

M E M O R A N D U M

TO: Council, SSC, and AP Members
FROM: Jim H. Branson
Executive Director
DATE: March 18, 1982
SUBJECT: Herring FMP

ACTION REQUIRED

No action. Information only.

BACKGROUND

The Bering/Chukchi Sea Herring FMP was re-submitted to the Secretary for approval and implementation on March 17, 1982. Copies will be available as soon as printing has been completed.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

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March 18, 1982

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

Dear Clem:

Chairman of the Board of Fisheries, Nick Szabo, and I in our December 22, 1981 letter to you expressed Alaska's dissatisfaction with the Council's draft Bering/Chukchi Sea Herring Fishery Management Plan. Following the January vote of the Council to resubmit the herring FMP, I wrote Secretary Baldrige on February 22, 1982 outlining the State's concern with the plan. The purpose of this letter and enclosed document is to further elaborate the State's position. It is my intent to bring this issue before the Council for reconsideration.

The State's position is that a Council herring FMP is both undesirable and unnecessary. This conclusion is based upon the following facts:

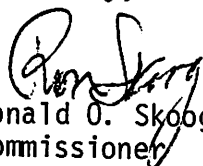
- * The inshore domestic herring industry has the ability and intent to fully utilize the available herring resource. The annual capacity exceeds 35,000 mt which is much higher than current expected harvest levels.
- * The plan inappropriately deals with optimum yield on an annual basis by automatically allocating any "surplus" to the offshore fishery. Available data indicate that 70 to 86 percent of the fish not harvested in the roe fishery will return the following year to bolster the spawning biomass and the fishery. "Underharvesting" in any particular year due to stock assessment, environmental, or other problems does not justify an offshore fishery that can neither target accurately on specific age classes nor specific stocks.
- * The FMP provides for a directed foreign allocation under certain circumstances. This is inappropriate. The Council, like it has done for Tanner crab and salmon, should declare that there is no surplus for a directed foreign harvest because the domestic industry has the capacity and intent to utilize the entire OY.

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- * Until sufficient research data become available to evaluate the risk of fishing mixed stocks of herring offshore, the State asserts that discrete stock management is the only approach which can be justified under the present circumstances. The Council's plan presumes that fish not taken inshore can be taken in the offshore fishery with an acceptable risk of overharvest. If such risks are to be justified, then they should be taken in the inshore fishery where the results can be monitored and evaluated.
- * The herring fishery should not raise the question of discrimination. The Council is not obliged by the FCMA to encourage all domestic fisheries. Some fisheries may take precedent over others.
- * The State is providing sufficient conservation and management for the Bering/Chukchi Sea herring resource through an extensive stock assessment, management, and enforcement system. Federal regulation of the domestic industry for this fishery would be duplicative and unnecessary. The Council's Bering Sea/Aleutian Island Groundfish FMP can be modified to mitigate the incidental harvest of herring in the domestic and foreign trawl fisheries directed at other species.

I encourage the Council to carefully study the position paper and to concur with the State's preferred option to withdraw the FMP.

Sincerely,


Ronald O. Skoog
Commissioner

Enclosure

STATE OF ALASKA

Position Paper on the
North Pacific Fishery Management Council's
Bering/Chukchi Sea Herring FMP

March 18, 1982

The State of Alaska has serious concerns with the North Pacific Fishery Management Council's Bering/Chukchi Sea Herring Fishery Management Plan (FMP) and has taken the position that a separate FMP for herring is undesirable and unnecessary. Sufficient conservation and management for the fishery conservation zone herring resource can adequately be addressed by treating herring as an incidental species in the Bering Sea/Aleutian Islands Groundfish FMP.

The State strenuously objects to provisions of the FMP which, under certain circumstances, automatically permit a domestic and/or foreign high seas herring fishery. Such an offshore fishery on mixed stocks is not consistent with the State's goal of full utilization of the herring resource through inshore fisheries managed on a discrete stock basis.

The inshore domestic industry (both harvesting and processing) has demonstrated the desire and the ability to fully utilize any identified surplus of herring. Barring unforeseen complications, there are no herring available for directed offshore harvests. Further, the State has the ability and the intent to manage the domestic herring fishery inshore where stocks are more segregated. Implementation of the Bering/Chukchi FMP establishes unnecessary duplication of regulations which clearly contradicts Reagan Administration's goals.

The following discussion explains Alaska's position.

Full Utilization Inshore

Bering Sea coastal herring fisheries are expanding rapidly. During the past four years the capacity to harvest and process herring in fisheries from Togiak to Norton Sound has increased from 10,000 mt to over 35,000 mt in 1981. The 1982 harvesting and processing capacity is expected to be similar to that in 1981. This capacity greatly exceeds current expected harvest levels and is the result of substantial economic investment and risk by over 30 domestic processing companies and several thousand fishermen to acquire and upgrade processing, tendering, and fishing capacity and efficiency. These efforts by the inshore industry should not be hampered by providing for an offshore fishery as outlined in the FMP.

Maximum utilization of the herring resource within coastal fisheries is viewed by the State as a major means of improving the poor economic conditions existing in most Bering Sea communities. The socioeconomic profile of these communities is summarized in the report by Langdon (1979). Cash poor coastal fishermen rely heavily on salmon and herring for their annual income. Given current marketing conditions in the Alaska salmon industry, the coastal herring fishery may contribute more to the fishermen's gross income than in previous years. Further, many

citizens from other communities elsewhere in the State and Nation also directly participate in this fishery. The Commercial Fisheries Entry Commission reports that a total of 2,167 resident and 713 non-resident permits were issued for the 1981 Bering/Chukchi Sea herring fishery.

Unique problems with stock assessment and bad weather during the initial years impeded the progress of this coastal fishery. Improvements in dealing with these problems are occurring and expected to expand as managers and industry gain additional experience. Similar to the expansion of the coastal herring fishery, the Department's herring management and research programs have expanded rapidly in recent years. The Department's annual budget devoted to Bering Sea herring activities currently is one-half million dollars. Additionally, the Department of Public Safety has a substantial fisheries enforcement program in Western Alaska.

The State believes that the draft FMP is inappropriate by addressing optimum yield on a strictly annual basis and by allocating any surplus to offshore harvest. The fairly long life cycle and relatively low annual natural mortality rates of herring lend well to management strategies which harvest only a portion of each age class during the several years a cohort is exposed to the fishery. The majority of the inshore fishery occurs on herring ages 4 through 8 (Fried et al 1981). The annual natural mortality has been calculated to vary from 14 percent for age 4 herring to 30 percent for 8-year old herring (Wespestad 1982). Only when herring are larvae or over age 11 does annual natural mortality exceed 50 percent. "Under-harvesting" in any particular year due to stock assessment problems and/or environmental factors does not justify an offshore fishery that can neither target accurately on specific age classes nor specific stocks.

The available data clearly demonstrate that the majority of any underutilized fish inshore do in fact return the following year to bolster the spawning biomass and the fishery. Unless a pattern of continual underharvesting occurs inshore the Council should conclude through its optimum yield determination process (i.e., a socioeconomic determination to work towards a goal of full utilization inshore) that the resource will be allocated to the inshore fishery.

The Draft Regulatory Impact and Flexibility Analysis states (page 20),

The FMP would tend to penalize inshore commercial fisheries for poor performance in any single year, whether due to market conditions or weather, if the herring OY exceeded the amount taken by the inshore fisheries. Under the FMP, the remaining OY would have to be allocated to competing offshore fisheries for the remainder of the fishing year, rather than being reserved for possible inshore harvest during succeeding years. This approach is believed by the Council to be justified by the policy favoring encouragement of all domestic fisheries, including those offshore, and by the Magnuson Act's requirements of nondiscrimination and assessment of DAH on an 'annual basis'. (emphasis added)

The last sentence of the above statement warrants two comments. First, is it really the Council's policy to encourage all domestic fisheries? The State's interpretation is that the Magnuson Act neither encourages nor requires the Council to develop all domestic fisheries, particularly not those which compete with others that are heavily capitalized and have the intent to utilize the entire OY. Some fisheries may take precedent over others. For example, the Council does not encourage a Kodiak troll fishery.

Second, the herring issue is not a question of discrimination and the Federal government should not succumb to such allegations. The Bering/Chukchi coastal herring fishery is an open entry fishery with fully one-third of the license holders being residents of states other than Alaska.

No Directed Foreign Fishery

The FMP explicitly provides for a possible allocation of herring to foreigners. This is wrong. The Council should instead prohibit any consideration of a directed foreign harvest, just as the Council has done for Tanner crab. The domestic industry has the capability to fully utilize the herring resources of the Bering Sea.

Complete removal of a directed foreign herring fishery is further justified by Congressman Breaux's Oversight Report on the Magnuson Act (September 1, 1981):

Utilization of the optimum yield determination as a method of enhancing U.S. marketing opportunities requires a clarification of National Standard No. 1. That standard, contained in section 301(a) (1) provides that:

Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery.

This National Standard has been interpreted to mean that fishery management plans must provide for the full utilization of the optimum yield. The result of this view is that any part of the optimum yield which will not be used by U.S. fishermen must be made available to foreign fleets. This is not so. The phrase "achieving***the optimum yield" means achieving that yield by U.S. fishermen. The fact that an optimum yield is established at a higher level than domestic harvesting capacity does not mean that the surplus fish must be made available for foreign harvest. There may be instances when it is appropriate to hold part of the optimum yield in reserve instead of allocating it to foreign fishermen.....(T)he precise extent of U.S. harvesting capacity may not be determinable and it is consistent with the priority access purpose of the MFCMA to hold fish for U.S. fishermen until their harvesting capacity is determined. (emphasis added)

In light of the demonstrated harvesting potential of the inshore fishery and the clarification by the authors of the Magnuson Act, it is inappropriate for the Council's herring plan to provide a system which would automatically allocate a "surplus" to foreign harvest. The incidental take of herring in the foreign groundfish fishery can be adequately handled by the Bering Sea/Aleutian Island Groundfish FMP.

Discrete Stock Management

A critical difference between the Bering Sea herring management strategy used by the State and that proposed by the Council involves management of segregated stocks versus mixed stocks. Similar to the manner used in the management of its

salmon resources, Alaska manages the coastal herring fisheries on a segregated or individual spawning stock basis to the greatest extent possible. Management strategies are directed toward achieving optimum yields for stocks in several fishing districts based on the specific biological and socioeconomic considerations associated with each stock.

The formula used in the Herring FMP to determine optimum yield is based upon applying a uniform exploitation rate to the cumulative "end-of-season" biomass estimates for all stocks. This method of calculating optimum yield, which in part ignores the different conservation and management strategies needed for specific stocks, could result in a harvest allocation to an offshore fishery on mixed stocks even when some stocks already may have sustained full utilization in an earlier coastal fishery.

Many of the scientific investigations of yields in mixed stocks fisheries have focused on the Pacific salmon fisheries. Both Ricker (1958) and Paulik et al (1966) explicitly state that yield is decreased with mixed stock harvests compared to harvests of the same stocks when segregated prior to spawning. Morishima (1980) writes:

The use of a common (assumed) exploitation rate upon individual stocks which comprise the mixed-stock resource base, can be likened to the statistical concept of expectation value. If the same combination of individual stocks could be subjected to an identical fishery year after year, the impact of a mixed stock fishery upon each stock would approach the expected value. However, for any given year, the operation of a mixed-stock fishery is likely to produce results which differ substantially from the long-term expectation. The inability to precisely predict or control the impacts of mixed-stock fisheries upon individual stocks results in a substantial risk of over/under-fishing. (emphasis added)

The FMP (p.14) acknowledges that "(t)he results of mixed stock fishing are not entirely predictable at this time, as there are few data available". During the Alaska Herring Symposium participants concluded (Proceedings, February 1980, p. 266) "that in a mixed stock fishery, the percentage removal is related to the percentage of mixing of the stocks and that if management objectives are for a general level of exploitation, then underfishing of the smaller stocks is as likely as overfishing."

These comments on the risks of overharvesting stock components combined with the absence of data on stock distributions offshore outweigh arguments for the development of an offshore fishery that could impact stocks of fish which are fully exploited inshore. It is inexcusable to expect that an offshore fishery will harvest only those fish which are "underharvested" in the inshore fishery without risks to other stocks. If the risks to other stocks are judged to be minimal, then additional harvest should be allowed inshore where the impacts of such an action can be evaluated, not offshore where the consequences are unknown.

Information on high seas herring population abundance, structure, and behavior are critical to evaluating the risks of fishing mixed stocks of herring. The State has for the past two years submitted research proposals to the Council

to perform stock separation analysis for Bering Sea herring. We have requested that NMFS perform high seas stock assessment on herring. Neither request has resulted in new data. This information cannot be collected through a commercial "test fishery" as some have suggested. Other than harvest ticket information and possibly logbooks (which are not geared to providing the information in need) it is highly questionable if data meaningful to the most significant questions would be gathered from a "test fishery."

Alternatives To Proposed FMP

A substantial commitment has been made to develop the draft FMP. In fact, the State was a major contributor when the plan was written in 1978 and 1979. However, because much progress and numerous changes have occurred in both the fishery and the Council/Federal system since enactment of MFCMA, the FMP in its current form is no longer necessary.

Examples of how "times have changed" since 1977 include:

- * The inshore domestic industry now has the capability to fully utilize the herring resource;
- * The Department of Fish and Game has improved its stock-by-stock management capabilities and is committed to further enhancement of management techniques;
- * A FMP is no longer required for each fishery (see Draft Guidelines for National Standards and Breaux's Oversight Report, September 1, 1981);
- * The State and the Council are setting precedent and recognizing increased efficiency and effectiveness by clearly defining responsibilities and dividing roles (e.g., Joint Statement of Principles and King Crab FMP);
- * Foreign nations can be excluded from fisheries for the purpose of expanding markets (see Breaux's Oversight Report, September 1, 1981);
- * The Reagan Administration is clearly oriented toward economizing Federal regulatory action and increasing the role of State governments; and
- * FMPs and optimum yields no longer need to be as structured and inflexible.

These facts illustrate that the environment for FMP development has changed and must be considered in the Council's planning process. Several alternatives to the current draft herring FMP should be considered.

Option 1

The environment described above and the previous discussions in this paper dealing with the State's interest in supporting the inshore industry and discrete stock management conclude that a FMP for herring is undesirable and unnecessary. The logical action for the Council is to withdraw the FMP from Secretarial review. This is the State's preferred option.

This action will require an amendment to the Bering Sea/Aleutians Island Groundfish FMP in order to control incidental harvests of herring in domestic and foreign trawl fisheries directed at other species. Such an amendment puts herring in its logical setting for Council management.

This option does not, of course, preclude the Council from future actions with herring if the need arises.

The efforts of the Council, the State and the public in developing the draft should not be considered "wasted". The planning system has matured and the draft was part of this progression. Further, the Council arena has contributed significantly to the enhancement of the inshore fishery. It is presumed that even without the formal FMP the Council through its meetings, SSC, AP, and research will continue to contribute to the effective utilization of the Bering Sea herring resource.

Option 2

As another option, the current version of the FMP could be modified to serve only as a contingency plan to be held in abeyance for several fishing seasons in order to provide a reasonable opportunity for the developing inshore fishery to fully utilize the OY. If the fishery failed to utilize the resource after several years then the FMP could be restructured to allow an offshore fishery if it can be demonstrated that such a fishery on mixed stocks would not harm the discrete spawning stocks.

This option is much less desirable because it requires the administrative action of submitting a formal plan. The cumbersome FMP process is not a requisite for the Council to review the performance of the inshore industry and offshore research. If the need truly arises for a separate Council plan for herring then one could be prepared.

This option also requires an amendment to the Groundfish FMP in order to regulate incidental harvests of herring offshore.

Option 3

The FMP could be rewritten to provide for:

- a) No foreign fishing because domestic capacity clearly exists; and
- b) a flexible decision making process that would provide for cost/benefit analysis before any allocation was made offshore. The automatic allocation process currently in the FMP should be considered totally unacceptable, particularly to the NPFMC which has been so instrumental in convincing NOAA/NMFS that flexibility is mandatory for effective resource management off Alaska.

This option is not desirable to the State because it still represents an unnecessary FMP. The State does not envision benefits at this time to an offshore domestic fishery. Herring belong in the Groundfish FMP as an incidental species.

Option 4

Status quo. If the Council chooses to stay with its draft and the Secretary approves the FMP then NMFS will very likely have some form of directed herring fishery to manage offshore during the next few years.

The consequences of the FMP are numerous. Consider, for example, a year when a storm prevents full utilization inshore. The State contends that the fish should be carried over to the next year. The FMP however allocates the resource offshore. What if the storm caused poor spawning? All the more reason to consider a carry-over but that would necessitate a FMP amendment and that process is unworkably slow.

LITERATURE CITED

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