced to harvest the entire OY. The assertion implies that the inshore herring fishermen feel threatened by any herring they do not catch being allocated to the offshore fishermen. This would not be logical since under the process in the FMP, the inshore fishery has first priority on the resource. Also, offshore production by other fishermen would not affect the markets for the fish caught by the inshore fishermen since the products are different. In

short, there is no logical reason why inshore fishermen would have to take the entire OY under any circumstances, particularly if they felt that their market prices would be higher at lower catch level.

A final problem with this assertion is that it does not take into account the realities of the markets for roe herring produced in western Alaska. The market for roe herring is in a single country, Japan. The main supplies are Canada and the United States. Due to the timing of the spawning, herring from Bristol Bay are caught after the production from California and British Columbia is already on the market. By that time, the price has been determined and much of the demand has been filled. In a sense, Bristol Bay herring processing companies are a supplier of last resort.

The 1981 roe herring prices for different areas of Alaska were presented in an ADF&G report presented to the Council in December. These data indicate that ex-vessel herring prices from western Alaska was at parity with ex-vessel prices from Prince William Sound and Southeast Alaska. It would appear, from the data available, that fishermen from western Alaska have no reason to feel that they are under economic duress from the "use it or lose it" formulation in the FMP.

SUMMARY OF HERRING FMP POLICY AND PROCEDURES

The Bering/Chukchi Sea Herring FMP is designed as a framework FMP which should not need annual amendments. Optimum Yield (OY) can be determined each year based on annual biomass surveys and alternative methodology is included in cases where no annual survey data is available. The determination of OY is based on a series of steps:

1. Annual biomass data is generated from aerial spawning surveys and other sources.
2. A single exploitation rate for the entire management area is calculated based on the current biomass level. This rate increases as the biomass increases and reaches 20% exploitation at MSY. Above MSY levels it can increase to an absolute maximum of 39%.
3. An Allowable Biological Catch (ABC) is calculated by multiplying the biomass estimate by the exploitation rate. This is adjusted upwards by 2,000 mt to allow for stocks not included in annual surveys.
4. OY is an adjustment of ABC to account for subsistence stocks (which are to be unexploited by inshore commercial fisheries) and the previous year's Allowable Incidental Catch (AIC) in the groundfish fisheries. The portion of the total ABC which is attributed to subsistence and the AIC are subtracted from ABC.

The FMP recognizes the fact that an offshore fishery would be a mixed-stock fishery and that it is impossible to intentionally avoid any particular stock or group of stocks. However, the method of determining OY coupled with other conservative measures ensure adequate protection to the herring populations. The FMP procedure uses primarily spawning biomass estimates rather than total biomass estimates, thus providing a buffer of pre-recruit herring. This also acts to depress the exploitation rate below what could otherwise be allowed.

An offshore herring fishery per se cannot be viewed as detrimental to either individual stocks or groups of stocks. At the Alaska Herring Symposium in 1980 (Proceedings, p. 265), it was noted that deletrious impacts could occur if the stocks were not well-mixed, but stocks are more evenly distributed at greater distances from the spawning grounds. The likelihood of impacting subsistence stocks in a fishery on the winter grounds is very small as long as these stocks are a small component of the total biomass. Thus, although it may be more difficult to assess the impact of an offshore fishery on individual stocks, it is very unlikely that any stocks would suffer. Rather, inshore and offshore fisheries would probably complement and augment each other in terms of both biological data and economic benefits.

Allocation

The FMP allocates OY in the following order:

1. Subsistence fisheries
2. Domestic Inshore (Roe) fisheries
3. Domestic Offshore (Food and Bait) fisheries
4. Foreign offshore fisheries

If stocks were critically depressed it is possible that subsistence harvests would be the only fisheries allowed. Any surplus beyond subsistence needs automatically goes to domestic inshore commercial fisheries, managed by the State. Any surplus beyond the domestic inshore fisheries is allocated to domestic offshore harvest.

Two modifications of OY take place during this procedure. There is a 2,000 mt allocation made to domestic offshore fisheries to account for food and bait harvest. This allocation is made to prevent interference with domestic non-herring fisheries (e.g. king crab), and to provide for minimal directed fishing. The other adjustment is to account for herring harvested incidentally the previous year in offshore groundfish operations (AIC).

AIC

The Herring FMP accounts for an unavoidable incidental catch of herring occuring in normal groundfish operations but requires that this be the minimum possible. AIC is set prior to the offshore fisheries and becomes part of the groundfish OY, i.e. herring is not a prohibited species at the beginning of the year.

Under the Bering Sea/Aleutian Islands Groundfish FMP, AIC will be allocated among foreign and domestic fishermen according to the proportion of the groundfish OY each receives. When a foreign nation's portion of herring OY (under the Herring FMP) and AIC are harvested, the Herring Savings Area is closed to that nation's trawl operations and herring becomes a prohibited species. The situation for domestic fishermen is slightly different because of the 2,000 mt allocation to this fishery and the possibility of harvesting any surplus after the inshore herring fisheries. Thus herring harvested by U.S. fishermen would be subtracted first from the 2,000 mt initial allocation, second from final herring OY (if any remains unharvested) and lastly from AIC. This will allow U.S. trawlers a degree of freedom from the Herring Savings Area closure, although they can be excluded from the area. As with foreign fisheries, herring becomes a prohibited species for U.S. fishermen after all allocations are harvested.

The procedures for determining exploitation rate, ABC, OY, and AIC are provided in the Appendix.

APPENDIX

Exploitation Rate (E_t)

$$E_t = \frac{\text{biomass estimate}}{\text{MSY biomass}} \times .2$$

$$E_{1981} = \frac{186,100}{240,930} \times .2 = .154$$

Allowable Biological Catch (ABC)

$$ABC = E_t \times \text{biomass estimate} + 2,000 \text{ mt}$$

or

$$= \frac{\text{biomass estimate}}{\text{MSY biomass}} \times .2 \times \text{biomass estimate} + 2,000 \text{ mt}$$

$$ABC_{1981} = .154 \times 186,100 + 2,000 \text{ mt}$$
$$= 30,750$$

Optimum Yield (OY)

$$OY = ABC - \text{subsistence stock ABC} - \text{previous year's AIC}$$

$$OY_{1981} = 30,750 - (3,700 \times .154) - 1,900$$
$$= 28,278$$

Allowable Incidental Catch (AIC)

AIC will not exceed 3,000 mt, and will be adjusted based on changes in groundfish (OY_g), herring biomass, and incidence rate of herring in groundfish trawl operations (IR).

PROPOSED REVISION OF HERRING FMP

2.0 SUMMARY

The Magnuson Fishery Conservation and Management Act (Magnuson Act) requires each of eight Regional Fishery Management Councils to prepare Fishery Management Plans for fisheries within its area of jurisdiction in the Fishery Conservation Zone (FCZ) from 3 to 200 miles offshore. The purpose of each plan is to provide for an optimum yield of the resource to the fishermen and to the nation, and to promote fair and equitable allocation of the resource.

The present plan has been developed by the North Pacific Fishery Management Council (Council) with the assistance of the Alaska Department of Fish & Game (ADF&G) and the National Marine Fisheries Service (NMFS) as a framework which will govern management of fisheries for herring conducted beyond the three-mile limit on a multi-year basis.

The domestic inshore fishery within three miles has been managed by the State of Alaska since the fishery developed in 1977. This plan establishes a cooperative management policy of the North Pacific Council, State of Alaska Board of Fisheries (Board) and the NMFS, under which efforts will be made to assure that the Federal offshore and State inshore herring management regimes complement each other. It provides the basis for management measures and regulations for herring resources over a period of several years.

After a long public comment period, the draft fishery management plan has been modified to incorporate decisions on options and alternatives, including the final decision on the implementation of a herring savings area. This plan proposes the following:

2.1 Management Objectives

The plan proposes the following objectives:

(a) To maintain the herring resource at a spawning biomass level that will provide the maximum production of recruits to the population on an annual basis.

(b) To maintain the herring resource at a level that will sustain populations of predatory fish, birds and mammals.

(c) To maintain the herring resource at a level that will enable the traditional subsistence fishery to harvest herring in the amounts necessary for subsistence purposes.

(d) To promote full utilization of the herring resource by domestic fisheries.

(e) To encourage development of herring fisheries in Western Alaska.

(f) To provide, to the extent possible, a unified management regime between Federal and State jurisdictions.

Together, these management objectives suggest that priority should be given to the various herring fisheries in the following order:

(a) the inshore subsistence fishery;

(b) the inshore roe fishery;

(c) the offshore domestic food and bait fishery; and

(d) the offshore foreign food and bait fishery.

In addition, the incidental harvest of herring in foreign and domestic groundfish trawl fisheries must be limited.

2.2 The Fisheries

The subsistence fishery is conducted within territorial waters from the coast of the Alaska Peninsula to the southern part of the Chukchi Sea, with varying degrees of local dependency on the resource. This is a small spring and summer gillnet fishery (average annual catch from 1975-1980 was approximately 100 metric tons) for herring for personal use.

The domestic commercial herring fishery includes a spawn-on-kelp fishery (1980 catch was 108 mt worth $168,000) and a developing herring sac roe fishery (1980 catch was 26,782 mt worth $4.1 million). Both fisheries are conducted in a short early summer season, generally by off-season salmon seiners and gillnetters, within territorial waters. There is also a small bait and food fishery.

Japan and the U.S.S.R. have been the historic participants in the directed distant water herring fishery conducted primarily northeast of the Pribilof Islands. Catches have declined since the peak in the late 1960's and early 1970's (Japanese catch in 1968-1969 was 50,857 mt, Soviet catch in 1969-1970 was 92,228 mt, foreign fleet total in 1968-1969 was 128,230 mt). A Preliminary Fishery Management Plan (PMP) for trawl fisheries and herring gillnet fisheries in the Bering Sea and Aleutian Islands was implemented in 1977, substantially ending the foreign directed food and bait herring fishery,

and limiting foreign vessels to an incidental harvest of herring in groundfish trawl fisheries. Since a court order was issued in February, 1980, herring have been a prohibited species, i.e. the taking of herring must be avoided and any herring caught by the foreign fishery must be thrown back and not retained. This order also terminated plans of United States fishermen for pioneering joint venture operations with Soviet processing vessels for 1980.

2.3 Estimation of Yield

The fishery management plan must assess and specify the Maximum Sustainable Yield (MSY) of the fisheries generated by it over a continuing period of time. MSY is based on an assessment of resource biomass. Biomass of the Bering Sea herring stocks wintering off the Pribilof Islands was estimated using data from Soviet hydroacoustic trawl surveys (1965, 1978) and from ecosystem modelling (1978). MSY was calculated from the average annual foreign fishery catch from 1962 to 1976, which was equal to 48,186 metric tons (mt) from an estimated biomass of 240,930 mt, at an exploitation rate of 20%. This estimate may be conservative and may be revised as additional research and catch information become available. The biomass level that will produce MSY over the long term will fluctuate according to growth, recruitment and mortality factors (see Section 9.6.1).

The annual estimate of the acceptable biological catch (ABC) will be calculated by the formula

$$ABC = \frac{\text{annual biomass}}{\text{MSY biomass}} \times .2 \text{ (exploitation rate at MSY)} \times \text{annual biomass}$$

$$+ \text{ 2,000 mt (Aleutian/Alaska Peninsula stocks)}$$

The best available estimate of spawning biomass or total biomass will be used. It is expected that the primary basis for these annual estimates will be counts of herring schools made during aerial surveys conducted by ADF&G throughout the spawning season. The greatest amount of available information is from the Bristol Bay/Good News stock grouping, the Kuskokwim/ Yukon River Delta and the Norton Sound stock grouping. These tentative stock groupings are based on similarities of distribution, behavior, utilization and abundance. Estimates are not available for the Aleutian/Alaska Peninsula stock grouping or the Port Clarence/Kotzebue Sound stock grouping, neither of which has been extensively exploited commercially in the past.

The plan maintenance team (PMT), which will recommend the ABC estimate to the Council each year, may use any other available information to augment the aerial survey counts. It is expected that in some years there may be no reasonable aerial survey data due to weather, ice or other factors. In the absence of spawning survey data the PMT will use the procedure outlined in Section 9.6.2.3.

The Allowable Incidental Catch (AIC) of herring in the groundfish trawl fisheries will not exceed 3,000 mt. AIC applies to both foreign and domestic groundfish trawl fisheries for the fishing year beginning April 1. The guidelines for adjustment of AIC are specified in Section 9.6.2.4.

The Optimum Yield (OY) is a departure from ABC for socioeconomic reasons. OY will be calculated in two stages (preliminary OY and final OY) based on the formula.

OY = ABC - previous year's AIC - subsistence stocks ABC

Stocks utilized exclusively for subsistence will be free from inshore commercial harvest, and the portion of ABC attributed to those stocks will be subtracted from ABC.

The priorities of allocation, the availability of data, and the sequential occurence of the fisheries require a system of in-season management for timely allocation based on current stock assessment information. In September of each year the PMT will use the most current data to determine ABC, AIC, and OY. This OY will be the final OY for the current year and be the basis for additional allocation to offshore fisheries during the remainder of the herring fishing year. This is also the preliminary OY for the succeeding year and will be the basis for preliminary allocations to the domestic food and bait fishery and to the inshore fisheries. Final allocations of remaining OY will depend on condition of stocks and performance of the fisheries (see Section 14.2).

2.4 Allocation of OY to the Fisheries

2.4.1 Fishing year. 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.

2.4.2 Allocation of preliminary OY

In September, a preliminary estimate of OY will be developed by a herring plan maintenance team (PMT or team) appointed by the Council, for the fishing year beginning the following April. The team will consist of representatives from the NMFS and ADF&G, and other individuals that the Council may wish to appoint.

The PMT will analyze all biological and fisheries data relevant to determination of ABC. Following the determination of ABC, the team will make an estimation of Allowable Incidental Catch (AIC) (for the following fishing year, April 1 to March 31) which is deducted from ABC, (see Section 9.6.2.4).

The team will also evaluate all socio-economic data available to it for determination of a preliminary OY (Section 12.0) for the following fishing year. The preliminary OY will be presented to the Council and the Alaska Board of Fisheries for review. The preliminary OY recommended by the Council will be submitted to the NMFS for its consideration in setting the preliminary OY by regulation.

After the establishment of a preliminary OY, allocations will be made to the individual fisheries in the following order:

(a) Domestic Offshore Food and Bait Fishery

An allocation will be made to the domestic food and bait fishery for the period April 1 to September 30. This allocation is primarily to provide for current domestic food and bait fisheries. For the immediate future, this allocation will be no greater than 2,000 mt.

(b) Domestic Inshore Roe Fishery

The remaining portion of the preliminary OY will be allocated to the inshore domestic roe fishery.

2.4.3 Determination and allocation of final OY

By September 30 of the current fishing year, the herring PMT will evaluate biomass estimates, biological parameters, ecological factors and socio-economic data to formulate a final OY for the current fishing year, which will also be the preliminary OY for the following fishing year. This will be submitted to the Council for review, and the Council will forward a final OY recommendation to NMFS, which will consider it in setting the final OY by regulation.

(a) Domestic Offshore Food and Bait Fisheries

If a harvestable surplus is available to the food and bait fishery following the roe fishery, fishing will be allowed throughout the FCZ until the end of the fishing year, March 31, or until the allocation is harvested.

The amount to be allocated to the domestic food and bait fishery will be determined by an intent to operate filed before the start of the winter season by processors and fishermen.

If there is no surplus, then the food and bait fishery will be allowed to harvest only its initial 2,000 mt allocation.

If, after the roe fishery, there is no surplus OY, or there is only a very small surplus OY that cannot be controlled by the regulation of a large fishing fleet, ie. the fishing effort is such that the OY can be taken within a reporting period, then domestic and foreign fisheries having the potential to take herring will be closed in offshore areas of herring concentrations (see Section 14.3.2.).

(b) Foreign Fisheries

If domestic fisheries utilize all of the OY and the domestic portion of AIC, then only the foreign Allowable Incidental Catch of herring in the groundfish fishery may be taken for the remainder of the fishing year.

Any OY remaining following final domestic food and bait allocation will be allocated to foreign herring food and bait fisheries.

If domestic fisheries are not active in December and there are no indications that domestic herring fisheries will be actively engaged in during the remainder of the fishing year, all or a portion of the remaining domestic food or bait allocation will be released to the foreign fisheries. The Regional Director of the National Marine Fisheries Service, Alaska Region (Regional Director), in consultation with the Council shall make the release from DAH to TALFF by January 30.

2.5 Management Measures for Domestic Fisheries

2.5.1 Inshore commercial fishery

i. Provisions for allocation. See Section 14.2.2(2).

ii. Regulations for the orderly conduct of the inshore commercial fishery shall be promulgated by the State of Alaska Board of Fisheries and are not provided for in this plan.

iii. The FCZ will be closed to directed herring fishing from the beginning of the fishing year, April 1 to July 1, south of 60°N latitude; and to August 1, north of 60°N latitude. However, the Regional Director, in consultation with ADF&G and the Council, may open the FCZ by emergency regulation if ice conditions or other factors preclude full development of the roe fishery within state waters.

Rationale

The roe fishery is currently managed exclusively by the State of Alaska because the entire fishery occurs within State waters. It is expected that the roe fishery will continue inside of three miles in the future since roe quality and recovery rates are greatest in close proximity to the spawning grounds. It is desirable to continue restricting the roe fishery to State waters because product quality will be highest, management and regulation of the fishery will be simplified, aerial biomass surveys will be more easily performed, and fishing on discrete stocks is facilitated. Management of the roe fishery by the State is based on the following considerations:

(a) the effect of overall fishing effort;
(b) the catch per unit effort and rate of harvest;
(c) the relative abundance of herring in comparision with pre-season expectations;
(d) the performance of the roe fishery;
(e) the proportion of immature or spawned out herring and the age structure of the populations;
(f) general information on the condition of herring;
(g) information pertaining to the optimum yield for herring;

(h) timeliness and accuracy of catch reporting by buyers to the extent that such timeliness or accuracy may reasonably be expected to affect proper management; and

(i) any other factors necessary for the conservation and management of the herring resource.

These considerations allow adjustment of harvest levels during the fishery and are also the basis for development of preliminary and final OY's by the Council and NMFS.

The third management measure will prevent a targeted fishery on herring from occuring on stocks immediately prior to spawning in order to allow the inshore fishery the maximum opportunity to harvest the spawning stocks.

2.5.2 Offshore food and bait fishery

i. Provisions for allocation, see sections 14.2.2.(1) and 14.2.3.(1).

ii. The FCZ will be closed to directed herring fishing from the beginning of the fishing year, April 1 to July 1, south of 60°N latitude; and to August 1, north of 60°N latitude. However, the Regional Director, in consultation with ADF&G and the Council, may open the FCZ by emergency regulation if ice conditions or other factors preclude full development of the roe fishery within state waters.

Rationale

See the rationale discussed above.

iii. All or part of the Herring Savings Area as described in Appendix 18.2 will be closed to herring and groundfish trawl fisheries by the Regional Director, in consultation with the Council if:

a. There is neither remaining DAH, remaining initial 2000 mt domestic allocation, nor remaining AIC; or

b. The amount of remaining DAH, remaining initial domestic allocation, and remaining AIC can be harvested within one reporting period.

Rationale

If it is determined that there is no remaining DAH, initial domestic offshore allocation, 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 remaining DAH, initial domestic offshore allocation, or AIC outstanding that can be taken in one reporting period, an in-season closure could be implemented by the Regional Director in order to avoid exceeding the OY between reporting periods (see In-season Adjustment of Time and Area, Section 14.5).

2.5.3 Other regulations

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

Rationale

Any herring trawl fishery in the FCZ is conducted in conjunction with both domestic and foreign groundfisheries. The restrictions on groundfishing operations have been developed to protect incidentally caught species and prevent gear conflicts. As herring fishing gear is similar to gear used for groundfish (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.

2.5.4 Statistical reporting requirements

Landings must be reported on a fish ticket as required by the State of Alaska commercial fishing regulations or on an equivalent form. Fishery data compiled for the domestic offshore herring fishery should have the following precision: catch by species, by ½ degree latitude x 1 degree longitude areas, by gear type and vessel class, and by month; effort (e.g., hours towed, number of landings, number of trips) by gear type and vessel class, and by month.

2.5.5 Permit requirements

All U.S. vessels operating in the FCZ portion of the Bering/Chukchi Sea must have on board a permit issued by the Secretary of Commerce or a State of Alaska vessel license.

2.6 Management Measures and Rationale for the Foreign Fishery

2.6.1 Existing area closures

i. Fishing for herring is not allowed within 12 miles of the baseline used to measure the Territorial Sea, except in certain waters adjacent to the western Aleutian Islands specified in the Bering Sea/Aleutians groundfish FMP.

ii. No foreign vessel may fish for herring east of 168°W longitude.

Rationale

These measures prevent conflicts with U.S. fixed gear and small, inshore fishery vessels and also prevent the catch of herring and localized inshore species important to U.S. fishermen.

iii. The Bering Sea/Chukchi Sea management unit will be closed to herring fishing by vessels of a nation for the remainder of the herring fishing year when that nation's allocation of herring OY is reached.

Rationale

This implements the requirement of the Magnuson Act that a foreign nation's fishery be terminated when the nation's allocation of TALFF for that fishery has been reached.

iv. Time/area closures specified in the implementing regulations of the Bering Sea/Aleutian Islands Groundfish Fishery Management Plan apply to herring fishermen using trawl gear in the Bering Sea/Aleutian Island area.

v. All or part of the Herring Savings Area, as described in Appendix 18.2 will be closed to herring and groundfish trawl fisheries by the Regional Director, in consultation with the Council if:

a. there is no remaining AIC or herring TALFF; or

b. the amount of remaining AIC or herring TALFF can be harvested within one reporting period.

Rationale

The purpose of this time/area closure is to minimize the incidental catch of herring by foreign groundfish trawl fisheries. 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 over harvested during one reporting period (see Section 10.3).

This closure applies to trawl gear only. Longline, pot or other gear types 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.

2.6.2 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 Fishery Management Plan and other Foreign Fishing Regulations, 50 CFR Part 611.

2.6.3 Permit requirements

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

2.6.4 Prohibited species

The retention of salmonids, Pacific halibut, Tanner crab, king crab, coral, snails, scallops, shrimp, surf clams, horsehair crab, lyre crab, or Dungeness crab, or other continental shelf fishery resources is prohibited. This prevents covert targeting on species of importance to U.S. fishermen.

2.7 In-season Adjustment of Time and Area

The Regional Director of the National Marine Fisheries Service, Alaska Region, or his designee, may issue field orders adjusting time and area restrictions.

Status of Major Atlantic and Pacific Herring Stocks

In February 1980, an Alaska Herring Symposium, funded by the Office of the Governor with support from the University of Alaska Sea Grant Office, NPFMC, ADF&G, and NMFS, was held in Anchorage. Herring biologists from Europe, the northwest Atlantic, the northwest Pacific and the northeastern Pacific coastal states were invited to present papers and participate in workshops relating to research and management of Pacific herring off Alaska, particularly in the Bering Sea. The information contained in this report is largely drawn from the Proceeding of the Alaska Herring Symposium, and whenever possible, information from more recent publications are included.

Atlantic Herring

During the Alaska Herring Symposium, management differences were noted between the Pacific herring currently falling under single country management and Atlantic herring subjected to multi-national management. The common thread through discussions of Atlantic herring management was the inability of the participating nations to respond rapidly to seriously declining stocks with an effective, coordinated program which all nations could accept.

In the Atlantic, before the crash of the herring populations, fisheries occurred on nearly all stages of the herring life cycle. Fishing began on herring as early as age 0, often for reduction to oil and meal and for use as sardines. Heavy fishing occurred on spawning herring and also on the feeding grounds. Technology increased effectiveness of the fleets, and the stocks characteristically declined during the 1960's. Scientists pointed out warning signs and recommended drastic reduction in harvest, but the multi-national management regime prevented effective action.

European Stocks

Three major geographical groups of herring occur in European waters: Atlanto-Scandian, North Sea, and Baltic Sea. Within these groups are several stocks divisible by spawning location or spawning season.

The Atlanto-Scandian herring group consists of Norwegian spring spawning herring, Icelandic spring and summer spawners, and Faroese spring spawning herring. The Norwegian spring spawners are the largest stock in this group. Harvests until the late 1940's generally ranged under 0.5 million tons (t). During the 1950's and 1960's, catches increased to over 1 million t as the fishery expanded and improved purse seining gear and acoustic equipment were acquired. The exploitation rate was high from 1950-1969, especially on young herring in coastal waters. Removals of pre-recruits was so great that the 1961 year-class was the last to contribute to the spawning stock in any quantity. After 1966, there was practically no recruitment to the adult stock and a rapid decline ensued.

Restrictions were placed on the fisheries starting in 1971 with the prohibition of reduction fisheries followed by reduced catch quotas. The 1981 report of the Atlanto-Scandian herring and capelin working group of ICES states that the stock is rebuilding and is estimated to be 400-450 thousand t with good recruitment evident. The 1980 catch is estimated to have been 20,000 t, and it is recommended to remain near the 1980 level to facilitate further rebuilding.

The other spring spawners in the Atlanto-Scandia group (Faroese and Icelandic) appear to be at very low levels and show no signs of recovery. Icelandic summer spawners are estimated to have a spawning stock size of 200,000 t, near the level observed between 1954-63, a period of high and steady recruitment. Pre-recruits appear to be very abundant and further increases in

stock size are expected in 1981 and 1982. The 1980 harvest was 53.3 thousand t with 40,000 t recommended for 1981 to allow for more rapid rebuilding.

North Sea

From 1946 to 1963, adult herring catches in the North Sea were maintained around 600,000 t. In 1963, purse seine vessels began operating in the North Sea which were more efficient in harvesting herring than the traditional trawl and drift gillnet fisheries. Total catch rose to over 1 million t in 1965 and then declined. Similar to the case of Norwegian spring spawners, a reduction fishery for juvenile herring developed starting in 1950 which reduced recruitment to the spawning stock. By 1971, stocks had been reduced to very low levels when the first management measure was taken, season closure in May and September. From 1972 to 1976 season closures, TAC's, minimum size limits, and prohibition of reduction fisheries were instituted followed by a ban on all directed herring fishing commencing in April 1977.

The stringent measures imposed resulted in a total spawning biomass increasing from a low in 1976 of about 200 thousand t to 400 thousand in 1980.

Northwest Atlantic

Five major herring groups occur in the northwest Atlantic. Three, Newfoundland, Gulf of St. Lawrence, and Nova Scotia-New Brunswick are off Canada, and two, Georges Bank and Gulf of Maine stocks, are within U.S. waters.

The catch in the northwest Atlantic from 1920 to about 1940 remained fairly constant, fluctuating between 60,000 and 100,000 t. In 1948, however, the catch increased to 242,000 t and then gradually declined to an approximate level of 180,000 t through the 1950's. During the 1960's, the catch increased

dramatically to over 900,000 t as new fisheries developed. The very important Georges Bank fishery began in 1961, the Nova Scotia adult purse seine fishery began in 1964-1965, the Gulf of St. Lawrence fishery intensified after 1965, and the Western Gulf of Maine fishery for adult herring began in 1967.

There are three adult fisheries in the Georges Bank-Gulf of Maine area and two inshore juvenile fisheries. The two juvenile fisheries occur, respectively, from Portland, Maine, to the Canadian border and from the border to St. John, New Brunswick. The adult fisheries are those on Georges Bank, the western Gulf of Maine and off southwestern Nova Scotia. All three adult herring fisheries began as autumn fisheries harvesting spawning herring of age 4 and older (herring generally greater than 25 cm total length). Gradually, the fisheries changed to using various gear types and fishing throughout the year.

The Georges Bank fishery collapsed in 1977, and catches were significantly reduced in the Gulf of Maine and Nova Scotia fisheries by 1978-1979. However, the recruitment of a strong year-class in 1980 increased reported landings in the Nova Scotia fishery to over 108 thousand t and 36,000 t in the western Gulf of Maine fishery which was the largest since 1972 and 54% greater than the 1979 catch. The 1976 year-class contributed an estimated 19,200 t to the 1980 catch in the western Gulf of Maine, the largest catch of age 4 fish in the history of this fishery.

Both the New Brunswick and Maine coastal fisheries have concentrated primarily on juvenile herring (ages 1-3) with annual catches highly dependent on recruiting year-class strength. Catches of juvenile herring off New Brunswick were relatively high during 1950-70 and subsequently declined during 1971-77; landings in 1978 and 1979 increased with recruitment of the strong 1976 year-class. The 1980 catch of 15,000 t was the lowest observed in the

New Brunswick fishery due to the very poor 1978 year-class and the scarcity of the 1977 year-class in New Brunswick waters.

Catches of juvenile herring along the Maine coast were high during 1950-63 and subsequently declined during 1964-76. Catches of 40,200 and 45,900 t in 1979 and 1980, respectively, were the largest since 1963 and were primarily due to the 1976 and 1977 year-classes. Although the 1978 year-class was poor in Maine, the 1977 year-class provided a catch of 26,500 t. Preliminary reports indicate that although the Maine fishery started later than usual in 1981 the pack of sardines was greater than average.

Catches from the Gulf of St. Lawrence stocks were low in the early 1960's primarily due to reduced abundance of adult fish as a result of a fungus disease in the late 1950's and to low effort levels. With the recruitment of the large 1958 and 1959 year-classes and the discovery of the major over-wintering area off southwest Newfoundland, catches increased dramatically from 21,000 t in 1961 to 304,000 t in 1970. With the passage of these year-classes through the fishery, catches declined, reaching a low of 43,000 t in 1974. Recruitment of these stocks has shown some improvement with slight increases in catches since then.

Fisheries in Newfoundland occurred at low levels until 1975 when the fishery expanded in response to favorable markets brought about by declines in European herring stocks. Since 1975, the catch has gradually increased up to 30,000 t.

Stocks in the northwestern Atlantic with the exception of Georges Bank appear to be in or approaching healthy levels of abundance. George's Bank remains closed to directed herring fishing. Anthony and Waring (1980) show that overfishing was the primary cause of the collapse and further proposed:

"One possible explanation for the collapse of the Georges Bank herring stock is the way overfishing occurred. Fishing was excessive during the spawning period, with spawning area after spawning area moving from east to west, successively depleted. The fisheries appeared to shift in this fashion until the catches in the westernmost spawning area on Georges Bank finally failed. The distribution of larvae also indicated the shift in larval production from east to west. By February 1978, the only larvae present appeared to come from the Nuntucket Shoals area.

In addition to the demise of spawning stocks because of fishing, the indirect effects of fishing may also have been important in the Georges Bank decline. Often, one finds that the spawning stock appears to be sufficient in size, but recruitment fails as the fishery develops. For Georges Bank, recruitment declines may have been due to the act of fishing rather than the decline of the spawning stock. Heavy fishing directly on the spawning grounds may have interfered with the spawning process. It is well known that herring are easily broken up by fishing vessels, and the number of vessels fishing the Georges Bank spawning grounds was very great in the late 1960's and early 1970's."

This observation, if true, may be relevant to the Togiak area of the Bering Sea as spawning and the fishery as progressively shifted to the western reaches of the Togiak spawning grounds.

Pacific Herring

Northwest Pacific

The Hokkaido herring fishery in Japan is one of the oldest documented herring fishery in the Pacific. Catches reached a level of about 750 thousand t around the turn of the century and then gradually decreased to about 13,000 t

in 1938. During and after World War II, catches increased to between 200-300 throusand t and declined dramatically to virtual commercial extinction since the mid-1950's. Japanese scientists suggest long-term warming of the waters around Japan and subsequent displacement of herring by sardines, however, it is also likely that heavy fishing during the post-war years hastened the decline.

Four major herring stocks occur off the Siberian coast, three within the Okhotsk Sea and one in the western Bering Sea. The stocks within the Okhotsk Sea are the Gyzhigynsk-Kamchatka, the Okhotsk and the Sakhalin portion of the Sakhalin-Hokkaido stock.

Very little recent information is available on the status of USSR herring stocks in published literature. The most comprehensive discussion of Soviet stocks is by Ayushin (1963) which addresses these stocks through 1961. In the early 1960's, only a small spawning stock remained off Sakhalin of the Sakhalin-Hokkaido stock. The Okhotsk stock supported catches between 10-60 thousand t during the 1950's and 1960's and the Gyzhigynsk-Kamchatka supported catches of 5-15 thousand t during the same period.

The Korf-Karagynsk stock in the western Bering was lightly fished until 1960 (Kachina 1967). In 1960, catch increased to 128 thousand t from 46.3 thousand t in 1958 and 75.8 thousand t in 1959. In 1961, catch peaked at 195.9 thousand t or 47.7% of the estimated exploitable biomass. Catches and exploitation remained high in the next few years followed by a rapid decline. In 1969, the fishery was terminated through bilateral agreement.

The current status of Soviet stocks is not known, although Soviet scientists have stated at US-USSR bilateral meetings that stocks are recovering from past overfishing. An additional sign of recovery was the exporting of

50 t of herring roe to Japan in 1981. This is the first known sale of herring products by the USSR.

Northeastern Pacific

Herring stocks are distributed along the west coast of North America from California to the Chukchi Sea. The greatest abundance of herring is from British Columbia into the Bering Sea. Stocks in California, Oregon, and Washington are small in relationship to those to the north. The following discription of fisheries and status of stocks was taken from the PFMC's draft herring FMP.

The California herring fisheries since 1916 exhibit three major cycles. Landings reached 3,600 t in 1918 during a reduction fishery which extended from 1916 to 1919. Herring were harvested as a replacement for the declining sardine fishery from 1948 to 1953 with a peak of 4,307 t in 1952. The current roe fishery began in 1973; landings totalled 6,447 t in 1980, with 5,832 t taken in San Francisco Bay.

Population estimates of Pacific herring stocks in California indicate a 1980 spawning population in excess of 54,000 t, a catch of 6,000 t, and a total of 60,000 t. The San Francisco and Tomales Bay spawning escapements are estimated to be at least 47,000 t and 5,400 t, respectively; other spawning areas support relatively minor stocks. Catch quotas have been increased gradually since 1976 and crurrently total about 12% of the resource available. The age structure of the catch has fluctuated from year to year but no year-class failures have occurred and older age classes are still represented in the fishery. Harvesting at current levels is conservative and stocks appear in excellent condition.

Oregon's landings since 1928 have been principally for bait and do not show any definite trends. Annual catches were highly variable with peak landings approximately 45 t per year.

Washington herring landings since 1935 show two main periods of catch. The first period through 1956 was characterized by generally low landings ranging from approximately 50 t to 500 t. Catches were used primarily for halibut and crab bait through about 1950, with a shift toward bait for recreational use during the early 1950's. Landings jumped dramatically during the second period, regularly exceeding 2,000 t when the general purpose fishery began in 1957. The general purpose fishery, originally for meal and oil, but more recently as bait for line and pot fisheries dominated the landings until about 1970. General purpose landings began declining after 1970, but this reduced production was compensated for by the sac-roe fishery which began in 1973.

The Strait of Georgia (northern Puget Sound) herring population which supports the Washington State sac-roe fishery has shown a decline since surveys began in 1973. The estimated population of 14,500 t in 1973 and 14,000 t in 1974 dropped to approximately 9,000 t in 1979 and 1980. Age composition data show apparently strong recruitment prior to and at the beginning of the fishery. The 1969 and 1968 year-classes dominated the fishery as four and five year olds beginning in 1973. This period was followed by several years with poor to moderate recruitment. Since 1974, the 1975 year-class has shown strength, recruiting into the fishery as 3 year olds in 1978 and the 1978 year-class recruiting as 2 year olds in 1980.

British Columbia

The principal use of British Columbia herring from the early 1900's until the late 1920's was for export to the Oriental dry salted market.

Catches increased to 85,000 t in 1928 and then decreased as the market declined (Hourston, 1980). The development of a reduction fishery led to increased landings from 1935 to the mid-1960's when as high as 250,000 t were landed annually. By 1966, catches declined rapidly as the fishery collapsed under heavy exploitation. The reduction fishery was closed in 1968. Very little fishing occurred during the next few years and stocks began to increase (Hourston, 1980). A roe fishery started in 1972; the catch peaked to the 80,000 t level in 1976-78 and then decreased to 10,000-30,000 t in 1980 and 1981 under a revision of management policy.

Canadian scientists estimate that present abundance corresponds closely to the peak abundance estimated for the reduction fishery of southern Vancouver Island during the early 1960's. The western Vancouver Island stock has been estimated at about 108,000 t and the eastern Vancouver Island stock at about 159,000 t (W.E. Johnson, pers. comm. to PFMC Herring PDT). Total estimated spawning biomass for all Canadian stocks in 1979 was estimated to be over 600 thousand t. Druing the late 1960's, the Vancouver Island stocks declined to low levels due to overfishing during a period of poor recruitment. Following a four-year ban on reduction fishing from 1968 through 1971, these stocks made a full recovery. The level of decline was clearly not large enough to seriously affect recruitment. Canada reinstituted intense fishing in 1972 with the beginning of the sac-roe fishery.

This review of herring fisheries and stock status indicates that several factors have been responsible for declines in herring abundance. However, overfishing has been the major factor in most cases. The general situation has been that catches rose rapidly over a few years and then as rapidly declined. In most cases, scientists either overestimated stock size or under estimated fishing mortality. Management bodies were also

at fault for not taking effective action when it became evident that stocks were declining.

Other factors that lead to overfishing in addition to maintaining effort above the productive capacity of the stock have been the failure to recognize reduced levels of recruitment through over-optimistic assumptions about the level of recruitment and the reduction of recruitment to the spawning population by extensive fishing on pre-recruit juveniles.

The resiliency of herring stocks appears to be variable. In some cases, stocks have increased to former levels of abundance rapidly following fishery curtailment, while others have remained at a depressed state for long periods. Many explanations and hypotheses for stock resurgence have been put forth, and most tend towards the recognition that environmental factors control year-class strength, and if conditions are favorable, rebuilding can be rapid. However, if spawning stocks are reduced below some threshold level, the reproductive rate may be so low that even in the best of circumstances a long time period is required to accumulate an adequate spawning stock.

References

Anthony, V.C., G.T. Waring and M.L. Fogarty. 1981. Status of herring stocks of the Gulf of Maine area for 1981. NMFS, Northeast Fish. Cent., Lab. Ref. Doc. 81-20.

Ayushin, B.N. 1963. Abundance dynamics of herring populations in the seas of the Far East, and the reasons for the introduction of fishery regulations. In B.B. Parrish (ed.) Contributions to herring symposium 1961. Cons. Perm. Int. pour Explor. Mer., Rapp. et Proc.-Verb, 154:262-269.

Cons. Perm. Int. pour Explor. Mer. 1981. Atlanto-Scandian herring and capelin working group report, part I. C.M. 1981/H:11, 26 p.

Kachina, T.F. Methods of calculating the abundance of fish in the commercial resources of the Korf-Karaga herring stock. In T.F. Dement'eva and K.A. Zemskaya (eds.) Methods of assessing fish resources and forecasting catches. VNIRO Proceedings 62:116-123.

Melteff, B.R. and V.G. Wespestad. 1980. Proceedings of the Alaska Herring Symposium, Feb. 1980. Alaska Sea Grant Rept. 80-4. 279 p.

Pacific Fishery Management Concil. 1981. Draft Pacific herring plan. 526 S.W. Mill St. Portland, OR. 126 p.

Saville, A. 1980. The assessment and management of pelagic fish stocks. Cons. Perm. Int. pour Explor. Mer., Rapp. et. Proc.-Verb, 177.

STATE OF ALASKA

JAY S. HAMMOND,

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

P.O. BOX 3-2000
JUNEAU, ALASKA 99802
PHONE:

ACTION	ROUTE TO	INITIAL
	Exec. Dir.	3
	Deputy Dir.	
	DEC 28 1981	

December 22, 1981

Mr. Clement V. Tillion
Chairman
North Pacific Fishery
Management Council
P.O. Box 3136 DT
Anchorage, AK 99510

Dear Clem:

The State of Alaska has serious concerns with the Bering-Chukchi Sea Herring Fishery Management Plan (FMP), and it should not be submitted in its present form to the Secretary of Commerce.

An offshore fishery on mixed stocks is not consistent with the State goal of full utilization of the resource through inshore fisheries managed on a discrete stock basis.

The existing inshore fishery is fully capable of harvesting the biological surplus in the coastal fishery. The State believes that the manner in which the draft FMP deals with the definition of optimum yield (OY) on a strictly annual basis, and the resultant potential surplus for offshore TALFF or joint ventures is inappropriate. The 8-9 year life cycle of this species lends itself to multi-year management strategies and the underharvesting of a single year surplus due to environmental factors does not justify an offshore fishery that cannot be targeted accurately. The continuity and stability of inshore management more than offsets minor variations in annual OY determinations and harvests, and best provides for the conservation of the resource.

In view of the State's existing management program and a fishery fully utilizing this resource, the present FMP is a duplication of effort and unnecessary expense for both State and Federal government. If the Council, after consideration of state concerns, still desires to submit an FMP, we recommend that it be restructured as a contingency plan to serve in the event that a long term, multi-year underharvest occurs in the coastal fishery (north of 55°47'N).

We urge the Council to endorse the State position and would be pleased to discuss the topic at the joint Board-Council meeting in January.

Sincerely,

Ronald O. Skoog
Commissioner
Alaska Dept. of Fish and Game

for Nick Szabo
Chairman
Alaska Board of Fisheries

cc: Governor Hammond

AGENDA E-2(f)
January 1982

A. KEMP FISHERIES, INC.
3434 16th Avenue West • Seattle, Washington 98119
206/285-0885

December 23, 1981

DEC 28 1981

Mr. Robert McVay
Regional Director
Department of Commerce
Box 1668
Juneau, Alaska 99802

Dear Mr. McVay:

After listening to the Alaska State Board of Fisheries comments on the North Pacific herring plan, I felt that some comment from the processors was in order.

Kemp Fisheries owns a large freezer processing vessel. This vessel, the "Bering Trader", is presently being equiped with the most modern and efficient freezing equipment available. When completed she will have the capability of freezing a finished product of some 240,000 pounds per day.

We plan to participate in the sac roe herring fisheries during the coming year along with salmon. After the salmon season we are interested in any of the off-shore fisheries that can maximize our production.

There are a number of ex crab fishermen that have invested $750,000.00 on deep water trawl gear. These American fishermen do not feel that the herring of the North Pacific should be reserved for the Japanese sac roe market. We as processors certainly concur.

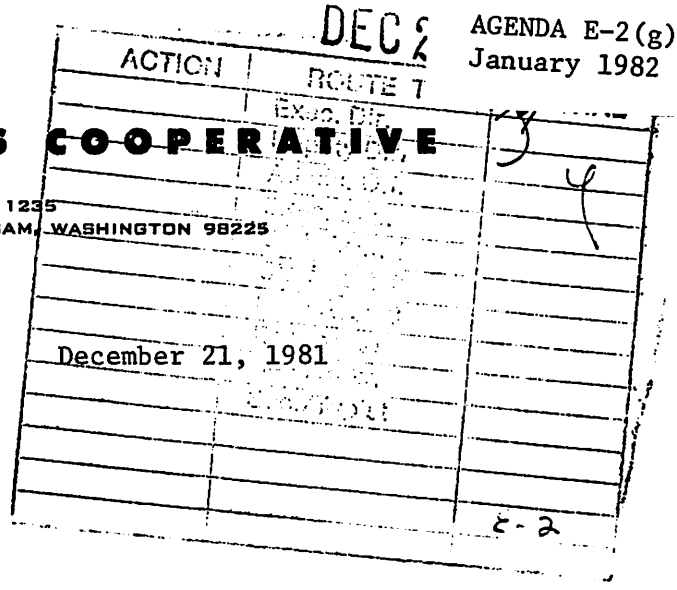
Kemp Fisheries would like to go on record as favoring a herring management plan that provides the widest use of the resource which would include an off-shore food herring market.

Very Truly Yours,

J. Jacobsen, Manager
Alaska Operations

JJ:smg

cc: Mr. Jim Branson
Executive Director
North Pacific Fisheries Council
Box 3136 DT
Anchorage, AK 99510



HALIBUT PRODUCERS COOPERATIVE

P.O. BOX 1235
BELLINGHAM, WASHINGTON 98225

TELEPHONE 733-0120
(AREA CODE 206)

Clem Tillion, Chairman
North Pacific Fishery Management Council
P.O. Box 3136 DT
Anchorage, AK 99510

Dear Mr. Tillion:

I would like to comment on the Council's report on offshore herring as recorded in the newsletter of December 14, 1981. According to N.M.F.S. Regional Director Bob McVey, N.M.F.S. has made a commitment to allow an offshore herring fishery if a surplus exists under the dictates of an F.M.P. or similarly implemented P.M.P.

I urge you to examine this proposal carefully. This could substantially reduce the income of inshore fishermen whether they are food herring or roe herring fishermen. As you must know, at the present time there is an excess of Kazunoko in Japanese inventory. The price for San Francisco gillnet roe herring has dropped dramatically from last year. Last year at this time that product was valued at $1800.00 per short ton F.O.B. San Francisco as compared to $1100.00 per short ton for this year. Seine caught is valued even lower due to the smaller carcass. In fact, the seine price still is not firm for San Francisco seine production, and will not be until Canadian East Coast food herring prices are settled with the Japanese. If we introduce joint venture offshore herring into the market both food and roe herring will be affected with the resultant drop in value to the inshore fisherman.

There should be consideration given also to the value herring has as a food source to larger finfish. It is my belief that no offshore herring should be taken by joint venture or foreign allocation.

Sincerely,

HALIBUT PRODUCERS COOPERATIVE

Robert A. Worley
Production Manager

RAW:bb