MEMORANDUM

TO: Council, AP, and SSC Members

FROM: Clarence G. Pautzke
Executive Director

DATE: April 13, 1993

SUBJECT: Management of the Scallop Fishery

ACTION REQUIRED

(a) Review State and Board actions on scallop management.

(b) Preliminary review of draft Council scallop management measures and alternatives.

BACKGROUND

In January, the Council determined that the scallop fishery met the national guidelines for possible development of a federal fishery management plan, especially as it may help protect the fishery from overcapitalization. The Council was presented with information indicating the stocks of weathervane scallops were fully exploited and any increase in effort could be detrimental. A control date of January 20, 1993 was also set to notice the industry that a moratorium for this fishery may be implemented. This control date meant that fishermen and/or vessels not participating in the fishery by that date may not be guaranteed future access to the fishery if access is limited.

(a) State Management

ADF&G adopted several interim management measures for the scallop fishery in February 1993, including: (1) area specific catch limits, allocated seasonally; (2) restricting scallop dredges to a maximum width of 15 feet, and (3) a limit of two dredges fished at a time. These measures were adopted as emergency regulations under ADF&G's "high impact emerging fishery" policy, and will be reviewed, along with a possible moratorium, at the Board of Fisheries spring 1994 meeting (Item C-4(a)). Regulations that require a maximum crew size of 12, and that scallops be shucked only by hand were approved at the Board's March 1993 meeting.

(b) Preliminary Council Management Plan

In January the Council requested staff to begin developing a management plan for preliminary review at the April meeting. Dave Witherell has done so, with help from Gordon Kruse. An Executive Summary is provided with the plan under item C-4(b). If the Council wishes, we can further polish the plan for one more review in June before going to public review during the summer.

STATE OF ALASKA

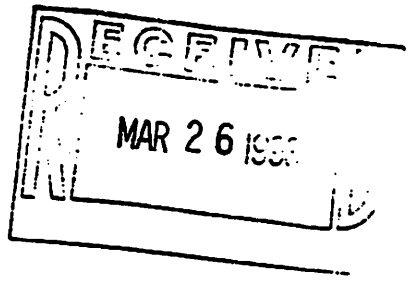
DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

WALTER J. HICKEL, GOVERNOR

P.O. BOX 3-2000
JUNEAU, ALASKA 99802-2000
PHONE: (907) 465-4100

March 24, 1993



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

Dear Clarence:

In response to your letter of January 27 regarding the council's intent to develop a federal scallop fishery management plan (FMP), I wish to make the council aware of further developments in the state managed scallop fishery. Further, I wish to identify Alaska Department of Fish and Game personnel who will participate in the development of an FMP.

On February 19, I approved the implementation of an interim management plan for commercial scallop fisheries in Alaska. This plan is essentially what my staff presented to the council at their January meeting. You may recall the plan establishes eight registration areas, defines legal gear, and sets annual harvest limits for each traditional fishing area with associated season dates. Approximately half of the harvest limit is to be reserved for the period after July 1, when an industry funded observer program is to be implemented.

In addition, I am in the process of determining if the weathervane scallop fishery is a high impact and emerging fishery. It is likely that I will request the Alaska Board of Fisheries, in March 1994, to review and adopt a final scallop management plan and consider a moratorium on new entrants into the fishery. This latter consideration may negate the need for council action.

Should the council wish to continue development of a scallop FMP while awaiting board action, I will appoint Earl Krygier, the extended jurisdiction coordinator, and Dr. Gordon Kruse, our marine fishery scientist, to aid the council in their process.

Thank you for your consideration of this new information on the scallop fisheries.

Sincerely,

Carl L. Rosier
Commissioner

State fish managers put limits on scallop harvests

By SUZANNE HANCOCK
Staff Writer

The Alaska Department of Fish and Game set new limits aimed at slowing down Alaska's burgeoning scallop industry.

Kodiak, which previously had no limit, now has a 400,000 pounds of shucked meat cap for the 1993 season, which began in January.

Last year the total catch for the Kodiak scallop fishery was 384,000 pounds.

"The industry has been in existence for more than 20 years now with little regulation," said Bob Clasby, acting director of the Division of Commercial Fisheries.

"Given recent dramatic increases in harvest, we'd probably be courting disaster if we didn't implement new catch and gear limits."

The plan will remain in effect until the Alaska Board of Fisheries adopts a long-term plan and associated regulations. The board is not scheduled to consider scallop management until spring 1994.

Mark and Teressa Kandianis, owners of the F/V Provider, which only fishes scallops, and the F/V Alliance, a groundfish boat, have been working with both the state and the North Pacific Fishery Management Council on limiting harvests.

Teressa Kandianis said they were happy with some aspects of the state's plan, but not with others.

As more scallop fishing occurs in federal waters, the NPFMC set a moratorium control date at its Jan. 20 meeting to slow down that fishery.

Kandianis said they had attempted to have the Alaska Board of Fisheries also set a moratorium to stop the effort in the scallop fishery. The state did not want to consider a moratorium, but now Kandianis says they "know we aren't crying wolf."

In the meantime, she felt they had no choice but to support the harvest limits even though it would hurt them in the short term.

Eighty percent of the Provider's yearly product is taken in Yakutat. The catch limit for that area is 250,000 pounds and it has been taken for this year, she said.

"Because of the increased efficiency we had to support the state's effort to change how the fishery is managed," she said.

Al Spalinger, Kodiak area shellfish biologist, said two vessels are currently registered in the Kodiak area for the scallop fishery. He thought vessel registration would increase to 5 or 6, which is how many fished last year.

"Industry prompted this action and thought it was necessary," Spalinger said.

"If it can help in the reduction of the harvest of small scallops within all harvest areas around the state it will be helpful."

Scallops are slow growing and become sexually mature at age 4 to 5.

In the early 1970s, the average age of scallops harvested was 7- to 8-year-olds.

"We have no age information now, but I expect the average age harvested is 4- to 5-years-old," he said.

Catch limits for other areas are Dutch Harbor 170,000 pounds, Prince William Sound 50,000 pounds, and the Kamishak District of Cook Inlet 20,000 pounds.

The plan also limits scallop dredges to a maximum width of 15 feet and restricts vessels to operating no more than two dredges at a time.

Another important aspect of the plan requires vessels carry industry-funded observers to manage the catches. This will not be implemented until July, according to Clasby.

"Over the next several months, department officials will be working closely with members of the industry to iron out details of an observer program," Clasby said.

"This will help us keep close tabs on the health of the resource and the incidental catch of other species by scallop vessels."

Weathervane scallops were first harvested commercially by a few vessels in 1967.

Within a year, a major fishery developed on the virgin stocks. Statewide, 19 vessels harvested 1.7 million pounds of shucked meat in 1968. A year later 1.9 million pounds were taken.

Between 1970 and 1989, catches fell to much lower levels, averaging 587,000 pounds per year.

In addition, the average age of scallops harvested decreased significantly, indicating that the older segment of the population had been fished out.

Catches in recent years have risen again, leading fishery managers to take action before scallop beds become depleted and harvests plummet once again.

"What we're trying to do," Clasby said, "is to conserve the resource and gather the information we'll need to manage responsibly without costing the industry too much or imposing unnecessary restrictions. The interim plan accomplishes these objectives."

AGENDA C-4(a)
APRIL 1993
Supplemental

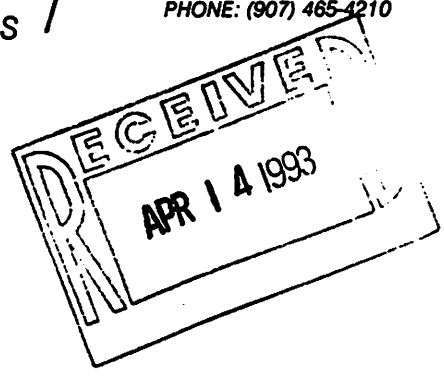
STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

P.O. BOX 3-2000
JUNEAU, ALASKA 99802-2000
PHONE: (907) 465-4210



April 9, 1993

Mr. David Witherell
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK 99510

Dear David:

To date, neither Earl nor I have had the opportunity to review your draft Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for the Proposed Federal Management of the Alaskan Scallop Fishery. Unfortunately, both he and I will be travelling for most of the rest of April, so it will be May before we have a chance to review it in detail.

In lieu of a thorough review at this time, I would like to offer a couple of very general comments. Foremost, it may be appropriate to rethink this plan to determine whether a federal plan is really necessary. Recall that much of the impetus for a federal plan was a perceived need to limit fishery participation because of fears about large numbers of potential new entrants. Despite earlier trepidation, data available to us suggest that these fears simply have not been realized. Further, we have implemented several new management measures that may curtail fishery interest among potential new participants in the future. For example, annual harvest limits constrain the catch within each traditional harvest area. Although this measure was implemented to meet conservation objectives, it will restrain the number of fishery participants for obvious economic reasons, as well. Additionally, I understand that the Alaska Board of Fisheries will consider the merits of fishery limitation during its spring 1994 meeting.

Aside from this central issue, my main comment about the document is that the status quo does not reflect the management actions taken by the department this year. I have enclosed paper and electronic copies of the executive summary of the department's fishery management plan along with associated regulations. These regulations are under review by the Department of Law for submission to the Lieutenant Governor's office where they will be filed as commercial fishing regulations. I believe that status quo in the federal plan (if needed) should reflect the management plan now being implemented. Please note that there is one inaccuracy in the enclosed executive summary: the department did not declare a high impact emerging fishery as stated. This declaration will be forthcoming.

David, I hope these thoughts are helpful. If you have any questions about scallop management while Earl and I are away during the month of April, please feel free to contact the Deputy Director for Fisheries Paul Larson at 465-6121.

Sincerely,

Gordon H. Kruse, Ph.D.
Marine Fisheries Scientist

Enclosures

cc: Bob Clasby
Earl Krygier
Paul Larson

EXECUTIVE SUMMARY OF THE INTERIM MANAGEMENT PLAN FOR COMMERCIAL SCALLOP FISHERIES IN ALASKA

March 16, 1993

Weathervane scallop (Patinopecten caurinus) resources in Alaska were first explored by a few vessels in 1967. A major fishery soon developed when 19 vessels made 125 landings totalling 1.7 million pounds of shucked meats in 1968 and 144 landings totalling 1.9 million pounds in 1969. Landings from the early fishery were predominated by old scallops (7^+ years of age), but by the early 1970s the age composition began to shift toward younger ages (2-6 year olds) as the largest scallops were cropped from previously unexploited stocks. During 1970-1989, participation and catches fluctuated at much lower levels than during the initial years of the fishery. On average, six vessels contributed 52 landings totalling 587,000 pounds annually during this 20 year period. More recently, significant increases in deliveries and total landings occurred. In 1990-1991, an average of 8 vessels made 135 landings weighing 1.2 million pounds annually. From preliminary data, it appears that harvests increased beyond 1990-1991 levels to 1.7 million pounds in 1992. Further, limited catch reports indicate that small scallops are constituting a greater portion of regional landings from some vessels. Participation is expected to increase in 1993, given the level of interest by potential new entrants from the east coast.

The recent increase of scallop harvests and fishing effort have led to serious concerns about conservation of scallop resources in Alaska. Unfortunately, due to a three year meeting cycle, scallop management is not scheduled for deliberation by the Alaska Board of Fisheries (BOF) until spring 1994. However, regulation 5 AAC 39.210 permits the Alaska Department of Fish and Game (ADF&G) to develop interim management plans and associated regulations for fisheries that meet at least one of four conditions of a high impact emerging fishery. ADF&G believes that most or all of these conditions are met for the scallop fishery: (1) harvesting effort has recently increased beyond a low sporadic level, (2) the resource is harvested by more than a single user group, (3) harvests approach levels that might not be sustainable on a local or regional level, and (4) the BOF has not developed comprehensive regulations to address issues of conservation, allocation, and conduct of an orderly fishery.

In July 1992, ADF&G published a report that provided management options for public review. Valuable comments were received from members of the fishing and scientific communities during the ensuing two month review period. These comments, plus ADF&G staff analyses, were carefully considered, and developed into a draft interim management plan. The draft plan received further review at the North Pacific Fishery Management Council and through public distribution. Final public comments were received on January 22, 1993 and were incorporated into the interim management plan and associated fishing regulations for implementation.

The goal of the interim management plan for scallop fisheries is to maximize the overall long-term benefit of scallop resources to residents of the State of Alaska and the nation, while providing for conservation of scallop populations and their habitats. Within the scope of this goal, there are five specific objectives that address: (1) biological conservation of scallop stocks; (2) bycatch of other species and gear-induced habitat alteration; (3) sustainable and orderly fisheries that promote long-term economic and social benefits received from stable landings of

high-quality, large scallops; (4) maintenance of resource availability to subsistence users; and (5) conduct of fishery research to increase the information base for future management decisions.

The department proposes a three step process to meet this goal. First, the department has declared a high impact emerging fishery for scallops. ADF&G plans to implement all elements of its draft interim management plan, except for one measure (onboard observers) that will be implemented after additional consultation with industry and other agencies. Second, soon after the details are resolved in mid-1993, ADF&G will institute a scallop observer program as specified in 5 AAC 39.141 and 5 AAC 39.645. This observer program will be modelled after the crab and groundfish observer programs in Alaska. Under 5 AAC 96.625 the department will petition the board to consider adoption of the scallop management plan and associated regulations. This petition will initiate the third step: development of a BOF-approved fishery management plan for scallop fisheries in Alaska and consideration of a moratorium. A draft of the comprehensive plan will become available prior to the spring 1994 BOF meeting where potential allocation issues will be addressed. The final plan will benefit from experience gained from the interim plan during the first year of implementation, new data from the observer program, and additional analyses. Therefore, it may include elements of the interim plan plus additional management measures and regulatory changes.

In developing this interim management plan, the department attempted to provide for collection of much needed biological and fishery data for improved management without being too costly, and to provide for resource conservation while minimizing impacts on existing users. Major new management measures and associated regulations of the plan address the following: (1) establishment of scallop fishery registration areas and registration requirements, (2) gear specifications, (3) area-specific annual harvest limits for traditional fishing grounds, (4) split fishing seasons, and (5) an industry-funded observer program. Many of the accompanying regulations have been carried over from existing scallop fishery regulations, some existing regulations have been modified, and some new regulations have been developed. These regulations are primarily directed toward fisheries for the weathervane scallop. Management for other scallop species is accomplished through the terms of special exploratory harvest permits; general guidelines for these permits are specified in the interim regulations.

Registration requirements. A total of eight scallop fishery registration areas are being established, corresponding to the Southeastern, Yakutat, Prince William Sound, Cook Inlet, Kodiak, Alaska Peninsula, Dutch Harbor, and Bering Sea portions of the state. Scallop fishing vessels will be required to register for each specific area prior to fishing, and vessels cannot be registered for scallop fishing in more than one area at any given time.

Gear specifications. The existing scallop gear regulations are modified to specify a maximum dredge width of 15 feet with rings not less than four inches inside diameter, and place restrictions on chafing gear, liners and ring modifications. No scallop vessels may operate more than two dredges at one time. The existing and more limited gear restrictions, previously approved by the Alaska Board of Fisheries, are maintained for portions of the Cook Inlet Registration Area.

Annual harvest limits. Specifications for annual harvest limits or permit requirements are established for each of the weathervane scallop fishing grounds as follows:

Region	Area	Limit (pounds shucked meat)
Southeast	Area A	(by exploratory permit)
Southeast	Area D, Yakutat	250,000 pounds
Central	Area E, Prince William Sound	50,000 pounds
Central	Area H, Cook Inlet, Kamishak district	20,000 pounds
Central	Area H, Cook Inlet, Outer district	(by exploratory permit)
Central	Area H, Cook Inlet, Eastern district	(by exploratory permit)
Westward	Area K, Kodiak, Traditional Areas	400,000 pounds
Westward	Area K, Kodiak, Southwest district	(by exploratory permit)
Westward	Area M, Alaska Peninsula	(by exploratory permit)
Westward	Area O, Dutch Harbor	170,000 pounds
Westward	Area Q, Bering Sea	(by exploratory permit)
Total poundage from all traditional harvest areas		890,000 pounds

For 1993, ADF&G intends to manage the scallop fishery to achieve the annual harvest limits in each traditional fishing area. Fishing for weathervane scallops in the remaining portions of the state (Southeast Alaska[1], Central, and Westward non-traditional scallop fishing grounds) is allowed under the terms of a special exploratory harvest permit.

Fishing Seasons. It is the department's intent that a portion of the harvest occur after the scallop observer program is implemented. In the case of Yakutat, the annual harvest guidelines can be apportioned equally between two fishing periods: January 1 - June 30 and July 1 - December 31. In the Prince William Sound area, where the harvest guideline is small, the season will be delayed until July 1, to assure data collection. In the Kodiak area, the existing season structure will provide for our intent. Within each registration area, if one-half of the upper end of the annual harvest limit is caught prior July 1, that fishery is closed until it reopens on July 1. Each scallop fishery closes for the calendar year when the total annual harvest limit for the registration area has been landed.

Observer requirements. Currently, ADF&G believes that an observer program is required to assess status of stocks and to provide the data necessary for inseason management to attain management goals and objectives. The department will be discussing details of a scallop observer program with members of the industry over the next 3-4 months prior to implementation by July 1, 1993.

[1] All districts of Southeast Alaska remain closed to the commercial harvest of scallops, except the seaward portions of districts 4, 13 and 16. A permit and observers are required to fish for scallops in the open areas. Information from experimental fishery permits and extensive observations by department dive personnel indicate that the inside waters of Southeast Alaska cannot support commercial exploitation with dredge gear. Scallop beds in inside waters are small and isolated, they can support limited personal use/subsistence fisheries only, and potential bycatch and gear conflicts with other fisheries are of concern.

SCALLOP PLAN
EXECUTIVE SUMMARY

The following alternatives were examined in an EA/RIR for the proposed federal management of the Alaskan scallop fishery:

Alternative 1: Status Quo -- Continue to defer all management of scallops to the State of Alaska.

Under the status quo, the State would continue to manage the scallop fishery in State waters and the EEZ without Council oversight. This alternative would provide no specific management measure to limit effort. New vessels could continue to enter the fishery, although the State can limit the number of fishermen permitted to take scallops. The number of permits issued to individuals is slightly higher than the number of vessels participating in the fishery (e.g. in 1992, 8 individuals were permitted, and 7 vessels participated). A State permit moratorium could limit access by restricting the number of participants, but would not restrict the number of vessels, unless the State grants ADF&G with that authority.

Alternative 2: Incorporate scallops into the existing Groundfish FMPs and place a moratorium on new vessels entering the fishery.

This alternative would require a groundfish plan amendment. Although the fishery has occurred nearly exclusively in the Gulf of Alaska, amendments would be required for both the GOA and BSAI FMPs, given that stocks of Icelandic scallops occur along the Aleutian Islands. Scallops would be added to the 'other species' category of the FMPs. This alternative defers much of the management to the State, similar to the way demersal shelf rockfish are managed in the Southeast Outside District by the GOA groundfish FMP. Access to the fishery would be limited by a vessel moratorium. Proposed qualifying times for vessels, and other elements of a moratorium are the same as under Alternative 3.

Alternative 3: Develop a new FMP for Alaskan scallops and place a moratorium on new vessels entering the fishery.

This alternative would require a new FMP be developed for Alaskan scallops. Under this alternative, a scallop SAFE document would be an annual requirement. As with Alternative 2, this alternative defers much of the management to the State, while the most controversial measures are fixed in the FMP and require plan amendment to change. Proposed management authorities are shown below:

Fixed in FMP	At Discretion of State
Legal Gear	Minimum Size Limits
Permit Requirements	Reporting Requirements
Federal Observer Requirements	State Observer Requirements
Limited Access	Registration Areas
	Districts, Subdistricts, and Sections
	Fishing Seasons
	Guideline Harvest Levels
	Inseason Adjustments
	Closed Waters
	Other

Access to the fishery would be limited by a vessel moratorium. Proposed qualifying times for vessels, and other elements of a moratorium are the same as under Alternative 2.

Moratorium Elements Under Any Alternative

As with groundfish, a scallop vessel moratorium would consist of several elements and options, similar to the pending moratorium for groundfish (Amendment 28 in GOA). Key elements are summarized below:

1. Qualifying Period

The qualifying period is determined by the earliest and latest dates during the time a vessel must have made landings. The options for beginning and ending dates are listed below.

Beginning Dates
a. January 1, 1967 (first year of commercial scallop deliveries)
b. January 1, 1980 (coincides with groundfish moratorium)
c. January 1, 1992 (restricts fishery to more recent participants)
d. some other date

Ending Dates
a. February 9, 1992 (coincides with groundfish moratorium)
b. January 20, 1993 (Control Date for scallop fishery)
c. some other date

2. Length of Moratorium

a. Until the Council rescinds or replaces; not to exceed 3 years from date of implementation, but Council may extend for 2 years if a permanent limited access program is imminent.

b. Until the Council rescinds or replaces; not to exceed 4 years from date of implementation, but Council may extend for 2 years if a permanent limited access program is imminent.

c. Until the Council rescinds or replaces; not to exceed 4 years from date of implementation.

d. some other duration period.

3. Crossovers During Moratorium

a. No restrictions on crossovers to other fisheries (groundfish, crab, or halibut) during the moratorium.

b. Crossovers to other fisheries (groundfish, crab, or halibut) during the moratorium will not be allowed.

4. Reconstruction of Vessels During the Moratorium

a. Vessels may be reconstructed during the moratorium subject to limitations and conditions listed below.

1. If physical reconstruction was completed before January 20, 1993, new size unrestricted; one more upgrade allowed, limited to a 20% increase in vessel length.

2. If physical reconstruction was started before January 20, 1993, new size unrestricted; no more upgrades allowed.

3. If physical reconstruction started on or after January 20, 1993, new size restricted to a 20% increase in vessel length; no more upgrades allowed.

b. Vessels may not be reconstructed during the moratorium.

5. Replacement of Vessels During the Moratorium

a. Qualifying vessels can be replaced with non-qualifying vessels as often as desired so long as the replaced vessel leaves the fishery or bumps another qualifying vessel out in the case of multiple transactions. No increases in vessel length allowed.

b. Qualifying vessels can be replaced with non-qualifying vessels as often as desired so long as the replaced vessel leaves the fishery or bumps another qualifying vessel out in the case of multiple transactions. Though several replacements are allowed, vessel size can only be increased once, subject to a 20% maximum increase in vessel length.

c. Qualifying vessels cannot be replaced.

6. A. Replacement of Vessels Lost or Destroyed During the Moratorium

a. Qualifying vessels can be replaced with non-qualifying vessels of similar capacity. Replaced vessels cannot be salvaged and come back into the fishery. No increases in vessel length allowed.

b. Qualifying vessels can be replaced with non-qualifying vessels subject to a 20% maximum increase in vessel length. Replaced vessels cannot be salvaged and come back into the fishery.

c. Qualifying vessels cannot be replaced.

6. B. Replacement of Vessels Lost or Destroyed Before the Moratorium

a. Qualifying vessels can be replaced with non-qualifying vessels of similar capacity. Replaced vessels cannot be salvaged and come back into the fishery. No increases in vessel length allowed.

b. Qualifying vessels can be replaced with non-qualifying vessels subject to a 20% maximum increase in vessel length. Replaced vessels cannot be salvaged and come back into the fishery.

c. Qualifying vessels cannot be replaced.

7. Small Vessel Exemption

   a. Exempt small vessels from the moratorium. In the Gulf of Alaska, vessels 26 feet or less are exempted from the moratorium. In the Bering Sea/Aleutian Islands, vessels 32 feet or less are exempted from the moratorium.

   b. No exceptions allowed for small vessels.

8. Appeals Process

   a. The appeals procedure will consist of a adjudication board of government persons and non-voting industry representatives.

   b. Some other appeal process.

The options chosen for the moratorium will have biological and environmental impacts. In particular, the qualifying time chosen will determine how many vessels will be allowed access to the fishery. Data on the number of persons licensed and vessels registered to fish for scallops, obtained from ADF&G Commercial Fisheries Entry Commission, provide information as to how many persons and vessels would be affected by qualifying time options. The following table shows the cumulative number of unique persons licensed and vessels registered to fish for scallops through 1992. Historical data on the fishery prior to 1979 were not available. The 1992 data are preliminary.

Years	Individuals	Vessels
only 1992	8	7
1991-1992	9	8
1990-1992	19	12
1989-1992	20	13
1988-1992	22	14
1987-1992	23	15
1986-1992	30	21
1985-1992	34	25
1984-1992	37	30
1983-1992	41	33
1982-1992	53	43
1981-1992	64	50
1980-1992	71	53

As these numbers show, the potential number of vessels decreases as the qualifying period is shortened. From the above table, the potential number of vessels can be determined for any number of qualifying periods.

PRELIMINARY DRAFT

ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW/ INITIAL REGULATORY FLEXIBILITY ANALYSIS

FOR THE PROPOSED FEDERAL MANAGEMENT OF THE ALASKAN SCALLOP FISHERY

Prepared by the Staffs of
the North Pacific Fishery Management Council
and the Alaska Department of Fish and Game

April 13, 1993

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1.0 INTRODUCTION

1.1 Management Background

Management of scallops has been under the jurisdiction of the Sate of Alaska since 1968, as no federal Fishery Management Plan (FMP) has been implemented for this fishery. Although a preliminary FMP for Alaska scallops was drafted by the NPFMC in 1976, it was never adopted. In 1992, the Alaska Division of Fish and Game (ADF&G) developed an Interim Fishery Management Plan (IFMP) for scallops (Kruse et al. 1992), as fishing effort was rapidly increasing and maximum sustainable yield may have been exceeded. The IFMP specified three major management measures: 1) setting area specific guideline harvest levels and gear restrictions to prevent localized overharvesting, 2) creating an observer program to monitor the fishery and obtain biological information, and 3) limiting effort via gear restrictions, seasons, minimum size limits, and other measures. State regulations did not allow for vessel moratorium to be implemented for this rapidly expanding fishery.

At the January 1993 meeting, the Council determined that the scallop fishery met the national standards for federal management, and that such management was necessary to protect the fishery from overcapitalization. The Council was presented with information indicating the stocks of weathervane scallops were fully exploited and any increase in effort would be detrimental to the stocks and the Nation. A control date of January 20, 1993 was also set to notice the industry that a moratorium for this fishery may be implemented. This control date meant that fishermen and/or vessels not participating in the fishery by that date may not be guaranteed future access to the fishery.

In February 1993, ADF&G adopted several interim management measures for the scallop fishery. New measures adopted were 1) area specific catch limits, allocated seasonally; 2) restricting scallop dredges to a maximum width of 15 feet, and 3) a limit of two dredges being fished at a time. These measures were adopted as emergency regulations under ADF&G's "high impact emerging fishery" policy, and will be reviewed at the Board of Fisheries spring 1994 meeting. At the March 1993 meeting, the Board promulgated regulations that limit crew size to a total of 12, and mandate that weathervane scallops may only be hand shucked.

The domestic and joint venture groundfish fisheries in the exclusive economic zone (EEZ, 3-200 miles offshore) in the waters off Alaska are managed under two Fishery Management Plans (FMP); one for the Bering Sea/Aleutian Islands (BSAI), and the second for the Gulf of Alaska (GOA). These FMPs were developed by the North Pacific Fishery Management Council (Council) under the Magnuson Fishery Conservation and Management Act (Magnuson Act). The groundfish FMPs for the GOA and BSAI were approved by the Secretary of Commerce and became effective in 1978 and 1981, respectively.

The Council solicits public recommendation for amending the GOA or the BSAI groundfish FMPs on an annual basis. Amendment proposals are then reviewed by the Council's GOA and BSAI groundfish FMP Plan Teams (PT), Plan Amendment Advisory Group (PAAG), Advisory Panel (AP), and Scientific and Statistical Committee (SSC). These advisory bodies make recommendations to the Council on which proposals merit consideration for plan amendment.

Amendment proposals and appropriate alternatives accepted by the Council are analyzed by the Groundfish Plan Teams or other staff analytical teams for their efficacy and for their potential biological and socioeconomic impacts. After reviewing this analysis, the Council, Advisory Panel (AP), and Scientific and Statistical Committee (SSC) will make recommendations as to whether the amendment alternatives should be changed in any way, whether and how the analysis should be refined, and whether to release the analysis for general public review and comment. If an amendment

proposal and accompanying analysis is released for public review, the AP, SSC, and the Council consider subsequent public comments before the Council decides whether to submit the proposals to the Secretary of Commerce for approval and implementation.

The Council may initiate amendments on their own as well. After hearing testimony from the staff, ADF&G, and public, the Council directed staff to proceed with an analysis to evaluate potential federal management of Alaskan scallops. The Council recommended that the analysis identify possible management regimes and specific management authorities of both federal and state agencies.

This document analyzes a proposed amendment that would incorporate Alaskan scallops into the GOA groundfish FMP, as well as a proposal to develop a separate FMP for the Alaskan scallop fishery. All fisheries for weathervane scallops (*Patinopecten caurinus*), Icelandic scallops (*Chlamys islandica*), and all other scallop species in the EEZ waters off Alaska would be federally managed under the proposed alternatives.

1.2 Purpose of the Document

This document provides background information and assessments necessary for the Secretary of Commerce to determine if the proposed Amendment or FMP is consistent with the Magnuson Act and other applicable law. It also provides the public with information to assess the alternatives that are being considered and to comment on the alternatives. These comments will enable to Council and Secretary to make more informed decisions concerning the resolution of the management problems being addressed.

1.2.1 Environmental Assessment

One part of the package is the environmental assessment (EA) that is required by NOAA in compliance with the National Environmental Policy Act of 1969 (NEPA). The purpose of the EA is to analyze the impacts of major federal actions on the quality of the human environment. The EA serves as a means of determining if significant environmental impacts could result from a proposed action. If the action is determined not to be significant, the EA and resulting finding of no significant impact (FONSI) would be the final environmental documents required by NEPA. An environmental impact study (EIS) must be prepared if the proposed action may be reasonably expected: (1) to jeopardize the productive capability of the target resource species or any related stocks that may be affected by the action; (2) to allow substantial damage to the ocean and coastal habitats; (3) to have a substantial adverse impact on public health or safety; (4) to affect adversely an endangered or threatened species or a marine mammal population; or (5) to result in cumulative effects that could have a substantial adverse effect on the target resource species or any related stocks that may be affected by the action. Following the end of the public review period, the Council could determine that the proposed changes will have significant impacts on the human environment and proceed directly with preparation of an EIS.

1.2.2 Regulatory Impact Review

Another part of the package is the Regulatory Impact Review (RIR) that is required by the National Marine Fisheries Service (NMFS) for all regulatory actions or for significant Department of Commerce or NOAA policy changes that are of significant public interest. The RIR: (1) provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action; (2) provides a review of the problems and policy objectives prompting the

regulatory proposals and an evaluation of the major alternatives that could be used to solve the problems; and (3) ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way.

The RIR also serves as the basis for determining whether any proposed regulations are major under criteria provided in Executive Order 12291 and whether or not proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Act (P.L. 96-354, RFA). The primary purpose of the RFA is to relieve small businesses, small organizations, and small governmental jurisdictions (collectively, "small entities") of burdensome regulatory and record-keeping requirements. This Act requires that the head of an agency must certify that the regulatory and record-keeping requirements, if promulgated, will not have a significant effect on a substantial number of small entities or provide sufficient justification to receive a waiver.

This RIR analyzes the impacts of proposed changes to the Alaskan scallop management regime.

1.3 Description of the Scallop Fisheries

Interest in an Alaskan scallop fishery has existed since the early 1950's when the Alaska Bureau of Commercial Fisheries began systematic surveys to determine if commercial quantities were available. The first commercial deliveries of weathervane scallops were made in 1967. Since then, the numbers of vessels, numbers of landings and harvest (weight of shucked meats) have varied annually (Table 1.3.1). On average, about two-thirds of the scallop harvest has been taken off Kodiak Island and about one-third has come from the Yakatat area between Cape Spencer to Cape St. Elias; other areas have made minor contributions to overall landings (Figure 1.3.1). Landings from State waters have comprised about 39 % of the total (Figure 1.3.2). Total commercial harvest of scallops has fluctuated from a high of 157 landings totalling 1,850,187 pounds of shucked meats by 19 vessels in 1969 to no landings in 1978. Harvests in 1990 and 1991 were the highest on record since the early 1970's. Preliminary information suggests that the 1992 harvest may have been even higher.

The size of the scallop fishing fleet off Alaska has fluctuated since the fishery began in 1967. Since then, up to 19 vessels per year have participated in the fishery. In 1992, only 7 vessels were actively fishing for scallops. Currently, the "average" scallop vessel is about 90-100 ft long and carries a crew of about 10. In the mid-1980s, several small (< 50 ft) and large (> 130 ft) vessels participated in the fishery. Traditionally, scallops have been processed at sea by hand shucking, with only the meats (adductor muscles) landed. The technology for automated mechanical shucking exists, and apparently can process weathervane scallops and Icelandic scallops.

Economic trends of the fishery depend upon the performance measures considered. For example, vessels averaged 212,000 pounds each during the early "fishing-up period" (1970-1973) of the fishery. During 1974-1986, landings per vessel averaged only about one-third (66,000 pounds) of the 1970-1973 average, but increased to about one-half (114,000 pounds) of the original level during the 1987-1991 period (Table 1.1). On the other hand, average gross receipts (exvessel value) per vessel reveal a different trend due to price effects during these same three time periods: $234,000, $178,000, and $400,000, respectively.

Table 1.3.1. Historic number of vessels, number of landings, landed weight of shucked meats, price per pound, exvessel value, landings per vessel, and exvessel value per vessel for the weathervane scallop fishery in Alaska during 1967-1991. All data for 1967-1968, and prices and exvessel values for 1967-1975 and 1979 were taken from Kaiser (1986); all other data were summarized from fish tickets. The 1991 and 1992 data are preliminary. In years when only one or two vessels participated in a fishery, the harvest statistics are confidential.

Year	No. of Vessels	Landings	Landings Wt. (lbs)	Price ($/lb)	Exvessel Value ($)	(lbs) per Vessel	Value ($) per Vessel
1967	<----------Confidential---------->						
1968	19	125	1,677,268	0.85	1,425,678	88,277	75,036
1969	19	157	1,850,187	0.85	1,572,659	97,378	82,772
1970	7	137	1,440,338	1.00	1,440,338	205,763	205,763
1971	5	60	931,151	1.05	977,709	186,230	195,542
1972	5	65	1,167,034	1.15	1,342,089	233,407	268,418
1973	5	45	1,109,405	1.20	1,331,286	221,881	266,257
1974	3	29	504,438	1.30	655,769	168,146	218,590
1975	4	56	435,672	1.40	609,941	108,918	152,485
1976	<----------Confidential---------->						
1977	<----------Confidential---------->						
1978	0	0	0	-	0	0	0
1979	<----------Confidential---------->						
1980	8	56	632,535	4.32	2,732,551	79,067	341,569
1981	18	101	924,441	4.05	3,743,986	51,358	207,999
1982	13	120	913,996	3.77	3,445,765	70,307	265,059
1983	6	31	194,116	4.88	947,286	32,353	157,881
1984	10	61	389,817	4.47	1,742,482	38,982	174,248
1985	9	54	647,292	3.12	2,019,551	71,921	224,395
1986	9	86	682,622	3.66	2,498,397	75,847	277,600
1987	4	55	583,043	3.38	1,970,685	145,761	492,671
1988	4	47	341,070	3.49	1,190,334	85,268	297,584
1989	7	54	525,598	3.68	1,934,201	75,085	276,314
1990	9	144	1,488,642	3.37	5,016,724	165,405	557,414
1991	7	125	1,191,014	3.75	3,773,745	100,633	377,375
1992	7						

Figure 1.3.1

Figure 1.3.1 **Scallop landings in Alaska, 1969-1992**

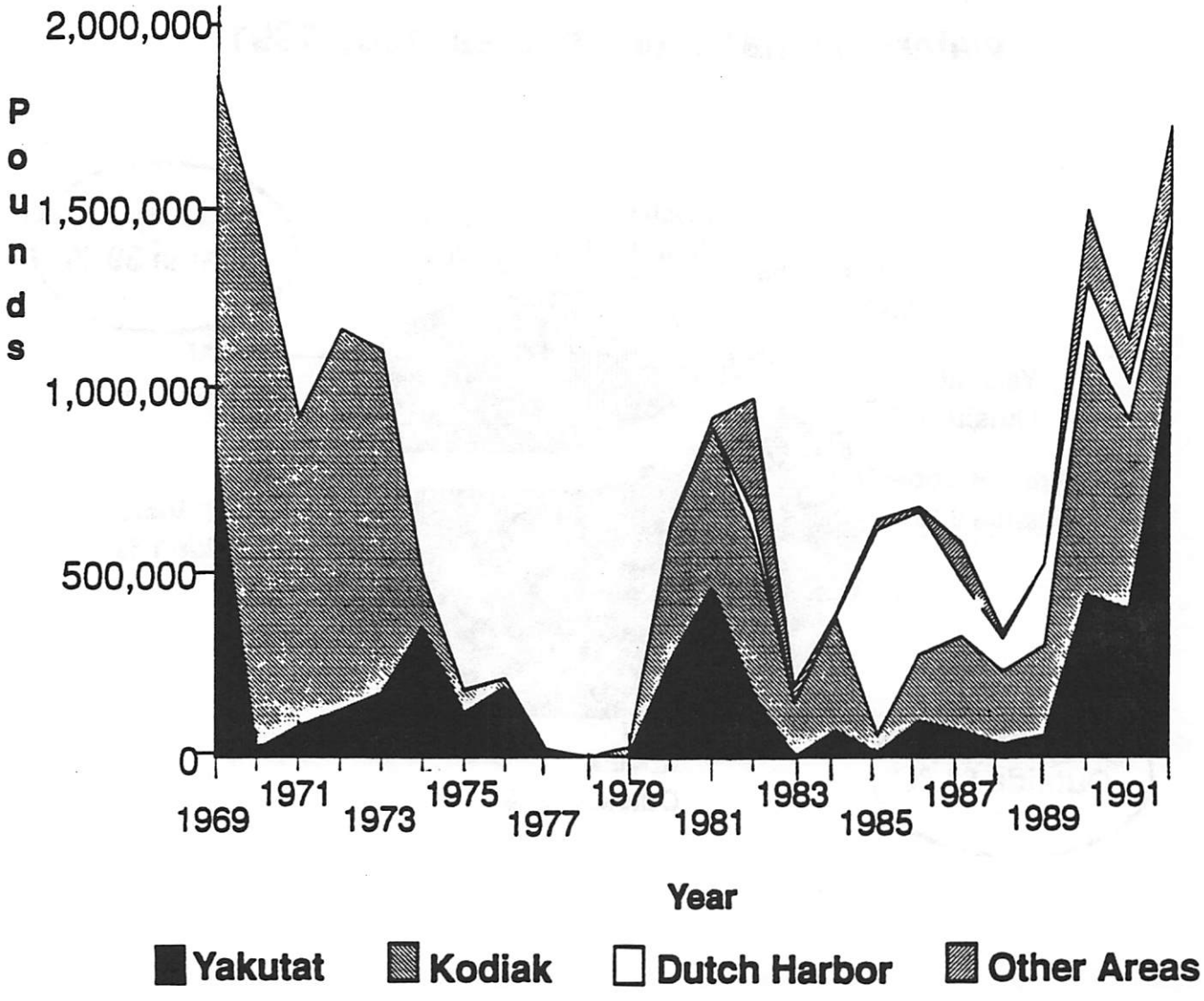
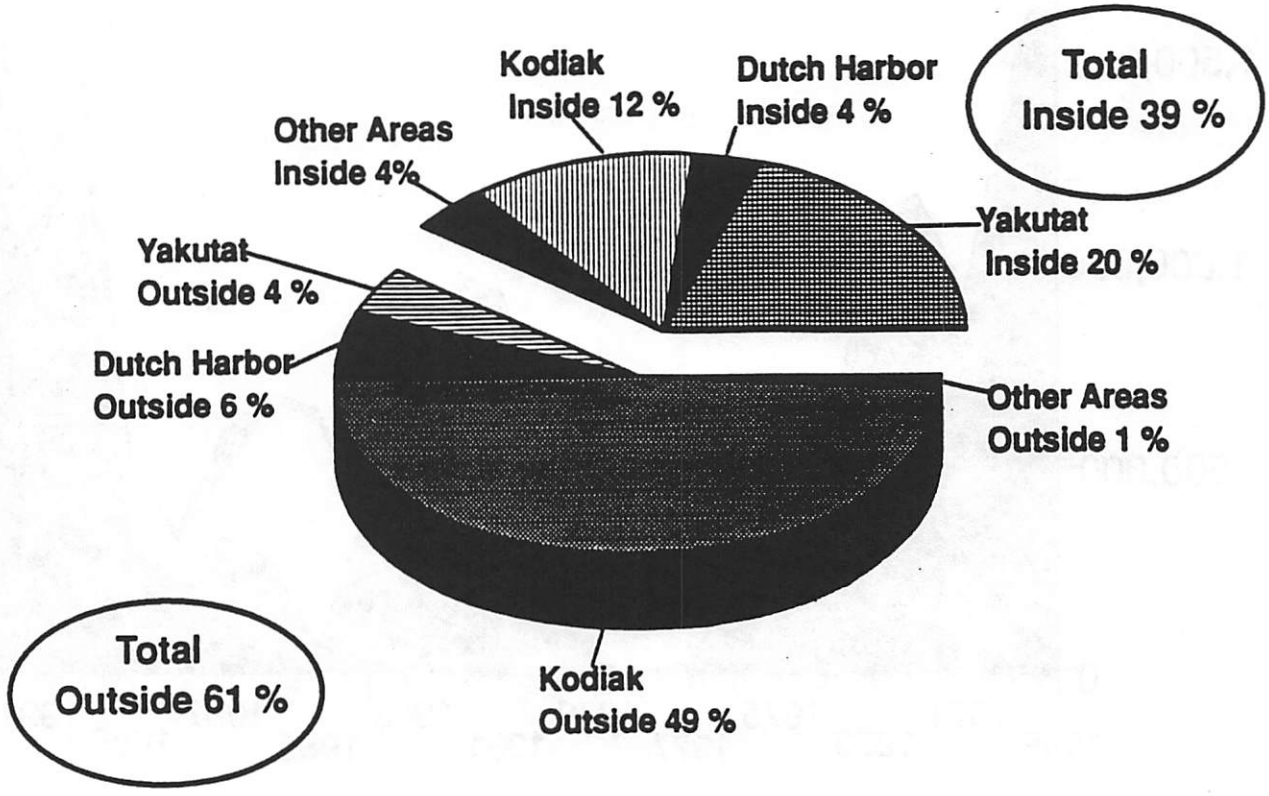


Figure 1.3.2

Figure 1.3.2 **Scallop landings inside and outside Alaska State waters by management area, 1969-1991**



1.4 Description of the Management Area and Habitat

In this analysis, the Gulf of Alaska is defined as the U.S. Exclusive Economic Zone of the North Pacific Ocean, exclusive of the Bering Sea, between the eastern Aleutian Islands at 170°W longitude and Dixon Entrance at 132°40'W longitude. The Bering Sea/Aleutian Islands region with respect to the U.S. extended jurisdiction is defined as those waters lying south of the Bering Strait, east of the U.S.-U.S.S.R. convention line of 1867, and extending south of the Aleutian Islands for 200 miles between the convention line and 170°W.

The Gulf of Alaska is a large body of water bordered by the Alaska coast from Dixon Entrance to Unimak Pass. Marine habitats within the Gulf of Alaska include estuaries, tideland marshes, bays, fjords, sandy beaches, unprotected rocky shores, river deltas, and a variety of continental shelf, slope, seamounts, and deep ocean habitats. This section describes the physical environment of potential scallop habitat areas in Gulf of Alaska. More detailed information on the Gulf of Alaska can be found in Alton (1981), Morris et al., (1983), Sharma (1979), and Rosenberg (1972).

All of the commercial fisheries for weathervane scallops take place in the relatively shallow waters (< 200 m) of the continental shelf. Scallops are found from intertidal waters to depths of 300 m (Foster 1991), but abundance tends to be greatest between depths of 45-130 m on beds of mud, clay, sand, and gravel (Hennick 1973). The shelf parallels the southeastern Alaska coast and extends around the Gulf of Alaska. Total area of continental shelf in the Gulf of Alaska is about 160,000 square km, which is more than the shelf area in the Washington-California region but less than 25% of the eastern Bering Sea Shelf. Between Canada and Cape Spencer in the Gulf of Alaska the Continental Shelf is narrow and rough. North and west of Cape Spencer it is broader. Although its width is less than 10 miles at some points, it is generally 30 to 60 miles wide. As it curves westerly from Cape Spencer towards Kodiak Island it extends some 50 miles seaward, making it the most extensive shelf area south of the Bering Sea. West of Kodiak Island and proceeding along the Alaska Peninsula toward the Aleutian Islands, the shelf gradually becomes narrow and rough again. Although weathervane scallops are widely distributed along the shelf, the highest densities in Alaska occur off Kodiak Island and along the eastern gulf coast from Cape Spencer to Cape St. Elias (Figure 1.4.1).

Coastal waters overlying the continental shelf are subject to considerable seasonal influences. Winter cooling accompanied by turbulence and mixing due to major storms results in a uniform cold temperature in the upper 100 m. Seasonal changes in temperature and salinity diminish with increasing depth and distance from shore. Along the outer shelf and upper slope, bottom water temperatures of 4 to 5° C persist year-round throughout the periphery of the Gulf of Alaska. With further increase in depth, water temperature shows no significant seasonal change but gradually decreases with depth, reaching 2° C or less at greater depths.

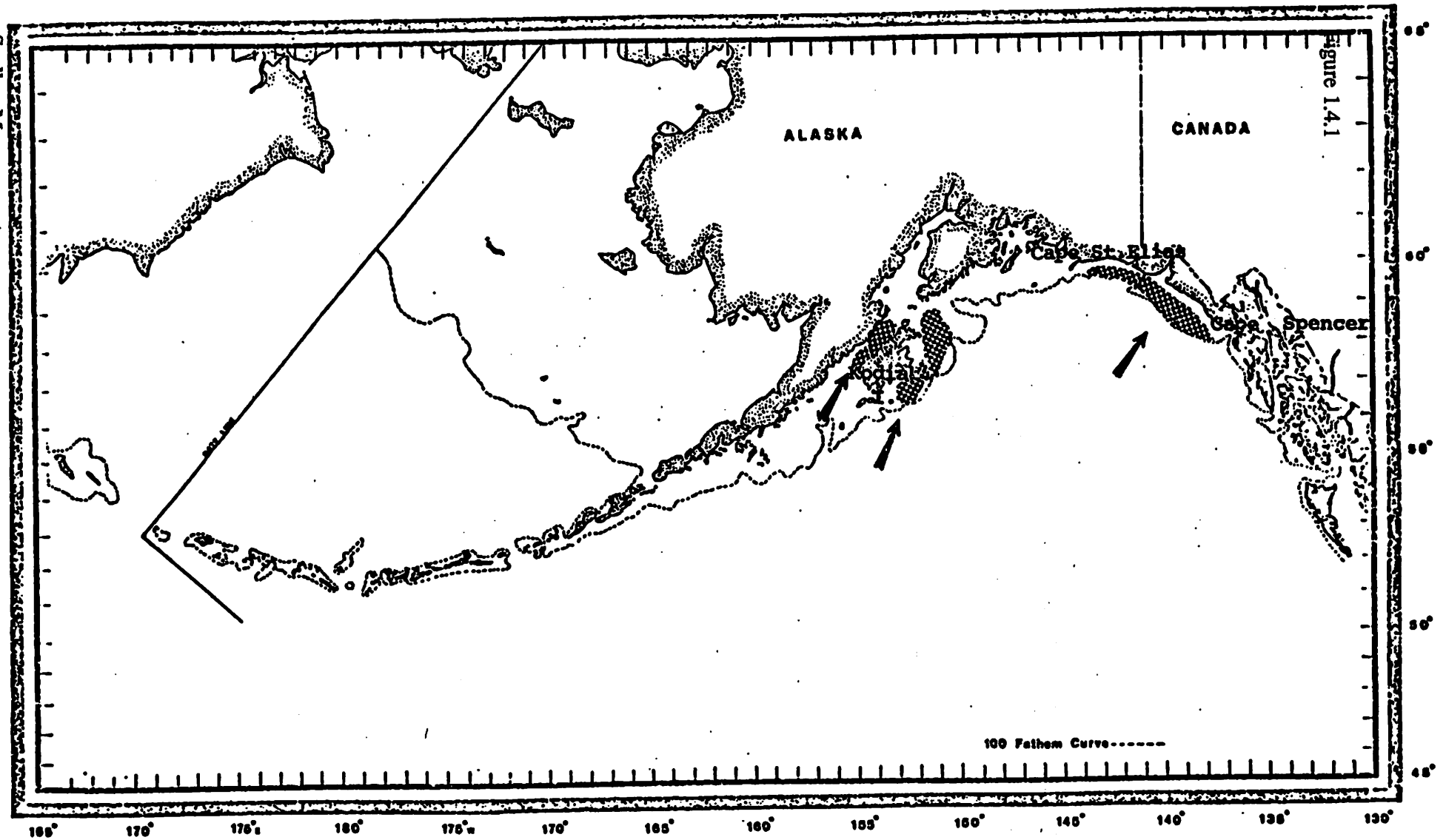


Figure 1.4.1 Locations of known weathervane scallops, Patinopectin caurinus, stocks of major commercial importance in the Gulf of Alaska.

2.0 PROPOSED FEDERAL MANAGEMENT OF THE ALASKAN SCALLOP FISHERY

2.1 Description of and Need for the Action

Federal management of Alaskan scallops may be necessary to prevent overcapitalization of the fishery. Under the current statutes, the State of Alaska cannot limit effort by prohibiting new vessels from entering the fishery. At the January 1993 meeting, the Council determined that unrestricted access to this fishery would be harmful to the resource and result in loss to the Nation. A control date of January 20, 1993 was also set to notice the industry that a moratorium for this fishery may be implemented.

Recent large variations in harvest and shifts in effort to new fishing areas may indicate that the maximum sustainable yield of the fishery is being exceeded. Further, it has been well-established that scallop populations worldwide are vulnerable to overharvest, and stock recovery may be slow (Aschan 1991; Bannister 1986; Bourne 1986; McLoughlin et al. 1991; Orensanz 1986). For these reasons, significant increases in scallop harvests in Alaska beyond historic levels should be avoided as they may jeopardize stock health and sustained yield.

Conservation impacts of the scallop fishery in Alaska depend upon the particular suite of management measures adopted. An active management strategy may include stock assessment surveys, calculation of optimal exploitation rates, estimation of key biological production parameters (e.g., growth, mortality, recruitment, etc.), an observer program to monitor the incidental catches of other species, use of exploratory fisheries as a research tool to refine time/area closures, a catch sampling program, and evaluations of gear effects on habitat. As knowledge accrues from such a program are incorporated into management, new areas could be opened to fishing, higher exploitation rates may be specified, and overall fishery productivity may increase.

The rate of natural mortality is one of the biological reference points commonly used in management of other fisheries to establish appropriate exploitation rates (Clark 1991). The longevity of weathervane scallops in Alaska implies that they experience very low natural mortality rates, and this requires that conservative commercial harvests of weathervane scallops may be necessary to maintain healthy stocks and sustainable fisheries. Unfortunately, other benchmarks that would bear on the choice of appropriate exploitation rates for weathervane scallops are not presently available; there is inadequate information on other biological production parameters, uncertainty in scallop population dynamics, and a lack of fishery yield models for Alaskan scallop fisheries.

It is widely accepted that fishery harvest levels should be prescribed in ways to prevent "recruitment overfishing", which is the condition that occurs when stocks are reduced to levels too low to produce adequate numbers of young scallops -- the future recruits to the fishery (Gulland 1983). Recruitment is a prerequisite for maintenance of viable populations, and is needed for sustainable harvests that support long-term economic benefits from the fishery. By limiting harvest levels, recruitment overfishing of scallops may be prevented, and the fishery may be maintained.

Optimal management may strive to achieve a balance of factors, such as cost-effectiveness, enforceability, resource conservation, and positive economic benefits that accrue from commercial harvests. Ideally, a scallop management plan would provide mechanisms to gain information that can be used to improve the management without being too costly, and would provide for resource conservation without being overly restrictive to the fishery. Management alternatives and measures are being considered by the Council and ADF&G in an attempt to achieve this balance.

One important management measure considered is a moratorium on new scallop vessels entering the fishery. Under the Magnuson Act, a moratorium is considered to be a form of limited access management. Section 303(b)(6) of the Magnuson Act provides authority to limit access to a fishery "...to achieve optimum yield if, in developing such a system, the Council and Secretary take into account:

A. present participation in the fishery
B. historical fishing practices in, and dependence on, the fishery,
C. the economics of the fishery,
D. the capability of fishing vessels used in the fishery to engage in other fisheries,
E. the cultural and social framework relevant to the fishery, and,
F. any other relevant considerations."

The Magnuson Act (Section 3(21)) further defines"...The 'optimum' with respect to the yield from a fishery, means the amount of fish -- (A) which will provide the greatest overall benefit to the Nation, with particular reference to food production and recreational opportunities; and (B) which is prescribed as such on the basis of the maximum sustainable yield from such fishery, as modified by any relevant economic, social, or ecological factor."

2.2 The Alternatives

2.2.1 Alternative 1: Status Quo -- Continue to defer all management of scallops to the State of Alaska.

Under the status quo, the State would continue to manage the scallop fishery in State waters and the EEZ without Council oversight. This alternative would provide no specific management measure to limit effort. New vessels could continue to enter the fishery, although the State can limit the number of fishermen permitted to take scallops. The number of permits issued to individuals is slightly higher than the number of vessels participating in the fishery (e.g. in 1992, 8 individuals were permitted, and 7 vessels participated). A State permit moratorium could limit access by restricting the number of participants, but would not restrict the number of vessels, at least until the State granted ADF&G with that authority.

The Alaskan commercial scallop fishery is currently being managed by the State of Alaska under miscellaneous shellfish regulations, contained in Chapter 38 of the Alaska Administrative Code; these regulations (Appendix E) authorize management within five statistical areas (5 AAC 38.005). The state extends its management authority beyond Alaska's territorial sea to include the adjoining waters of the Exclusive Economic Zone (EEZ, 5 AAC 38.010). Because there is no federal fishery management plan, the state has authority to regulate the scallop fishery in the EEZ.

For miscellaneous shellfish, the entire State of Alaska is considered as a single registration area (5 AAC 38.020). Therefore, an individual can fish scallops in all areas under a single Commercial Fishery Entry Commission (CFEC) Permit (commercial fishing license). In addition to an entry permit, a commissioner's permit is needed to take scallops commercially (5 AAC 38.062). The commissioner's permit may:

(1) stipulate location and duration of harvests;
(2) limit gear and other harvest procedures; and
(3) require periodic or annual reporting.

State regulations currently limit the allowable commercial gear to scallop dredges, having a maximum width of 15 feet. Only two dredges may be fished at a time. Scallop dredges are required to have rings with minimum inside diameters of four inches; except for vessels fishing west of Sanak Island (in the Aleutian Islands), where three inch rings may be used. The State is authorized to require observers aboard vessels fishing dredges with less than four inch rings. However, no existing regulations authorize the department to require observers aboard vessels operating dredges with standard four inch rings.

The current regulations in the Southeastern Alaska and PWS areas specify that there is no closed season for scallops (5 AAC 38.120 and 38.220). In the Yakutat area, the waters of Yakutat Bay are closed to scallop fishing (5 AAC 38.180). In these three areas, the scallop fishery is generally managed under the authorities provided in the existing statewide miscellaneous shellfish regulations, discussed above. However, area specific catch limits, apportioned seasonally, were recently adopted as part of ADF&G's interim management plan for the scallop fishery.

In the Cook Inlet and Westward areas, limited area-specific regulations are stipulated in addition to existing statewide regulations. These include fishing seasons (5 AAC 38.400) and area closures (5 AAC 38.424) in the Westward area and fishing seasons (5 AAC 38.280), area closures (5 AAC 38.324), a six foot wide dredge restriction (5 AAC 38.322), and a guideline harvest range (5 AAC 38.330) for portions of the Cook Inlet area.

2.2.2 Alternative 2: Incorporate scallops into the existing Groundfish FMPs and place a moratorium on new vessels entering the fishery.

This alternative would require a Plan amendment. Although the fishery has occurred nearly exclusively in the Gulf of Alaska, amendments would be required for both the GOA and BS/AI FMP, given that stocks of Icelandic scallops occur along the Aluetian Islands. Scallops would be added to the 'other species' category of the FMPs. This alternative defers much of the management to the State, similar to the way demersal shelf rockfish are managed in the SEO district by the GOA groundfish FMP.

Access to the fishery would be limited by a vessel moratorium. Proposed qualifying times for vessels, and other elements of a moratorium are the same as under Alternative 3, and are listed in section 2.3.1.

2.2.2 Alternative 3: Develop a new FMP for Alaskan scallops and place a moratorium on new vessels entering the fishery.

This alternative would require a new FMP be developed for Alaskan scallops. Under this alternative, a scallop SAFE document would be an annual requirement. As with Alternative 2, this alternative defers much of the management to the State, while the most controversial measures are fixed in the FMP and require Plan amendment to change.

Access to the fishery would be limited by a vessel moratorium. Proposed qualifying times for vessels, and other elements of a moratorium are the same as under Alternative 2, and are listed in section 2.3.1.

A Fishery Managment Plan for scallops will require an overfishing specification. According to the 602 guidelines for FMP's, overfishing is a level or rate of fishing mortality that jeopardizes the long-term capacity of a stock or stock complex to provide MSY on a continuing basis. Although adequate life history data exist to define overfishing as 30% of pristine spawning biomass per recruit, this may not be an appropriate definition for weathervane scallops. Currently, data collection for this fishery consists of only total landings. No size or length data are collected, and exploitable biomass cannot be estimated. Therefore, for the proposed FMP, overfishing is defined as landings of adductor muscles exceeding 1,700,000 lbs. This was the amount landed in 1992 (preliminary information).

Goals and objectives of the proposed federal FMP for Alaskan scallops are identified below. The management goal for scallop fisheries is to maximize the overall long-term benefit of scallop resources to the Nation, while providing for conservation of scallop populations and their habitats. Within the scope of the management goal, five specific objectives have been identified. These objectives concern biological conservation, habitat, sustainable and orderly fisheries, subsistence, and fishery research.

Biological Conservation Objective

The biological conservation objective is to ensure the long-term reproductive viability of scallop populations. The maintenance of adequate reproductive potential in each scallop population takes precedence over other economic, social, management and research considerations. To ensure continued reproductive viability of scallop stocks, management measures will be designed to prevent recruitment overfishing by preventing the spawning stock from being reduced to too low a level to ensure adequate production of recruits to future fisheries. Management measures that could be used to attain the biological conservation objective include: (1) closures during spawning seasons; (2) minimum shell height; (3) size limits on dredge rings; and (4) guideline harvest levels (GHLs) or optimum yields (OYs).

Bycatch and Habitat Objective

The impacts of scallop dredges on other fish and shellfish populations and the quality and availability of habitat supporting populations of scallops and other species are of concern. The bycatch and habitat objective is to minimize adverse effects of this gear on incidental harvest of other species and on bottom habitat needed for recruitment and survival of scallops and other bottom-dwelling organisms, particularly those of commercial importance. Management measures that could be used to attain this objective may include onboard observers and closed areas. Research studies on bycatch and habitat may promote this objective, as well.

Sustainable and Orderly Fishery Objective

The sustainable and orderly fishery objective is to ensure the conduct of manageable, steady-paced scallop fisheries that provide stable employment opportunities and maintain supplies of high quality scallops to seafood markets. Toward this end, populations of large scallops will be perpetuated to enhance product marketability, favorable prices, and stability in landings, personal income, and employment. It is recognized that this objective will promote long-term economic and social benefits over and above short-term gains associated with "boom-and-bust" fisheries. Therefore, management measures will be designed to sustain scallop fisheries over the long-term despite sporadic recruitment events. Applicable management measures may include: (1) GHLs; (2) time/area closures; (3) observers; (4) trip limits; (5) rotational harvest areas; (6) quarterly fishing periods with separate quotas; (7) moratorium on new entrants; and (8) measures that reduce harvest/processing rates, such as minimum dredge width or crew size limits.

Subsistence Objective

Where appropriate, the subsistence objective is to ensure that scallop harvest requirements by traditional users in coastal communities are met, as required by law. Abundance and availability of local scallop stocks to subsistence users must be protected from deleterious effects of commercial fisheries. Management must assure that traditional subsistence users are not adversely impacted by commercial harvest of scallops. This objective could be attained by closing subsistence harvest areas to commercial harvest.

Research Objective

The research objective is to gather and analyze data relevant to attaining fishery management objectives and to ensure that management plans are adjusted to reflect this new knowledge. Priority research topics may include: (1) new gear designs to increase efficiency, reduce bycatch, and minimize adverse effects on bottom habitat; (2) estimation of comparative mortality associated with regulations for minimum dredge ring size or minimum shell height; (3) estimation of population abundance and size/age structure; (4) scallop biology, life history, and stock production parameters; (5) analyses of reproductive potential, population thresholds, and recruitment overfishing; (6) investigations into exploitation rates and alternative management strategies; (7) genetic stock structure; and others. This objective may be attained by the institution of an observer program and the conduct of scallop research, perhaps paid by test fishing receipts, State of Alaska general fund appropriations, federal aid funds, or research grants.

2.3 Management Measures and Authorities

Under Alternative 1, the State of Alaska retains management authority over scallops, and may use any management deemed necessary to meet the State's management objectives. Under Alternatives 2 and 3, management authority for scallops would be distributed between Federal and State agencies. Management measures which may be used to achieve the management objectives, and authority for management categories are specified in the following section. Many of these management measures are currently used by the State to manage scallop fisheries.

Two categories of management measures are described (Table 2.3.1): (1) those that are specifically fixed in the proposed FMP, and require an FMP amendment to change, (2) those measures that are neither rigidly specified nor frameworked in the FMP. The measures in (2) above may be adopted as State laws subject to the appeals process outlined in the FMP. The following description of management measures is not intended to limit the State government to only these measures. However, implementation of other management measures not described in the proposed FMP must be consistent with the FMP, the Magnuson Act, and other applicable Federal law, and may occur only after consultation with the Council.

Table 2.3.1. Management measures used to manage scallops in Alaska by category, under the proposed FMP.

Category 1 (Fixed in FMP)	Category 2 (Discretion of State)
Legal Gear	Minimum Size Limits
	Reporting Requirements
Permit Requirements	Guideline Harvest Levels
Federal Observer Requirements	In-season Adjustments
Limited Access	Districts, Subdistricts and Sections
	Fishing Seasons
	State Observer Requirements
	Registration Areas
	Closed Waters
	Other

2.3.1 Category 1--Federal Management Measures Fixed By The FMP

Legal Gear

Specification of legal gear is important to attainment of the biological conservation and economic and social objectives. The allowable commercial gear is limited to scallop dredges. Scallop dredges cannot exceed a maximum width of 15 feet each and are required to have rings with a minimum inside diameters of four inches; except for vessels fishing west of Sanak Island (in the Aleutian Islands), where three inch rings may be used. Vessels are restricted to operating a maximum of two dredges at a time.

Permit Requirements

Federal fishing permits will be required for harvesting vessels if a moratorium is instituted. A Federal permit requirement would not be necessary if all scallop fishermen continue to be licensed and vessels are registered under the laws of the State, and as such, while fishing in the EEZ subject to all State regulations consistent with the FMP, Magnuson Act, and other applicable Federal law. Vessels may also be required to be registered with the State of Alaska and comply with all state regulations when fishing in State waters.

Federal Observer Requirements

Any vessel fishing for scallops, and/or processing scallops within the management area, may be required to take aboard an observer, when so requested by the Director, Alaska Region, NMFS. Such an observer requirement may be imposed, notwithstanding the existence of a State mandated observer program for State registered vessels. To the maximum extent practicable, the Regional Director will coordinate any Federal observer program with that required by the State.

Observers are necessary aboard some scallop fishing and/or processing vessels to obtain needed information such as catch per unit of effort (CPUE), size composition of the catch, and other information required to manage the scallops stocks in the management area.

Limited Access

Access to scallop fisheries within the management unit can be limited by the Council and the Secretary of Commerce. The State can also limit access by limiting the number of individual permits issued annually. Under the Magnuson Act, a moratorium is considered to be a form of limited access management. Section 303(b)(6) of the Magnuson Act provides authority to limit access to a fishery "...to achieve optimum yield if, in developing such a system, the Council and Secretary take into account:

A. present participation in the fishery
B. historical fishing practices in, and dependence on, the fishery,
C. the economics of the fishery,
D. the capability of fishing vessels used in the fishery to engage in other fisheries,

E. the cultural and social framework relevant to the fishery, and,
F. any other relevant considerations."

The Magnuson Act (Section 3(21)) further defines"...The 'optimum' with respect to the yield from a fishery, means the amount of fish -- (A) which will provide the greatest overall benefit to the Nation, with particular reference to food production and recreational opportunities; and (B) which is prescribed as such on the basis of the maximum sustainable yield from such fishery, as modified by any relevant economic, social, or ecological factor."

The proposed scallop vessel moratorium consists of several elements and options. Similar to the pending moratorium for groundfish (Amendment 28 in GOA), the key elements are summarized as follows: 1) the qualifying period, as defined by the earliest and latest dates during the time a vessel must have made landings; 2) the duration of the moratorium; 3) fishery crossovers during the moratorium; 4) reconstruction of vessels during the moratorium; 5) replacement of vessels during the moratorium; 6) exemptions for lost or destroyed vessels; 7) exemptions for small vessels; and 8) an appeals procedure. Unlike the groundfish moratorium, special exemptions for disadvantaged communities were not considered, as the commercial fishery is relatively small in size and area. For each element, two or more options exist that the Council may want to consider.

1) Qualifying Period

The qualifying period is determined by the earliest and latest dates during the time a vessel must have made landings. The options for beginning and ending dates are listed below.

Beginning Dates
a. January 1, 1967 (first year of commercial scallop deliveries)
b. January 1, 1980 (coincides with groundfish moratorium)
c. January 1, 1992 (restricts fishery to more recent participants)
d. some other date

Ending Dates
a. February 9, 1992 (coincides with groundfish moratorium)
b. January 20, 1993 (Control Date for scallop fishery)
c. some other date

2) Length of Moratorium

a. Until the Council rescinds or replaces; not to exceed 3 years from date of implementation, but Council may extend for two years if a permanent limited access program is imminent.

b. Until the Council rescinds or replaces; not to exceed 4 years from date of implementation, but Council may extend for two years if a permanent limited access program is imminent.

c. Until the Council rescinds or replaces; not to exceed 4 years from date of implementation.

d. some other duration period.

3) Crossovers During Moratorium

a. No restrictions on crossovers to other fisheries (groundfish, crab, or halibut) during the moratorium.

b. Crossovers to other fisheries (groundfish, crab, or halibut) during the moratorium will not be allowed.

4) Reconstruction of Vessels During the Moratorium

a. Vessels may be reconstructed during the moratorium subject to limitations and conditions listed below.

1. If physical reconstruction was completed before January 20, 1993, new size unrestricted; one more upgrade allowed, limited to a 20% increase in vessel length.

2. If physical reconstruction was started before January 20, 1993, new size unrestricted; no more upgrades allowed.

3. If physical reconstruction started on or after January 20, 1993, new size restricted to a 20% increase in vessel length; no more upgrades allowed.

b. Vessels may not be reconstructed during the moratorium.

5) Replacement of Vessels During the Moratorium

a. Qualifying vessels can be replaced with non-qualifying vessels as often as desired so long as the replaced vessel leaves the fishery or bumps another qualifying vessel out in the case of multiple transactions. No increases in vessel length allowed.

b. Qualifying vessels can be replaced with non-qualifying vessels as often as desired so long as the replaced vessel leaves the fishery or bumps another qualifying vessel out in the case of multiple transactions. Though several replacements are allowed, vessel size can only be increased once, subject to a 20% maximum increase in vessel length.

c. Qualifying vessels cannot be replaced.

6) A. Replacement of Vessels Lost or Destroyed During the Moratorium

a. Qualifying vessels can be replaced with non-qualifying vessels of similar capacity. Replaced vessels cannot be salvaged and come back into the fishery. No increases in vessel length allowed.

b. Qualifying vessels can be replaced with non-qualifying vessels subject to a 20% maximum increase in vessel length. Replaced vessels cannot be salvaged and come back into the fishery.

c. Qualifying vessels cannot be replaced.

B. Replacement of Vessels Lost or Destroyed Before the Moratorium

a. Qualifying vessels can be replaced with non-qualifying vessels of similar capacity. Replaced vessels cannot be salvaged and come back into the fishery. No increases in vessel length allowed.

b. Qualifying vessels can be replaced with non-qualifying vessels subject to a 20% maximum increase in vessel length. Replaced vessels cannot be salvaged and come back into the fishery.

c. Qualifying vessels cannot be replaced.

7) Small Vessel Exemption

a. Exempt small vessels from the moratorium. In the Gulf of Alaska, vessels 26 feet or less are exempted from the moratorium. In the Bering Sea/Aleutian Islands, vessels 32 feet or less are exempted from the moratorium.

b. No exceptions allowed for small vessels.

8) Appeals Process

a. The appeals procedure will consist of a adjudication board of government persons and non-voting industry representatives.

b. Some other appeal process.

Implementation of a moratorium is essentially a matter of issuing licenses for qualified vessels and tracking the vessel configuration to verify adherence to capacity restrictions.

2.3.2 Category 2--Management Measures Deferred to State

Minimum Size Limits

The proposed FMP would authorize the State to adjust size limits under State regulations. In establishing minimum size limits, the State can consider, within constraints of available information, the following: (1) biological and functional size at maturity, (2) protection of reproductive capability,

(3) market and other economic considerations, (4) natural and discard mortality rates, (5) growth rates, and (6) yield per recruit.

Typically, biological considerations such as (1), (2), and (4)-(6) are used to establish minimum legal size limits to ensure that conservation needs are served. In the past, minimum size of scallops landed was probably dictated by industry economic conditions, and to a large extent economics continues to play an important role. If minimum size limits are proposed or changed, an analysis with appropriate documentation will be presented.

Minimum size limits may be important in meeting both the biological conservation and economic and social objectives of the proposed FMP. The use of the estimated average size of maturity is intended to allow scallops to spawn at least once before being subjected to harvest. Evidence available for weathervane scallops suggests that most are sexually mature at age 3, and all are sexually mature by age 4. Because of different growth rates, an age 3 scallops averages 3.3 inches (85 mm) in the Yakatat area and 4.1 inches in the Kodiak area (Hennick 1970). Thus, minimum size limits may be set at depending on an area specific life history pattern.

Guideline Harvest Levels and Ranges

The proposed scallop FMP would authorize the State to set preseason guideline harvest levels (GHL), within a guideline harvest range (GHR), under State regulations. The term GHL corresponds closely to the term total allowable catch (TAC) used in the BS/AI groundfish FMP. A range of harvest levels allows the State to make in-season management decisions based on current data obtained from the fishery. Seasons or areas may be closed when the GHL is reached, or earlier or later based on current in-season information. GHL is used in lieu of TAC because the State has used this term for scallop management and it allows for State management within a framework of Federally-approved factors.

The GHL is the result of a process which includes the examination of the effects of different harvesting strategies on the objectives of management listed previously in the proposed scallop FMP. While harvest strategies will be evaluated relative to all of these objectives, GHL will most frequently be used as a management measure to achieve only the first two objectives. For this reason, the GHL is primarily composed of two interrelated components: a biological component and a socioeconomic component.

To achieve the biological conservation objective of preventing recruitment overfishing, the biological component, or ABC, for each area is defined as the upper limit of the GHR. Because the maintenance of adequate reproductive potential takes precedence over economic and social considerations, the ABC serves as an upper bound constraint on harvest. A target harvest level is then chosen within ABC to maximize the anticipated discounted benefits to the fishery over the long term. These benefits include: profits, personal income, employment, benefits to consumers and less tangible or less quantifiable social benefits such as the economic stability of coastal communities. The GHR represents a confidence interval around the proposed harvest level reflecting the uncertainty in stock status and the uncertainty in estimates of socioeconomic benefits. Ideally, bioeconomic analysis should be used to determine the GHL. However, such modeling efforts are relatively new and complex; in the future they should be employed along with more conventional means of determining the GHL.

Regardless of the specific approach, the process of determining a GHL which prevents recruitment overfishing and maximizes socioeconomic benefits includes the routine collection and analysis of biological, economic, social, and other data. Scallop populations vary in the level of scientific

information available for management. Consequently, exact procedures for determining appropriate ABCs and GHLs vary due to differences in the quality and quantity of resource data bases. Information necessary to evaluate the Federally-approved factors (above) for establishing GHLs include data from trawl surveys, pot surveys, fishery performance statistics (catch per unit of effort), price, personal income, employment and other market and economic data.

Having specified an ABC, a GHL must be chosen to be less than or equal to the ABC. Ideally, bioeconomic analyses can provide advice to management about the benefits to be received from alternative harvest levels. Such analyses can be used to evaluate the benefits (e.g., personal income, employment, etc.) resulting from two alternative harvest strategies. For example, high exploitation rates can be applied to obtain higher harvest levels of scallops at the expense of foregone future harvest. Alternatively, low exploitation rates can be applied to obtain higher future harvest of larger scallops at the expense of lower current harvest. Information on other socioeconomic factors, such as benefits to consumers and economic stability of coastal communities can also be used in the determination of harvest level.

An annual area management report will be prepared which describes the determination of GHLs and ABCs for all types of stocks using the best available information. This report will be reviewed by the State, NMFS, and the Council, and available for public comment on an annual basis. The GHLs contained in this report will be updated when new information is available and made available to the public.

Annual guideline harvest levels will be set within the GHR established for specific areas. The GHR established for each of the traditional weathervane scallop fishing grounds are listed in Appendix B. As new biological and fishery data are collected on scallops, GHR's will be reanalyzed for possible revision. For 1993, ADF&G intends to manage the harvest from each traditional fishing area toward the upper end of the GHR. Fishing for weathervane scallops in the remaining portions of the State (Southeast Alaska, Alaska Peninsula, Bering Sea-Bristol Bay-Adak, and other non traditional scallop grounds) is allowed under the terms of a special exploratory harvest permit, issued by ADF&G, that is similar to the permit needed to fish for scallop species other than weathervane scallops. No level of guideline harvest has been set for these areas.

In-season Adjustments

The proposed scallop FMP would authorize the State to make in-season adjustments to GHLs and to fishing period lengths and to close areas under State regulations. In making such in-season adjustments, the State shall consider appropriate factors to the extent in-season data is available on: (1) overall fishing effort, (2) catch per unit of effort and rate of harvest, (3) relative abundance of scallops, (4) achievement of GHLs, (5) size of scallops caught and landed, (6) general information on stock condition, (7) timeliness and accuracy of catch reporting, (8) adequacy of subsistence harvests, and (9) other factors that affect ability to meet objectives of the FMP.

After registration areas are opened, seasons set, minimum sizes and GHLs established preseason, events can occur in-season which would disrupt the management scheme and resultant economic benefits to the nation. When a preseason prediction proves to be incorrect or when an unanticipated event occurs which affects preseason predictions, compensatory in-season adjustments must be made to keep the management system on track toward the biological and economic objectives of this FMP. In-season adjustments and analysis will be conducted within the constraints of this FMP. All in-

season adjustments must be recorded and justified in writing and will be made available for review to the public, the State, the NMFS, and other regulatory agencies.

The State monitors the condition of scallop stocks through such data and information as are practically available, both preseason and in-season. When the State, in close communication with the NMFS, finds that continued fishing effort would jeopardize the viability of scallop stocks within a registration area, or continued fishing would be counter to the goal and objectives established by this FMP, the registration area or a portion of the registration area is closed by emergency order. In determining whether to close a registration area, the State shall consider all appropriate factors to the extent there is information available on such factors. Factors to be considered and which are currently embodied in State regulations for scallops include:

1. The effect of overall fishing effort within the registration area. Large amounts of effort are often concentrated on scallop aggregations. In-season data concerning excessive fishing effort can result in emergency closures of limited areas where these conditions occur, resulting in a more orderly fishery, and the ability to meet the biological conservation objective, as well as other objectives identified in this FMP. This provision also addresses the ability of the ADF&G to close a registration area when the projected harvest equals or exceeds the GHL established for the registration area.

2. Catch per unit of effort and rate of harvest. In addition to using CPUE to provide estimates when preseason GHLs are to be attained, these data are also analyzed in-season to check survey accuracy used to establish stock abundance levels and GHLs. Standardization of effort of the commercial fleet is always a limiting factor in interpreting in-season data. If in-season data analysis suggests stocks are significantly higher or lower than indicated by earlier information, GHLs may be adjusted in-season using the new in-season estimates. Exploitation rates are generally not changed in-season, unless the estimates of stock levels using in-season data are so different from preseason estimates that different exploitation rates are necessary.

In cases where annual survey data are either unavailable, or unreliable, in-season data are relied on heavily. Such provisions are essential for prevention of overfishing and adherence to the biological conservation objective of this FMP. To the degree exploitation rates are established to meet economic and social objectives, this provision could be used to maximize economic benefits as well.

3. Relative abundance of scallops within the area in comparison with preseason expectations. Relative abundance is usually established by comparison of current in-season data with trends established over time within the current season or comparison with previous year's CPUE data. In certain cases, survey data may be obtained during an open fishery. These relative abundance data of scallop stocks would be applied immediately to adjustment of GHLs as stated previously under item (2). This factor is usually considered as additional analysis of the data obtained or established under factors (1) and (2) discussed previously.

4. Such GHLs or GHRs as may be promulgated by State regulations. The primary use of in-season emergency order authority is when an established GHL is reached and the fishery is to be closed within current State regulations established within the framework procedures listed in this FMP. The midpoint of the GHL is usually targeted except in cases where in-season data and analysis, or other provisions discussed in this section, require closure either before or after obtaining the established GHL, or below or above the range associated with the GHL.

5. The size of scallop caught and landed. This factor is paramount to ensure product quality and prevention of unnecessary wastage. When catches of scallops require significant levels of discard

because of the amount of small scallops caught, a portion or all of a registration area may be closed to further harvest. Such closures are issued when sorting is of sufficient magnitude to have significant impacts on product quality or significant wastage. Although a high abundance pre-recruit scallops may occur in a localized area, often other areas are available for harvest and economic forces cause the fleet to move to those areas with acceptable discard rates. The ability of managers to consider these factors without rigidly establishing formulas for issuing closures provides for continued fishing when the biological or economic consequences will be minimal, even though short periods of high sorting in local areas may occur. Such flexibility allows the State to meet the biological conservation objective, as well as the economic and social objective established in this FMP.

6. General information on the condition of scallop stocks within the area. This factor includes the salability of the product. Low yields from spawning scallops are also a factor which may be considered. Use of this factor primarily addresses the economic and social objective established by this FMP.

7. Timeliness and accuracy of catch reporting by buyers, fishermen or vessel operators within the registration area to the extent that such timeliness or accuracy may reasonably be expected to affect proper management. Management of a commercial fishery depends upon appropriate and timely data. In that in-season closure decisions almost always result in short-term loss of income for the participating commercial fleet and the processing industry, even though these closures will in the long run ensure long-term economic viability of these same participants, the temptation to underreport or misreport is obvious. Without accurate data, the management process breaks down. Therefore, the State may close a fishery if the timeliness and accuracy of catch reporting is inadequate. Only with this provision does the State have the ability to ensure compliance with reporting requirements and retain the ability to accurately regulate the fishery within the objectives established by this FMP. This factor is used in justifying emergency action only when misreporting is of such magnitude as to jeopardize the management process.

8. Adequacy of subsistence harvests within the registration area. Subsistence harvests take precedence over all other harvests, as required by State regulations. Emergency order authority would be used if subsistence fisheries requirements are not being met by established regulations by the State. Emergency order authority would close commercial fisheries to ensure that subsistence harvests would be achieved without jeopardizing conservation concerns established in the biological conservation objective of the FMP.

District, Subdistrict, and Section Boundaries

The State is authorized to adjust district, subdistrict, and section boundaries on the basis of any of the following criteria: (1) If the area contains a reasonably distinct stock of scallops that requires a separate GHL estimate to avoid possible overharvest, (2) if the stock requires a different size limit from other stocks in the registration area, (3) if different timing of spawning requires a different fishing season, (4) if estimates of fishing effort are needed preseason so that overharvest can be prevented, or (5) if part of an area is relatively unutilized and unexplored and if creation of a new district, subdistrict or section will encourage exploration and utilization.

Fishing Seasons

Fishing seasons may be used to protect scallops during the spawning portions of their life cycle. Normally the fisheries have been open during these periods as the spawning may extend over several months. Weathervane scallops are diocious and spawn once annually in May to July depending on location (Hennick 1970). Fisheries conducted during sensitive biological periods should be carefully designed to prevent any irreparable damage to the stocks. Specification of fishing seasons may be important to attainment of the biological conservation, economic and social, vessel safety, and gear conflict objectives of the FMP.

Registration Areas

Existing State registration areas within the BS/AI and GOA fishery management unit are adopted. The management unit historically has been divided by the State into registration areas. Registration areas may be further divided into fishing districts, subdistricts, and sections for purposes of management and reporting. Registration areas are characterized by relatively homogeneous established fisheries on stocks of scallop that occupy distinct areas and may have different life history patterns. State regulations require vessels to register for fishing in these areas, and may require vessels to register for specific fishing districts within a registration area. Registration requirements allow estimation of fishing effort and the rate at which the resource will be harvested.

Registration areas within the management unit may be designated as either exclusive or nonexclusive. For an exclusive registration area, vessels may register for any one exclusive area and are not restricted in their choice, but cannot fish in any other exclusive area during the registration year. They can, however, fish any or all other nonexclusive areas. Fishermen often consider potential harvest, proposed prices, and distances between the fishing grounds and processing facilities when making their selection of an exclusive area. Nonexclusive registration areas are usually quite large, have developing fisheries, and may contain some sections that are both underutilized and unexplored.

The use of exclusive area designations can aid in dispersing fishing effort while still allowing the majority of the fleet the opportunity to harvest the majority of the scallops. Exclusive registration areas can help provide economic stability to coastal communities or to segments of the industry dependent on an individual registration area's scallop stocks, particularly if the character of the fishing fleet and the related industry participants depending upon the registration area's potential production would not allow movement to another registration area. This is particularly advantageous to the less mobile vessels if the area in which they fish is not the most profitable area for the more mobile vessels. This will not necessarily provide greater stability for the less mobile vessels because as fishery conditions change from year to year, the mobile vessels can change the area(s) in which they fish. However, on the average, fewer mobile vessels will fish in the less profitable areas if fishing in multiple areas is restricted. The specification of registration area, both exclusive and nonexclusive, may be important to attainment of the economic and social objectives of this FMP.

Any designation of an area or district as exclusive must be supported by a written finding by the State that considers all of the following factors to the extent information is available:

1. The extent to which the designation will facilitate proper management of the fishery.

2. The extent to which such designation will help provide vessels with a reasonable opportunity to participate in the fishery.

3. The extent to which such designation will help to avoid sudden economic dislocation. Established processing facilities and fishing fleets within a registration area may provide economic stability for the labor force and affected communities and may adversely affected by an in-season influx of additional fishing power.

4. The extent to which the designation will encourage efficient use of vessels and gear.

5. The extent to which the economic benefits conferred by the designation will be offset by economic costs and inefficiencies.

6. The extent to which other management measures could yield the results desired from the designation.

The following are examples of situations in which the designation or maintenance of the exclusive registration area might be appropriate:

1. The existence of differences in seasons between registration areas that could promote peak harvest rates only at the beginning of each season. Vessels capable of moving rapidly between areas could fish the season opening of more than one area, thereby creating an adverse impact on the vessels that planned on or were capable of fishing just one area for the entire season.

2. The occurrence of exvessel price settlements at different times in different registration areas, causing concentration of fishing and processing effort in registration areas that have completed price settlements.

3. Historic profitable utilization of the scallop resource of an area by a fleet that could not be used to fish in more distant areas, and by processors heavily dependent for their supplies of scallops upon the activities of that fleet.

4. The scallop fishing fleet has experienced rapid growth and advanced in fishing efficiency. There is, therefore, an increasing potential for overharvest of a particular stock, especially during normal fluctuations in scallop populations. Situations may exist where, in the absence of limitations, the number of vessels registering for an area or district may possess a one-trip cargo capacity that exceeds the amount of scallops that can be safely taken from that area. The absence of flexibility to modify registration areas in this instance could result in either no fishing or in an overharvest.

5. Registration areas historically fished by small vessels require a longer period of fishing time to harvest scallop resources because they cannot fish in bad weather and have limited carrying capacity. Relatively low production levels of inshore fishing grounds provides the smaller vessels opportunity to maximize their production capabilities. Larger vessels designed primarily for areas of greater fishing power can adversely affect the economics of established fleets, processing facilities, labor forces, and community dependence on production from the local resource, while failing to maximize utilization of smaller scallop stocks.

Closed Waters

The FMP recognizes State regulations that prohibit commercial fishing for scallops in certain waters. The State may designate new closed waters areas or expand or reduce existing State closed waters areas in order to meet State subsistence requirements. In making such changes, the State shall consider appropriate factors to the extent data are available on: (1) need to protect subsistence fisheries, (2) need to protect critical habitat for target or non-target species, and (3) prevention of conflict between harvesting of species.

Reporting Requirements

All vessels participating in the fishery must be licensed and registered with the State, and reporting requirements shall be deferred to the State.

Reporting of scallop catches by individual vessel operators was required as early as 1968. Current State requirements (5 AAC 39.130) include: reporting the company or individual that purchased the catch; the full name and signature of the permit holder; the vessel that landed it with its license plate number; the type of gear used; the amount of gear; the weight of scallop meats landed; the dates of landing and capture; and the location of capture. Processing companies are required to report this information for each landing purchased, and vessel operators are required to provide information to the processor at the time of sale. All reports ("fish tickets") are confidential. Reporting requirements ensure adequate information and efficient management and enforcement. The State of Alaska obtains timely information through its current reporting requirements for all vessels participating in the fishery. Additional information is currently available from the State of Alaska shellfish observer program. The price paid for the scallops is also important information for managing the fisheries and is included on fish tickets but is currently not required information by the State because it is not always available at the time the fish tickets are prepared.

Since fishery managers monitor harvest rates in-season to determine areas of greatest fishing effort, thereby preventing overharvest of individual stocks, the current State catch and processing report requirements are an important component in achieving the biological conservation, economic and social, and research and management objectives of the FMP.

State Observer Requirements

The FMP defers the State observer requirements to the State. The State may place observers aboard scallop fishing and/or processing vessels to obtain, for example, catch and effort data; species, and size composition data. Observers may provide better scientific and enforcement information than is otherwise available. The State is currently developing an industry funded observer program for scallop vessels. It is important that the State observer program and any future Federal observer program be coordinated.

Other

As previously noted, the State government is not limited to only the management measures described herein. Other management measures that may be considered for scallops may include, but are not limited to, 1) limiting automated shucking, 2) limiting crew size, 3) trip limits, 4) establishing a rotational harvest system, and 5) prohibition of shell stocking. However, implementation of other management measures not described in the proposed scallop FMP must be consistent with the FMP,

the Magnuson Act, and other applicable Federal law, and may occur only after consultation with the Council. This management measure provides for an expanded scope of Federal review.

3.0 ANALYSIS OF THE ALTERNATIVES

3.1 Environmental and Biological Impacts

The biological and environmental effects on scallops will depend on the alternative chosen. Both Alternatives 2 and 3 include a vessel moratorium, which will help maintain CPUE for participating vessels. Combined with GHL's, an orderly fishery will be conducted and fishermen will target the larger, premium size scallops, which have spawned at least once. Fewer scallops would be harvested under the GHL. Alternative 1, with no vessel moratorium and a harvest limited by GHLs, creates a potential for a derby style fishery. In a derby fishery, each vessel harvests as quickly as possible. More scallops, smaller in size, would likely be harvested prior to reaching the GHL.

There would be significant biological impacts if fishing effort and landings were unrestricted. The weathervane scallop stocks were apparently overfished in the early 1970's to the point that no landings were made in 1978. If effort and landings were allowed to increase, stocks could be subject to recruitment overfishing, with a resulting high variability in stock size. Other scallop populations around the world are vulnerable to overharvest, with slow stock recovery (Aschan 1991; Bannister 1986; Bourne 1986; McLoughlin et al. 1991; Orensanz 1986). Significant increases in Alaskan scallop harvests may jeopardize stock health and sustained fishery yield.

The alternatives to the status quo would limit the number and size of scallop dredges used in Alaska. A restriction on the maximum size and number of dredges used would greatly limit any potential impacts of scallop dredging on scallop stocks, other species, and habitat. These potential impacts, which may be minimized with federal management, are listed in Appendix D.

The options chosen for moratorium will have biological and environmental impacts. In particular, the qualifying time chosen will determine how many vessels will be allowed access to the fishery. Data on the number of persons licensed and vessels registered to fish for scallops, obtained from ADF&G Commercial Fisheries Entry Commission, provide information as to how many persons and vessels would be affected by qualifying time options. The following table shows the cumulative number of unique persons licensed and vessels registered to fish for scallops through 1992. Historical data on the fishery prior to 1979 were not available. The 1992 data are preliminary.

Years	Individuals	Vessels
only 1992	8	7
1991-1992	9	8
1990-1992	19	12
1989-1992	20	13
1988-1992	22	14
1987-1992	23	15
1986-1992	30	21
1985-1992	34	25
1984-1992	37	30
1983-1992	41	33
1982-1992	53	43
1981-1992	64	50
1980-1992	71	53

As these numbers clearly show, the potential number of vessels decreases as the qualifying period is shortened. From the above table, the potential number of vessels can be determined for any number of qualifying periods. For the qualifying periods described by the starting and ending dates proposed, the number of vessels are as listed in the following table.

	Ending Date	
Beginning Date	February 9, 1992	January 20, 1993
January 1, 1967	> 53	> 53
January 1, 1980	53	> 53
January 1, 1992	--	7

The January 1, 1992 to February 9, 1992 qualifying time was not considered for analysis because of the extremely short time frame (one month). Therefore, all of the qualifying options examined, with one exception, will allow at least 53 vessels the potential to participate in the fishery. The exception to this is the option to allow only those vessels that landed scallops from January 1, 1992 through January 20, 1993, which would limit the fishery to seven qualifying vessels. Longer qualifying periods would allow more vessels the potential to participate.

Other options chosen for moratorium will also have biological and environmental impacts. In addition to the qualifying period, the other elements are: duration, crossovers, reconstruction, replacement, exemptions for small vessels, and appeals. Any crossovers of vessels between fisheries, if allowed, will amplify any biological impacts associated with the increased capacity of the fleet. Reconstruction, replacement, and exemptions for small vessels, if allowed, will also increase the capacity of the fleet. Such an increase in capacity will directly depend on the extent of these options.

3.2 Socioeconomic Impacts

The alternatives to the status quo will affect those who harvest and process Alaskan scallops. Owners of vessels that will not qualify under the moratorium will also be affected. The options chosen for moratorium will greatly effect the economic efficiency of the scallop fleet.

A historical perspective implies that there would be significant benefits to not allowing increased fishing effort on scallops. The weathervane scallop stocks were apparently overfished in the early 1970's to the point that no landings were made in 1978. If effort and landings were allowed to increase, stocks could be subject to recruitment overfishing, with a resulting stock collapse. A stock collapse of scallops would result in loss to the Nation, as product would not be harvested and sold. The total exvessel value of scallops landed since 1990 have exceeded $3.7 million per year.

The effects of federal fishery management of Alaskan scallops on existing users also depends upon the particular suite of management measures and regulations adopted. Because this document only provides a mechanism for public comments and subsequent evaluation by the Secretary, the exact set of regulations to be adopted cannot be specified at this time. For these reasons, it is not possible to estimate precise impacts of the management plan and regulations on existing users. However, insights are provided into potential impacts of the four new management measures currently proposed.

Establishment of an optimum yield or annual guideline harvest levels may have differential effects on existing users, depending on the level of yield specified, productivity of scallop stocks, and future

changes in numbers of participants. If the number of participants exhibits historic patterns in the future, then total harvest per vessel may reflect historical values, as well. In such case, higher exvessel value would be realized only through increases in exvessel price. On the other hand, if more vessels participate in the fishery in the future, then existing users will capture smaller harvest shares. Establishment of OYs or GHLs may increase long-term future harvest above those levels that would occur in the absence of these management measures, if OYs and GHLs help prevent overharvest and promote sustainable fisheries, as planned.

Potential closures during the scallop spawning season may impose costs to those vessels that would have otherwise fished during closed periods. Marginal costs will be nil for vessels fishing in those areas (e.g., Kamishak district of lower Cook Inlet) where fishing is not permitted currently during the spawning season, whereas costs may be greater for areas (e.g., Southeast Alaska, Yakutat, etc.) where there are no closed seasons at present. However, given available fishing effort during the balance of the year, it is unlikely that total harvest will be significantly affected by seasonal closures alone.

Establishment of a minimum size limit will reduce catch rates. Increased costs will occur due to avoidance of high density areas of undersized scallops or due to additional onboard sorting of sublegal scallops. On the other hand, catch rates of larger scallops may increase in the future as more young scallops survive and grow to legal size. To the extent that a minimum size limit acts to prevent recruitment overfishing, long-term fishery productivity may be higher than levels that would occur without this regulation. Additionally, the exvessel price for larger scallops is generally higher than for smaller ones.

New requirements for onboard observers would impose a cost to existing users. As a benchmark, it was recently estimated that observers in the ADF&G shellfish observer program cost an average of about $7,400 per month. This estimate includes salary, benefits, insurance, travel, and other taxes and fees. In the crab and groundfish fisheries in the EEZ off Alaska, such costs have been widely accepted as necessary to enumerate harvests, discards, and bycatches and for enforcement considerations.

Scallops do not comprise a major component of subsistence harvest. However, under the current management system, commercial fishing permits for weathervane scallops have not been issued for inside waters of Southeast Alaska (Statistical Area A), because these stocks are considered too limited to sustain a commercial fishery in addition to existing harvests by subsistence, personal use and sport fishermen.

3.2.1 Reporting Costs

The proposed alternatives to the status quo would not increase the reporting burden on fishermen or processors. In-season management and monitoring would be based on fish ticket data and observer information. Therefore, relative to the status quo, the proposed federal management should not change the reporting costs of any participant in the fishery.

3.2.2 Administrative, Enforcement, and Information Costs and Benefits

Administrative costs and benefits will depend on the management options chosen for all alternatives. In-season management of the scallop fishery requires real-time monitoring of catches, resulting in added management costs. The amount of added costs will also depend on the options chosen for

limited access. A moratorium may will slightly increase administrative costs, as permit transfers and vessel replacements, upgrades, and crossovers will require additional monitoring. These costs may be somewhat offset if fewer permits are issued. However, a small vessel exemption will allow the capacity of the fleet and sheer numbers of vessels to increase, making it more difficult for in-season monitoring. An appeals process may also require additional administrative costs. By optimizing the use of limited State and Federal resources and prevent duplication of effort by making use of the existing State management regime, costs to the Federal government are minimized. The State has made a substantial investment in facilities, information systems, vessels, equipment, experienced personnel capable of carrying out scallop management, and research and enforcement programs.

The proposed alternatives may require some additional federal enforcement of the scallop fishery in the EEZ. In response to this change, federal enforcement officials can do one of two things: (1) obtain an increase in funding to maintain the status quo enforcement capability by increasing surveillance flights and cruises, or (2) reallocate enforcement activity from other areas and, thus, decrease the enforcement capabilities elsewhere.

All of the alternatives, including the status quo, have information costs and benefits. State and Federal observers may be placed aboard scallop fishing and/or processing vessels to obtain, for example, catch and effort data; species, and size composition data. Observers may provide the benefits of better scientific and enforcement information than is otherwise available. The State is currently developing an industry funded observer program for scallop vessels. A scallop observer program may be funded by experimental fishing permit receipts, State of Alaska general fund appropriations, federal aid funds, research grants, or other sources.

3.2.3 Impacts on Consumers

One potential benefit accrued from federally managing the scallop fishery is that the consumer will continued to be able to obtain premium sized Alaskan scallops. Prices for scallops should not be affected by federal management.

3.2.4 Redistribution of Costs and Benefits

The costs of the proposed management are borne by the vessel owners who do not qualify for permits under the moratorium. The benefits will accrue to those who harvest, process, market, and consume Alaskan scallops.

3.2.5 Benefit-Cost Conclusion

There will be costs to fishermen who cannot gain access to the scallop fishery, unless they purchase or lease a qualifying vessel. The benefits associated with federal management result from the fishery not being overcapitalized. Benefits also depend on the ability of the scallops stocks to maintain recruitment given the protection afforded by Federal management. The magnitudes of the potential costs and benefits are only known within large ranges.

4.0 EFFECTS ON ENDANGERED AND THREATENED SPECIES AND ON THE ALASKA COASTAL ZONE

Interaction between scallops and marine mammals is generally minimal. Possible exceptions are interactions with sea otters that may feed on scallops of all sizes. The sea otter is a benthic feeder and regularly dives to 30 fathoms in search of food. Sea otters have been recorded at depths as great as 50 fathoms. No documentation exists on the importance of scallops in the sea otter diet, and sea otter mortality resulting from interactions with the scallop fisheries is believed to be rare.

With any of the alternatives, commercial fishing for scallops would continue to be conducted under the same harvest levels. Therefore, the long-term predator/prey relationships that exist in local areas would not be expected to change. The overall environmental impacts of these alternatives are not well understood but are believed to be insignificant. The Gulf of Alaska ecosystem is so complex that the environmental impacts as a result of this amendment may be undetectable given the background variability of the system.

None of the alternatives are expected to have any adverse effect on endangered or threatened species or their habitat. Thus, formal consultation under Section 7 of the Endangered Species Act is not required.

Also, each of the alternatives would be conducted in a manner consistent, to the maximum extent practicable, with the Alaska Coastal Management Program within the meaning of Section 307(c) (1) of the Coastal Zone Management Act of 1972 and its implementing regulations.

5.0 OTHER EXECUTIVE ORDER 12291 REQUIREMENTS

Executive Order 12291 requires that the following three issues be considered:

(a) Will the amendment have an annual effect on the economy of $100 million or more?

(b) Will the amendment lead to an increase in the costs or prices for consumers, individual industries, Federal, State, or local government agencies or geographic regions?

(c) Will the amendment have significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of U.S. based enterprises to compete with foreign enterprises in domestic or export markets?

Regulations impose costs and cause redistribution of costs and benefits. If the proposed regulations are implemented to the extent anticipated, these costs are not expected to be significant relative to total operational costs.

The amendment would not have significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of U.S. based enterprises to compete with foreign enterprises in domestic or export markets.

The amendment should not lead to a substantial increase in the price paid by consumers, local governments, or geographic regions since no significant quantity changes are expected in the scallop markets. Where more enforcement and management effort are required, costs to state and federal fishery management agencies will increase.

These amendments should not have an annual effect of $100 million, since the total value of the domestic scallop catch is less than $10 million annually, these amendments are not expected to substantially alter the amount of distribution of this catch.

6.0 IMPACT OF THE AMENDMENTS RELATIVE TO THE REGULATORY FLEXIBILITY ACT

The regulatory Flexibility Act (RFA) requires that impacts of regulatory measures imposed on small entities (i.e., small businesses, small organizations, and small government jurisdictions with limited resources) be examined to determine whether a substantial number of such small entities will be significantly impacted by the measures. Fishing vessels are considered to be small businesses. Over 2,000 vessels may fish for groundfish off Alaska in 1993, based on Federal groundfish permits issued by NMFS. While these numbers of vessels are considered substantial, regulatory measures will only affect a much smaller proportion of the fleet. Only 7 vessels commercially harvested scallops in 1992.

7.0 FINDINGS OF NO SIGNIFICANT IMPACT

For the reasons discussed above, neither implementation of the status quo not any of the alternatives would significantly affect the quality of the human environment, and the preparation of an environmental impact statement on the final action is not required under Section 102(2)(c) of the National Environmental Policy Act or its implementing regulations.

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9.0 LIST OF PREPARERS

David Witherell
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

Gordon Kruse
Alaska Department of Fish and Game
Division of Commercial Fisheries
P.O. Box 3-2000
Juneau, Alaska 99802-2000

APPENDIX A. DEFINITIONS OF TERMS

The following terms are used extensively throughout this document:

Maximum sustainable yield (MSY) is an average over a reasonable length of time of the largest catch which can be taken continuously from a stock under current environmental conditions. MSY should normally be presented with a range of values around its point estimate. Where sufficient scientific data as to the biological characteristics of the stock do not exist, or the period of exploitation or investigation has not been long enough for adequate understanding of stock dynamics, the MSY will be estimated from the best information available. This definition adopted by the Council's Scientific and Statistical Committee (SSC) is similar to a definition presented in Ricker (1975).

Threshold is the minimum size of a stock that allows sufficient recruitment so that the stock can eventually reach a level that produces MSY. Implicit in this definition are rebuilding schedules. They have not been explicitly specified since the selection of a schedule is a part of the OY determination process. Interest instead is on the identification of a stock level below which the ability to rebuild is uncertain. When a stock is at or below threshold, the fishery will be closed entirely, because further removals from the spawning stock will further jeopardize the already uncertain ability of the stock to recover. The estimate given should reflect use of the best scientific information available (see Guideline Harvest Levels). This threshold definition differs only slightly from those used in other FMPs. The primary distinction is the specification that the fishery will be closed when the stock is at or below threshold. However, this addition is made only for clarity, and is consistent with the range of harvests specified in the definition of ABC below.

Acceptable biological catch (ABC) is a seasonally determined catch or range of catches that may differ from MSY for biological reasons. It may be lower or higher than MSY in some years for species with fluctuating recruitment. Given suitable biological justification, the ABC may be set anywhere between zero and the current harvestable biomass. The ABC is defined as zero when the stock is at or below threshold. The ABC may be modified to incorporate safety factors and risk assessment due to uncertainty. Lacking other biological justification, the ABC is defined as the MSY exploitation rate multiplied by the size of the biomass for the relevant time period. This definition of ABC differs slightly from other FMPs, in that others specify that the upper end of the range for ABCs is current biomass less threshold.

Optimum Yield (OY) is that which provides the greatest overall benefit to the nation with particular reference to food production and recreational fisheries. OY is based upon the maximum sustainable yield for a given fishery, modified by relevant economic, social or biological factors. It may be obtained by a plus or minus deviation from ABC for purposes of promoting economic, social or ecological objectives as established by law and the public participation process.

The definition of OY prescribes that the benefits of the fishery resources be allocated among all of the people affected by the fishery. These include commercial fishermen, processors, foreign fishermen, sport fishermen, distributors, consumers, governments, and a host of manufacturing and service industries. These groups usually have different and often conflicting ideas about the best use of the resources. Optimum yield then involves judgmental decisions that must be made by Councils based upon the best obtainable information.

Fishing year is a calendar year used for accounting and tax purposes. It is defined as January 1 through December 31.

Registration year is defined as January 1 through December 31.

Guideline harvest level (GHL) is the proposed level of harvest that is less than or equal to ABC, established preseason, and usually expressed as a range of allowable harvest for a species or species group of scallops for each registration area, district, subdistrict or section. The sum of GHLs represent the allowable catch within the OY range.

Recruitment overfishing is the condition that occurs when the spawning stock is reduced by fishing to too low a level to ensure adequate production of young scallops -- the recruits to the future fishery. This definition is modified from Gulland (1983).

Registration (statistical) area. According to the State regulations, a statistical area consists of a registration area comprising all the waters within the statistical area which are territorial waters of Alaska; and an adjacent seaward biological influence zone, comprised of all the waters within the statistical area which are not part of the registration area. For this FMP, the term registration area shall encompass the statistical area.

Commercial fishing means fishing, the resulting catch of which is intended to be sold or bartered.

Subsistence fishing means the taking of scallops for customary and traditional uses by Alaska residents for direct personal or family consumption and not for sale in accordance with applicable law.

APPENDIX B. SPECIFICATION OF GUIDELINE HARVEST RANGE

Guideline harvest ranges (GHR's) insure biological conservation of scallops by preventing recruitment overfishing and by sustaining long term yield. The GHR are established on the basis of pounds of shucked meats, and are estimated using the best available scientific information.

In the absence of surveys, the upper end of GHRs for Yakutat, Kodiak and Dutch Harbor have been estimated as the average of the historic catch from 1969 to 1992 minus years when no fishery and 'fishing up effect' occurs. The term 'fishing up effect' is used to describe the initial exploitation phase of a new fishery or 'removal of accumulated stock' (Gulland 1977). Catches much larger than equilibrium levels are taken for a few years immediately after substantial increases in fishing mortality rates on previously unfished stocks (Baranov 1918). Catches during this developmental period are greater than subsequent catches taken at the same rate of fishing (Ricker 1973). This cropping off of a population is evident in Kaiser's (1986) comparison of percentage age composition of the commercially caught weathervane scallops in Yakutat and the westside of Kodiak Island during fishery inception. ne percentage of age 12 or older scallops declined from 35% to 3.6% in Yakutat between 1969 and 1971. In Kodiak, age 12* scallops declined from 27.3% to 2.6% between 1968 and 1971 and age 2-6 scallops increased from 13.3% to 53.8%. Dramatic declines in historic pounds landed in specific statistical areas during the first years of the fishery coupled with changes in age composition of the commercial catch indicate that a 'fishing up effect' occurred in the Yakutat, Kodiak and Dutch Harbor scallop fisheries. The first two years of catch data were excluded from calculation of the GHR for Kodiak. Years when zero catch occurred, 1977 and 1978, were also excluded from calculation of the GHR for Kodiak. The first year of catch data was excluded from the GHR calculation for Yakutat and Dutch Harbor to account for the 'fishing up effect'. The years 1978, 1979 and 1983 (0-30 lb catch) were excluded from calculation of GHR for Yakutat. Data from 1969 to 1981 and 1983 to 1984 were excluded from the estimation of the GHR for Dutch Harbor because no fishing occurred in those years.

Recent development of scallop fisheries in Prince William Sound and Cook Inlet necessitate use of methods other than averaging historic catch data for estimating GHRS- Tie GHRs for Prince William Sound and Cook Inlet are based on estimates of exploitable biomass, a 10% harvest rate and a conversion factor of 10% average meat weight to total animal weight. Exploitable biomass for Prince William Sound is calculated using area swept methods with information from fishermen on bed size, average towing speed and pounds per tow. The GHR for Prince William Sound was outlined in Emergency Order 2-S-E-05-92 and has been adjusted down to account for more accurate estimate of exploitable biomass. Exploitable biomass for the Kamishak district in Cook Inlet is also calculated using area swept methods, however, input data are from a department survey conducted in 1984. The GHR for Cook Inlet, Kamishak district is specified in the 1992 Commercial Shellfish Regulations (5 ACC 38.330). The lower limit of the Kamishak district GHR has been changed to allow for fishery closures.

Areas exhibiting sporadic catch and effort preclude estimation of GHRs by the above methods. These areas will be open by special exploratory permit issued by the Commissioner. These areas include Southeast Area A, and Westward Areas M and Q.

Annual guideline harvest ranges for weathervane scallop fisheries are summarized as follows:

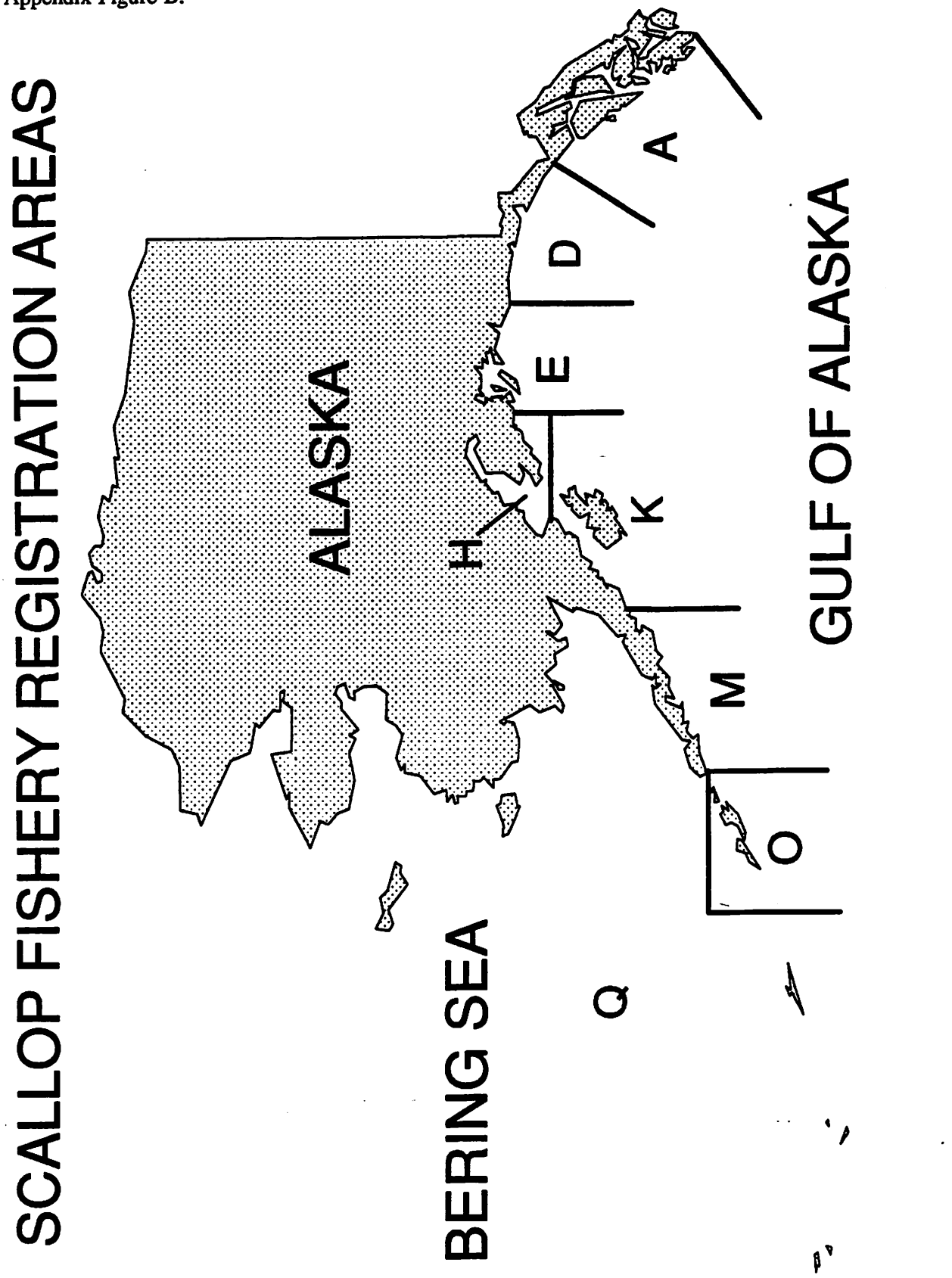
Region	Area	Guideline Harvest Range
Southeast	Area A	by exploratory permit
Southeast	Area D	0 - 215,000 pounds
Central	Area E	0 - 50,000 pounds
Central	Area H1	0 - 20,000 pounds
Central	Area H2	by exploratory permit
Central	Area H3	by exploratory permit
Westward	Area Y	0 - 385,000 pounds
Westward	Area M	by exploratory permit
Westward	Area 0	0 - 170,000 pounds
Westward	Area Q	by exploratory permit

Total of upper range of GHR's statewide: 840,000 pounds.

H1 = Cook Inlet, Kamishak District
H2 = Cook Inlet, Outer District
H3 = Cook Inlet, Eastern District

Annual guideline harvest levels will be set within the GHR established for specific areas. For 1993, ADF&G intends to manage the harvest from each traditional fishing area toward the upper end of the GHR. In other years, as new biological and fishery data are collected on scallops under the interim management plan, GHRs will be reanalyzed for possible revision. Ideally, observer data could be used to estimate stock abundances and production parameters on which future guideline harvest levels could be based.

Appendix Figure B.



APPENDIX C. BIOLOGICAL AND ENVIRONMENTAL CHARACTERISTICS OF THE RESOURCE

Weathervane scallops are distributed from Point Reyes, California, to the Pribilof Islands, Alaska. The highest known densities in Alaska occur off Kodiak Island and along the eastern gulf coast from Cape Spencer to Cape St. Elias. Scallops are found from intertidal waters to depths of 300 m (Foster 1991), but abundance tends to be greatest between depths of 45-130 m on beds of mud, clay, sand, and gravel (Hennick 1973). Similar to patterns documented for other scallop species (Caddy 1989; Robert and Jamieson 1986), beds are elongated along the direction of current flow, and aggregations often represent different age or size groups.

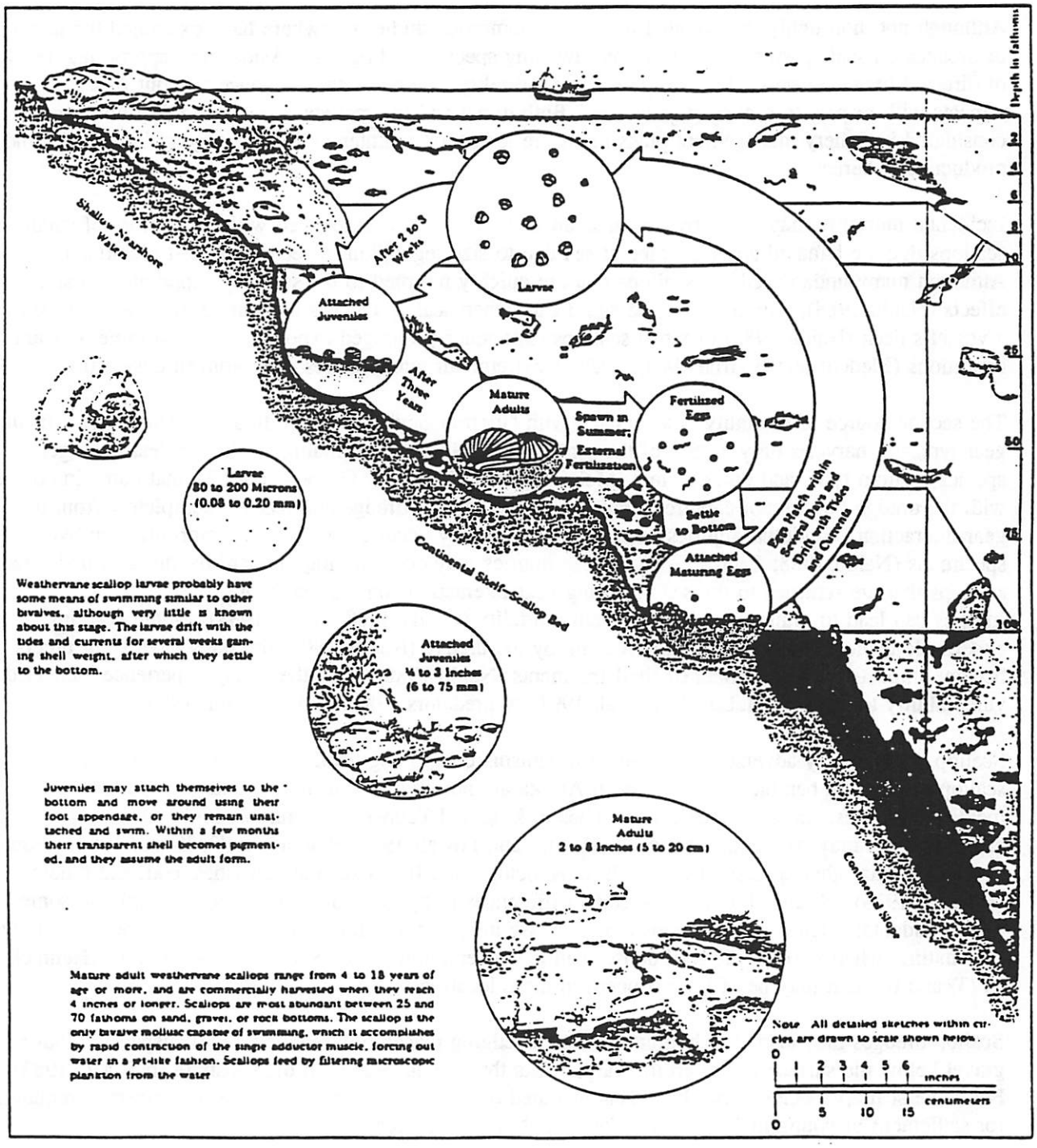
Mature males and females are distinguishable: female gonads are pink or orange-red whereas gonads of males are creamy white (Haynes and Powell 1968; Robinson and Breese 1984). Although spawning time varies with latitude and depth (Robinson and Breese 1984; MacDonald and Bourne 1987), in Alaska weathervane scallops appear to mature in mid-December to late January and spawn in May to July depending on location (Hennick 1970a).

Scallops develop through egg, larval, juvenile, and adult life stages (Hennick 1973), as shown in Appendix Figure C.1. Eggs and spermatozoa are released into the water, and fertilized eggs settle and become fixed to the bottom. After a few days, eggs hatch, and larvae rise into the water column and drift with ocean currents for about 3 weeks. Then, the larvae transform, and "post-larvae" settle and attach to a hard surface on the bottom with strings called "byssal threads." Young juveniles may remain attached, or they may become mobile by use of a "foot," or they may swim. Within a few months the shell develops pigmentation, and juveniles then resemble the adult in appearance.

Weathervane scallops are long-lived and natural mortality rates are low; individuals may live 28 years old or more (Hennick 1973). Generally, many juvenile scallops mature by age 3 at about 7.6 cm (3 inches) in shell height (SH), and virtually all scallops are mature by age 4 (Haynes and Powell 1968; Hennick 1973). Growth is most rapid during the first 10-11 years (Hennick 1973). However, growth, maximum size, and size at maturity vary significantly within and between beds and geographic areas. For example, on average, maximum size tends to be about 190 mm (7.5 inches) SH for Marmot Flats off Kodiak Island and only 144 mm (5.7 inches) SH for the Cape Fairweather - Cape St. Elias area (Kaiser 1986). The largest recorded specimen measured 250 mm (9.8 inches) SH and weighed 340 g (12 ounces, Hennick 1973). Although increasing with age and size, weight varies seasonally; meat yield declines during the spawning season and increases during the growing season.

Only limited information on biological productivity is available for weathervane scallops to promote the conservation of stocks and sustained yield of the fishery. Much of this information (Haynes and Powell 1968; Hennick 1970b, 1973) was collected during the early years of the fishery, but has been summarized more recently by Kaiser (1986). Although the fishery has been prosecuted every year since 1967 except 1978, the only assessment survey since 1972 was conducted in 1984 in lower Cook Inlet (Hammarstrom and Merritt 1985). Likewise, there have been no routine biological or fishery sampling programs conducted on weathervane scallops. The distribution of scallops in Alaskan waters is rather well-known, but insufficient information on abundance, exploitation rates, recruitment, mortality, and other key population dynamics parameters hampers fishery management.

Appendix Figure C.1



Appendix Figure C.1 Weathervane scallop life history.

Source: U.S. BLM 1980.

APPENDIX D. POTENTIAL EFFECTS OF SCALLOP DREDGING ON SCALLOP STOCKS, OTHER SPECIES, AND HABITAT

Although not thoroughly investigated in Alaska, numerous studies elsewhere have examined the impacts of dredges on scallop stocks, other bottom-dwelling species, and habitat. Aside from appropriate levels of directed harvest discussed earlier, incidental mortality is another area of concern about fishery impacts with respect to scallop populations. Both direct and indirect sources of mortality must be considered in fishery management plans to ensure long-term maintenance of healthy scallop stocks and productive fisheries.

Incidental mortality may occur by two mechanisms. The first is associated with the capture of small scallops that are handled and discarded at sea due to size regulations or economic considerations. Although many undamaged sea scallops that are quickly returned to the sea may experience no side effects (Naidu 1988), mortality may be significant when scallop catches containing rocks are dumped on a vessel's deck (Naidu 1988) or when scallops experience prolonged exposure to unfavorable onboard conditions (Medcof and Bourne 1964), such as extreme air temperatures or prolonged desiccation.

The second source of mortality is associated with "inefficiency" of scallop dredges. This type of fishing gear typically harvests only 5-35% of the scallops in their path, depending on dredge design, target species, bottom type, and other factors (McLoughlin et al. 1991). Of those 65-95% that come in contact with the dredge but are not captured, some elude the passing dredge and recover completely from the gear interaction. Sublethal injuries occur, as evidenced by occurrences of shell deformities on live specimens (Naidu 1988; Caddy 1989). These injuries may occur during onboard handling of undersized scallops that are returned to the sea or during gear interactions on the sea floor.
Injuries can lead to immediate or subsequent mortality (Caddy 1968; Naidu 1988). Some scallops experience damage and death due to crushing by the dredge (Naidu 1988), the body cavities of others become impacted with sediment or shell fragments (Naidu 1988), and others may experience increased vulnerability to disease (McLoughlin et al. 1991) or predators (Elner and Jamieson 1979).

Scallop dredges may adversely affect other organisms comprising benthic communities. Effects of scallop dredges on benthic communities in Alaska are not known, but limited data are available on incidental catches. In some areas, the catches of king and Tanner crabs may be high, and many captured crabs may be lethally damaged (Haynes and Powell 1968; Hennick 1973; Kaiser 1986). Some catches contain other species of crabs, shrimps, octopi, and fishes such as flatfishes, cod, and others (Hennick 1973). Seasonal and area-specific differences in bycatch rates exist. For example, in some areas incidental catches of king crabs may increase in spring as adult crabs migrate inshore for molting and mating, whereas other areas of dense scallop concentrations may possess few king crabs (Hennick 1973) and bycatch may be of little concern in these locations.

Scallop dredges may also alter bottom habitat. Dredging places fine sediments into suspension, buries gravel below the surface and overturns large rocks that are embedded in the substrate (NEFMC 1982). For some scallop species, it has been demonstrated that dredges may adversely affect substrate required for settlement of young to the bottom (Fonseca et al. 1984; Orensanz 1986).

APPENDIX E. SCALLOP FISHING REGULATIONS AND SELECTED STATUTES: ALASKA COMMERCIAL SCALLOP FISHING REGULATIONS (IN EFFECT FOR 1992)

MISCELLANEOUS SHELLFISH
CHAPTER 38 - MISCELLANEOUS SHELLFISH

5 AAC 38.005. STATISTICAL AREAS ESTABLISHED. (a) For the miscellaneous shellfish fishery, there are established the following statistical areas with the following code letters:

Code Letter

A - Southeastern Alaska Area. (5 AAC 38.100)

D - Yakutat Area. (5 AAC 38.160)

E - Prince William Sound Area. (5 AAC 38.200)

H - Cook Inlet Area. (5 AAC 38.300)

J - Westward Area. (5 AAC 38.400)

(b) Statistical areas are areas which the department shall utilize to obtain biological and fishing effort data and other information necessary for the formulation of comprehensive and effective conservation and management regulations governing miscellaneous shellfish resources inhabiting territorial waters of Alaska. However, regulations governing territorial waters will be applied to the remainder of the Statistical Area consistent with 5 AAC 38.010.

(c) The seaward boundary of a statistical area is a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured.

5 AAC 38.010. APPLICATION OF REGULATIONS. (a) Notwithstanding any other provision of this chapter, all regulations in this chapter applicable to territorial waters of Alaska shall be applicable also to the remainder of the Statistical Area or areas encompassing the territorial waters.

(b) Persons on a vessel navigating within a statistical area shall conduct their operations and activities in full compliance with the regulations applicable to the territorial waters of Alaska encompassed by the statistical area.

(c) The commissioner may suspend the application of this section wholly or partially in any statistical area if he finds that such application:

(1) does not tend to facilitate enforcement of regulations applicable to territorial waters of Alaska;

(2) does not tend to protect or conserve miscellaneous shellfish inhabiting the territorial waters of Alaska; or

(3) that the state has an insufficient interest in the miscellaneous shellfish inhabiting the statistical area to warrant extension of the jurisdiction of the state throughout the area.

5 AAC 38.020. REGISTRATION. (a) For the miscellaneous shellfish fishery, all territorial waters of Alaska shall be considered one registration area. All miscellaneous shellfish gear shall be registered, and all miscellaneous shellfish vessels shall be licensed and registered prior to fishing for any miscellaneous shellfish during a registration year.

(b) The registration year shall be January 1 through December 31.

5 AAC 38.035. AREA CLOSURES. (a) The commissioner shall monitor the condition of miscellaneous shellfish stocks in all statistical areas through the use of such data and information as are practically available.

(b) When the commissioner finds that continued fishing effort would jeopardize the viability of miscellaneous shellfish resources in territorial waters of Alaska within any statistical area, he shall close such waters by emergency order.

(c) In determining whether to close territorial waters of Alaska, the commissioner shall consider all appropriate factors to the extent there is information available on such factors. Factors which may be considered include:

(1) the effect of overall fishing effort within the Statistical Area encompassing the territorial waters of Alaska;

(2) catch per unit of effort and rate of harvest;

(3) relative abundance of miscellaneous shellfish resources in the area in comparison with preseason expectations of the department;

(4) such guideline harvest levels as may be promulgated by regulation;

(5) the proportion of immature shellfish being handled;

(6) general information on the condition of miscellaneous shellfish within the area;

(7) information pertaining to the maximum sustainable yield of miscellaneous shellfish within the area;

(8) timeliness and accuracy of catch reporting by buyers, fishermen or vessel operators within the registration area to the extent that such timeliness or accuracy may reasonably be expected to affect proper management; and

(9) adequacy of subsistence harvest within the areas.

(d) Within five days after the closure of any territorial waters of Alaska, the owner of any vessel registered for miscellaneous shellfish may formally request the commissioner to reopen such waters. The commissioner shall personally review pertinent information on the condition of the species within the area, and shall formally announce his decision within 14 days of the receipt of the request.

ARTICLE 2
GENERAL SPECIFICATIONS AND RESTRICTIONS

5 AAC 38.055. GEAR FOR SCALLOPS. (a) Scallops may be taken only by scallop dredges.

(b) Scallop dredge rings with less than four inch inside diameter may not be used or carried aboard scallop fishing vessels except as follows:

(1) scallop dredges with rings of three inches or greater inside diameter may be used from vessels fishing west of the longitude of the westernmost point of Sanak Island;

(2) a permit issued by the department is required for the use or transport of scallop dredges with rings of three inches or greater inside diameter; the permit may require a department observer aboard the vessel during periods or in locations as may be specified by the department; the permit may also specify conditions for transporting scallop dredges with rings of three inches or greater inside diameter to or from the area west of the longitude of the westernmost point of Sanak Island.

5 AAC 38.062. PERMITS FOR SCALLOPS, OCTOPI, SQUID, KOREAN HAIR CRAB, SEA URCHINS, SEA CUCUMBERS, SEA SNAILS, CORAL, AND OTHER MARINE INVERTEBRATES. (a) Unless otherwise specified in 5 AAC 03-
5 AAC 38, marine invertebrates, except king crab, Tanner crab, Dungeness crab, clams and spot, coonstripe, sidestripe and pink shrimp, may be taken only under the authority of a permit issued by the commissioner or his authorized designee.

(b) The permit may:

(1) stipulate location and duration of harvests;

(2) limit gear and other harvest procedures; and

(3) require periodic or annual reporting.

(c) The commissioner will in his or her discretion, require an application for a permit. The commissioner will, in his or her discretion refuse or terminate a permit if he finds that the terms of the permit have been violated or that the harvest operations jeopardize the sustained viability of the resource.

5 AAC 38.070. REGISTRATION AND INSPECTION DOCUMENTS. A vessel being registered for a registration area pursuant to 5 AAC 38.020, if the necessary information is provided, if properly licensed, and if the vessel is otherwise in compliance with the regulations of this title, shall be issued a registration certificate after the applicant completes a registration form available from the local representative of the department. The registration certificate shall be signed by the registrant, kept immediately available at all times during fishing operations by the vessel operator and shall be shown upon request to any authorized representative of the department.

ARTICLE 5
STATISTICAL AREA A (SOUTHEASTERN ALASKA)

5 AAC 38.120. FISHING SEASON FOR SCALLOPS IN AREA A. There is no closed season on scallops.

STATISTICAL AREA D (YAKUTAT)

5 AAC 38.167. FISHING SEASONS FOR SCALLOPS IN AREA D. There is no closed season on scallops.

5 AAC 38.180. CLOSED WATERS IN AREA D. The waters of Yakutat Bay east of a line from the easternmost tip of Ocean Cape to the southernmost tip of Point Manby are closed to the taking of scallops.

ARTICLE 6.
STATISTICAL AREA E (PRINCE WILLIAM SOUND)

5 AAC 38.220. FISHING SEASON FOR SCALLOPS. There is no closed season on scallops.

ARTICLE 7.
STATISTICAL AREA H (COOK INLET)

5 AAC 38.320. FISHING SEASONS FOR SCALLOPS. Scallops may be taken or possessed in

(1) the Kamishak District from August 15 through October 31, and

(2) in all other districts from January 1 through December 31.

5 AAC 38.322. GEAR FOR SCALLOPS. In the Kamishak, Southern, and Central districts, scallops may be taken only with a single dredge. The opening of a dredge may not be more than six feet in width.

5 AAC 38.324. CLOSED WATERS FOR SCALLOPS. Scallops may not be taken in the following waters:

(1) Cook Inlet north of a line from Cape Douglas to Point Adam, except for the Kamishak district;

(2) inshore from a line from Point Adam to Cape Elizabeth, then to the southwestern point of Perl Island, then to the southern point of East Chugach Island, then to Gore Point;

(3) Nuka Bay inside a line from Yalik Point to 59°27'30" N. lat., 150°22'50" W. long.

5 AAC 38.330. GUIDELINE HARVEST RANGE. The guideline harvest range for the taking of scallops from the Kamishak District is 10,000 to 20,000 pounds of shucked meat.

ARTICLE 8.
STATISTICAL AREA J (WESTWARD)

5 AAC 38.420. FISHING SEASONS FOR SCALLOPS. Scallops may be taken:

(1) from June 1 through March 31 in the Pacific Ocean waters north of 57°37'07" N. lat., and east of 152°09'01" W. long. (Cape Chiniak Light) and the waters of Shelikof Strait north of 57°17'20" N. lat. (the latitude of Cape Ikolik);

(2) from July 15 through March 31 in the Pacific Ocean waters south of the latitude of Cape Chiniak Light and waters east of the longitude of Cape Barnabas, excluding those waters northwest of a line from Cape Barnabas to Narrow Cape;

(3) there is no closed season for scallops in the remainder of Statistical Area J except as provided in Sec. 425 of this chapter.

5 AAC 38.425. CLOSED WATERS FOR SCALLOPS. Scallops may not be taken:

(1) in the Pacific Ocean waters of the Alaska Peninsula area between the longitude of Scotch Cap and the longitude of Cape Pankof, and waters of king crab registration area M extending shoreward and three miles seaward of a line (the base line) beginning at the southernmost tip of Cape Kumlik to the easternmost tip of Unavikshak Island to the southernmost tip of Atkulik Island to the easternmost tip of Kak Island to the easternmost tip of Castle Cap (Tuliumnit Point) to the easternmost tip of Chankliut Island and from there along the seaward coast to the southernmost tip of Chankliut Island to the southernmost tip of Seal Cape to the easternmost tip of Mitrofania Island to the southernmost tip of Spitz Island to the southernmost tip of Chiachi Island, and all waters west of the southernmost tip of Kupreanof Point which are depicted as Territorial Sea on NOAA Chart #16540 (10th Ed. Oct 10/81) entitled, "Shumagin Island to Sanak Island", and all waters east of the longitude of Scotch Cap Light and south of Unimak Island and the Alaska Peninsula which are depicted as Territorial Sea on NOAA Chart #16520 (20th Ed. July 10/82) entitled, "Unimak and Akutan Passes and Approaches";

(2) in waters south of the latitude of Cape Ikolik (57°17'20'N.lat.), west of the longitude of Cape Barnabas (152°52'W. long.), east of the longitude of Kilokak Rocks (126°19'W. long.) and in Old Harbor Narrows west of 153°16'W. long.;

(3) all waters of Sitkalidak Strait, Kiliuda Bay, and Ugak Bay east of 153° 16' W. long. in Sitkalidak Passage and enclosed by a line from Black Point (56° 59'30" N. Lat., 153°18' W. long.) to 56°57'30" N. Lat., 153° 13' W. long., then a line along the three mile contour to 57° 20' N. lat., 152° 23' W. long., then a straight line to the southernmost tip of Ugak Island (57° 22' N. lat., 152°18'30" W. long.) and west of a line from the northernmost tip of Ugak Island (57° 23'30" N. lat., 152° 17' W. long.) to Narrow Cape (57°26' N. lat., 152°19' W. long.):

(4) all waters enclosed by a line from Cape Chiniak (57°38' N. Lat., 152° 09' W. long.) to 57°38' N. lat., 151°47' W. long. then to Cape St. Hermogenes (58°15' N. lat., 151°47' W. long.) and from Marmot Cape (58°10' N. lat., 151°52' W. long) on Marmot Island to Pillar Cape on Afognak Island (58°09' N. lat., 152°07' W. long.)

(5) in waters of the Alaska Peninsula east of the longitude of Three Star Point (159°10' W. long.), west of the longitude of Seal Cape (158°25' W. long.), and north of the latitude of Kupreanof Point (55°34' N. lat.).

(6) in waters of Inanudak Bay enclosed by a line from Cape Kigunak to Cape Ilmalianuk on Umnak Island;

(7) all waters of Akutan Bay south of a line from Akun Head (54°18' N. lat., 165°38' W. long.) to North Head (54°14' N. lat., 165°56' W. long.),

(8) in waters of Kalekta Bay enclosed by a line from the tip of Erskine Point to the tip of Cape Kaletka on Unalaska Island.

(9) all waters of Akun Bay enclosed by a line from Billings Head (54°17'30" N. lat., 165°28'30" W. long.) to 54°13' N. lat., 165°24' 30" W. long. on the opposite shore; and

(10) all waters of Unalaska Bay enclosed by a line from Cape Cheerful (54°01' N. lat., 166°09'30" W. long.) to Cape Kalekta (54° 00'30" N. lat.),

(11) all waters of Makushin Bay enclosed by a line from Cape Kovrizhka (53°51'N. lat., 167°09'30" W. long.) to Cape Idak (53°31' 20" N. lat., 167°47' W. long.) to Konets Head (53°19'30" N. lat., 167°50'45" W. long.);

(12) all waters of Beaver Inlet south of a line from Brundage Head (53°56' N. lat., 166°12'30" W. long.) to Cape Sedanka (53°50'30" N. lat., 166°05'20" W. long.) and north of 53°42' N. lat.: and

(13) all waters of Uyak Bay, Uganik Bay, Viekoda Bay, Kupreanof Strait, Raspberry Strait, Malina Bay, Paramanof Bay, Foul Bay, and Shuyak Strait east of a line from Cape Uyak (57°38'20" N. lat., 154°20'50" W. long.) to Cape Ugat (57°52'20" N. lat., 153°50'40" W. long.) to Raspberry Cape (58°03'35" N. lat., 153°25' W. long.) to Black Cape (58°24' 30" N. lat., 152°53' W. long) to Party Cape on Shuyak Island (58°31"N. lat., 152°34"W. long.) west of 152°30' W. long. in Shuyak Strait and west of 152°50' W. long. in Whale Pass and Afognak Strait.

GENERAL PROVISIONS
CHAPTER 39. - GENERAL PROVISIONS
ARTICLE 1. - GENERAL

5 AAC 39.105. TYPES OF LEGAL GEAR.

(d) Unless otherwise provided in this title, the following are legal types of gear;

(16) a "scallop dredge" is a dredge-like device designed specifically for and capable of taking scallops by being towed along the ocean floor;

5 AAC 39.210. MANAGEMENT PLAN FOR HIGH IMPACT EMERGING FISHERIES (a) To guide management of high impact emerging commercial fisheries a plan is needed that ensures resource conservation, minimizes impacts on existing users, and provides orderly development of new fishery resources.

(b) The department may regulate a commercial fishery as a high impact emerging fishery if the commissioner determines that any of the following conditions apply to a species or species group in an area or region:

(1) harvesting effort has recently increased beyond a low sporadic level;

(2) interest has been expressed in harvesting the resource by more than a single user group;

(3) the level of harvest might be approaching that might not be sustainable on a local or regional level;

(4) the board has not developed comprehensive regulations to address issues of conservation, allocation, and conduct of an orderly fishery.

(c) The commissioner shall notify the board when a determination is made to manage a fishery as a high impact emerging fishery.

(d) The department shall close a high impact emerging fishery once it is designated as such by the commissioner and may not reopen the fishery until an interim management plan and associated regulations

have been developed. If an interim management plan and regulations have been adopted, the commissioner may allow the fishery to continue.

(e) The department shall develop an interim management plan for each high impact emerging commercial fishery. An interim management plan shall contain at least the following information:

(1) a review of the history of commercial exploitation of the species in Alaska and other relevant jurisdictions;

(2) a review of the life history of the organism;

(3) identification of specific management goals and objectives;

(4) an evaluation of potential impacts on existing users;

(5) designation and justification of the preferred management measures;

(6) an evaluation of the conservation impacts of the preferred management approach on non-target species and on non-target individuals of the same species;

(7) a plan for determining the productivity of the species and impact of the fishery;

(8) a listing of proposed interim regulations;

(9) a cost estimate for plan implementation;

(10) an analysis of customary and tradition subsistence use patterns.

(f) The commissioner may adopt regulations and open the fishery consistent with measures identified in the interim management plan. The regulations will remain in effect until the board adopts regulations under (g) of this section.

(g) Upon completion of an interim plan, the department shall petition the board under 5 AAC 96.625 to consider adoption of the management plan and associated regulations at its next regularly scheduled meeting.

(h) The department may require onboard observes as specified in 5 AAC 39.141 and 5 AAC 39.645, on fishing vessels, catcher/processor, and floating processors that participate in high impact emerging fisheries.

SELECTED ALASKA STATUTES

SEC. 16.05.050. POWERS AND DUTIES OF THE COMMISSIONER. The commissioner has, but not by way of limitation, the following powers and duties:

(20) to petition the Alaska Commercial Fisheries Entry Commission, unless the Board of Fisheries disapproves the petition under AS 16.05.251(g), to establish a moratorium on new entrants into commercial fisheries

(A) that have experienced recent increases in fishing effort that are beyond a low, sporadic level of effort;

(B) that have achieved a level of harvest that may be approaching or exceeding the maximum sustainable level for the fishery; and

(C) for which there is insufficient biological and resource management information necessary to promote the conservation and sustained yield management of the fishery.

SEC. 16.05.251. REGULATIONS OF THE BOARD OF FISHERIES.

(g) The Board of Fisheries shall consider a request of the commissioner for approval of a petition to the Alaska Commercial Fisheries Entry Commission to establish a moratorium on new entrants into a commercial fishery under AS 16.43.225 at the board's next regular or special meeting that follows the receipt by the board of the request for approval of the petition and that allows time for the notice required under this subsection. The board may consider the request of the commissioner for approval of the petition only after 15 days' public notice of the board's intention to consider whether the commissioner, in support of the request for approval of the petition, has adequately shown that the fishery meets requirements for a moratorium on new entrants under AS 16.05.050. The board by a majority vote of its members at the meeting when the petition must be considered shall approve or disapprove the petition.

SEC. 16.43.225. MORATORIUM ON NEW ENTRANTS INTO CERTAIN FISHERIES. (a) Subject to (b) of this section, the commission may establish a moratorium on new entrants into a fishery

(1) that has experienced recent increases in fishing effort that are beyond a low, sporadic level of effort;

(2) that has achieved a level of harvest that may be approaching or exceeding the maximum sustainable level for the fishery; and

(3) for which there is insufficient biological and resource management information necessary to promote the conservation and sustained yield management of the fishery.

(b) The commission may establish a moratorium on new entrants into a fishery described in (a) of this section if

(1) the commissioner of fish and game, subject to AS 16.05.251(g), petitions the commission under AS 44.62.220 to establish a moratorium on new entrants into the fishery; and

(2) the commission finds that

(A) the fishery has reached a level of participation that may threaten the conservation and sustained yield management of the fishery resource and the economic health and stability of commercial fishing; and

(B) the commission has insufficient information to conclude that the establishment of a maximum number of entry permits under AS 16.43.240 would further the purposes of this chapter.

(c) The commission may establish a moratorium under this section for a continuous period of up to four years. A fishery that has been subject to a moratorium under this section may not be subjected to subsequent moratorium under this section unless five years have elapsed since the previous moratorium expired.

(d) While a moratorium is in effect, the commission shall conduct investigations to determine whether a maximum number of entry permits should be established under AS 16.43.240 by

(1) conducting research into conditions in the fishery;

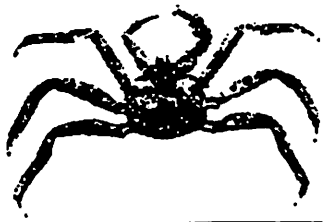
(2) consulting with the Department of Fish and Game and the Board of Fisheries, and

(3) consulting with participants in the fishery.

(e) The commission shall establish by regulation the qualifications for applicants for an interim-use permit for a fishery subject to a moratorium under this section. The qualifications must include the minimum requirements for past or present participation and harvest in the fishery. The commission may not issue an interim-use permit of a fishery subject to a moratorium under this section unless the applicant can satisfy the qualifications established under this subsection and establish the present ability and intent to participate actively in the fishery.

AGENDA C-4
APRIL 1993
Supplemental

COMMERCIAL FISHERIES



NEWS RELEASE

ALASKA DEPARTMENT OF FISH & GAME

STATE OF ALASKA

Department of Fish and Game
Carl L. Rosier, Commissioner

Jeffrey P. Koenings, Director
Commercial Fisheries Management
and Development Division

Westward Region

211 Mission Road
Kodiak, Alaska 99615

Contact: William E. Nippes
Westward Region
Shellfish/Groundfish
Management Biologist

IMMEDIATE RELEASE

Date: April 9, 1993

ATTENTION WESTWARD SCALLOP VESSELS

District registration for scallop fishing vessels operating in the Westward Region is now in effect. All scallop vessels must be registered for a single district within the Region prior to fishing. A vessel can be registered for only one district at a time. The districts are as follows:

(A) Area K, Kodiak Area, as described in 5 AAC 34.400;

(B) Area M, Alaska Peninsula, as described in 5 AAC 34.500;

(C) Area O, Dutch Harbor, as described in 5 AAC 34.600;

(D) Area Q, Adak-Bristol Bay-Bering Sea, is the combined Adak, Bristol Bay, and Bering Sea Statistical Areas as described in 5 AAC 34.700, 5 AAC 34.800, and 5 AAC 3.900.

Registrations can be obtained in Dutch Harbor or Kodiak. At the time of registration scallops from another district may be aboard. A completed fish ticket must be received by the department prior to the issuance of a new district registration for scallops aboard at time of registration.

These changes have become necessary due to concerns about the scallop stocks expressed by fishermen and the department. District registration will enable ADF&G to monitor fleet movement and harvest. The department does intend to make appropriate closures of areas which have received adequate harvest.

APRIL 20, 1993

VIA AIR COURIER

MR. CLARENCE PAUTSKE
EXECUTIVE DIRECTOR
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL
605 WEST FOURTH AVENUE
P.O. BOX 103136
ANCHORAGE, AK 99501

SCALLOP MANAGEMENT

DEAR MR. PAUTSKE:

I AM WRITING ON BEHALF OF WANCHESE FISH COMPANY, INC., A FISHING COMPANY BASED IN SEWARD, ALASKA, IN CONNECTION WITH THE COUNCIL'S PRELIMINARY REVIEW AT ITS APRIL 21-23 MEETING OF DRAFT SCALLOP PROCEED IN THE DIRECTION OF STRONG FEDERAL MANAGEMENT, FULLY DISPLACING CURRENT STATE MEASURES APPLICABLE TO FISHING IN THE EEZ.

WANCHESE FISH COMPANY CURRENTLY OPERATES TWO SCALLOP VESSELS, BOTH OF WHICH ARE REGISTERED IN THE STATE OF ALASKA, IN THE NORTH PACIFIC SCALLOP FISHERY, AND ARE OUTFITTING A THIRD VESSEL TO BEGIN FISHING THIS SUMMER. WE HAVE BEEN PARTICIPATION IN THE SCALLOP FISHERY SINCE 1991 AND EMPLOY APPROXIMATELY 35 PERSONS FROM THE SEWARD AREA. IN 1992, WE LANDED OVER 500,000 POUNDS OF SCALLOPS FROM THE NORTH PACIFIC.

AS YOU KNOW, CURRENT ALASKAN STATE REGULATION EXTENDS TO FISHING OPERATIONS OF STATE-REGISTERED VESSELS IN THE EEZ BEYOND THE STATE'S TERRITORIAL WATERS. IN FEBRUARY OF 1993, THE ALASKA DEPARTMENT OF FISH AND GAME ADOPTED AN INTERIM MANAGEMENT PLAN, HARVEST LIMITS, FISHING SEASONS AND OBSERVER REQUIREMENTS. MORE RECENTLY, JUST AT THE END OF MARCH, THE BOARD OF FISHERIES ADOPTED A PROHIBITION ON MECHANICAL SHUCKING AND A LIMITATION ON CREW SIZE TO NO MORE THAN 12 PERSONS.

P.O. BOX 369
WANCHESE
NORTH CAROLINA
27981

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FAX

IN THE FACE OF SUCH REGULATION, WE CAN SEE THAT THE COUNCIL MIGHT AT FIRST BLUSH BE ATTRACTED TO AN OPTION OF SIMPLY DEFERRING TO STATE MANAGEMENT MEASURES, AND WE UNDERSTAND THAT SUCH AN APPROACH REPRESENTS AN OPTION CURRENTLY UNDER CONSIDERATION. IN OUR JUDGEMENT, LEAVING MANAGEMENT UP TO THE STATE WOULD BE A SERIOUS MISTAKE. 61% OF THE RESOURCE IS HARVESTED OUTSIDE STATE TERRITORIAL WATERS. WE STRONGLY BELIEVE THAT A NUMBER OF ALASKAN MEASURES ARE PAROCHIAL IN NATURE, WITHOUT ADEQUATE SCIENTIFIC SUPPORT AND BASICALLY DESIGNED TO PROVIDE ECONOMIC BENEFITS TO A SMALL NUMBER OF LOCAL VESSELS. WE DO NOT BELIEVE THESE MEASURES COULD BE JUSTIFIED UNDER THE NATIONAL STANDARD OF THE MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT. IT IS THEREFORE IMPERATIVE THAT A FEDERAL PLAN BE ADOPTED AND PUT IN PLACE, ESTABLISHING A REASONABLE CONSERVATION REGIME FOR THE EEZ AND OUSTING INCONSISTENT AND CONFLICTING STATE REGULATIONS.

THE MAJOR PROBLEM IN THE ALASKAN SCALLOP MEASURES ARE FOUND IN THE MARCH BOARD EMERGENCY ACTION TO LIMIT THE SIZE OF TOTAL CREW TO 12 INDIVIDUALS AND TO BAN MECHANICAL SHUCKING. THERE ARE SERIOUS QUESTIONS CONCERNING THE PROCEDURE BY WHICH SUCH RESTRICTIONS WERE ADOPTED--THE REQUIRED ADVANCE LEGAL NOTICE DOES NOT APPEAR TO HAVE BEEN GIVEN--AND THE VERY AUTHORITY OF THE BOARD TO DELVE INTO AREAS RELATED TO PROCESSING AND MANNING. WE TESTIFIED IN OPPOSITION TO THIS ACTION ON MARCH 16 BEFORE THE BOARD, AND A COPY OF OUR TESTIMONY IS ENCLOSED. AS WE EXPLAINED TO NO AVAIL TO THE BOARD, THIS ACTION HAS NO MEANINGFUL CONSERVATION EFFECT; MAKES A FEW VESSELS LESS ECONOMIC AND EFFFIJCIENT AND EXCLUDED ONE OR TWO COMPLETELY; AND, IN THE CASE OF THE CREW SIZE LIMIT, RAISES SIGNIFICANT SAFETY CONCERNS. ALTHOUGH THERE ARE ONLY EIGHT VESSELS IN THE WEATHERVANE SCALLOP FISHERY, THE ULTIMATE IMPACT OF THE BOARD'S ACTION IS ESSENTIALLY TO IMPACT ADVERSELY THE OPERATION OF LARGER VESSELS, INCLUDING OURS, AND TO PROVIDE INAPPROPRIATE AND UNNECESSARY PROTECTION FROM LEGITIMATE COMPETITION TO SEVERAL SMALLER VESSELS.

IN LIGHT OF SUCH ACTION BY THE BOARD, WE HOPE THAT THE COUNCIL WILL MOVE VIGOROUSLY TO APPROVE AND IMPLEMENT ITS OWN MEASURES FOR SCALLOPS IN THE EEZ. SUCH MEASURERS SHOULD NOT INVOLVE MERE ADOPTION OF WHAT THE STATE HAS DONE. RATHER, THE COUNCIL'S MEASURERS SHOULD BE APPROPRIATELY TAILORED TO THE REAL NEEDS OF THE RESOURCE IN ACCORDANCE WITH THE NATIONAL STANDARDS. IN PARTICULAR, THE COUNCIL SHOULD EXPRESSLY REJECT A PROHIBITION ON MECHANICAL SHUCKING AND CREW SIZE LIMITATIONS, WHICH SHARPLY LIMIT EFFICIENCY SO THAT THESE STATE RULES CANNOT BE APPLIED AGAINST VESSELS LAWFULLY FISHING IN THE EEZ. ONLY IN THIS WAY WILL THERE BE ANY ASSURANCE THAT THE FISHERY WILL BE MANAGED FOR THE BENEFIT OF THE NATION, AS REQUIRED BY THE MAGNUSON ACT.

P.O. BOX 369
WANCHESE
NORTH CAROLINA
27981
919
473-5001

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473-5004
FAX

FRESH SEAFOOD SINCE 1936
WANCHESE
FISH COMPANY

THANK YOU VERY MUCH FOR YOUR CONSIDERATION OF THESE COMMENTS. WE LOOK FORWARD TO WORKING WITH YOU AS THE COUNCIL PROCEEDS TO CONSIDER A SCALLOP MANAGEMENT PLAN, AND WE WOULD BE HAPPY TO PROVIDE ADDITIONAL INFORMATION CONCERNING THE SCALLOP FISHERY TO ASSIST THE COUNCIL IN ITS DELIBERATIONS.

SINCERELY,

Michael Daniels

MICHAEL DANIELS
DIRECTOR

ENCLOSURE

CC: MEMBERS OF THE COUNCIL
RICHARD B. LAUBER, CHAIRMAN

MD/MH

PO
BOX 369

WANCHESE
NORTH
CAROLINA
27981

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BOARD OF FISHERIES

RECEIVED FOR 4PR 05 1993

STATEMENT OF
MICHAEL DANIELS
Director of
WANCHESE ALASKA, INC.
BEFORE THE ALASKA BOARD OF FISHERIES
ANCHORAGE, ALASKA

MARCH 16, 1993

Opposition to Petition by Kodiak Fish Company
To Limit Crew Size And Mechanical Shucking
In Commercial Scallop Fisheries in Alaska

Mr. Chairman, my name is Michael Daniels and I am a Director of Wanchese Alaska, Inc., a fishing company based in Seward, Alaska. I am appearing before the Board today to oppose a petition filed by Kodiak Fish Company ("KFC") to limit the efficiency of scallop fishing vessels. Just last month, the Department of Fish & Game ("DFG") approved an interim management plan ("Interim Plan") for scallop fishing. Emergency regulations implementing the Interim Plan will go into effect in the next 30 to 45 days. These emergency regulations will govern scallop fishing throughout the State until the Board takes up a permanent management plan for scallop fisheries in early 1994.

The petition pending before the Board seeks approval of emergency action to limit the size of total crew on scallop vessels to 12 individuals and to ban mechanical shucking. A comparable recommendation was rejected by DFG in drawing up the Interim Plan. We strongly oppose the petition for four reasons:

(1) There is no "emergency" that justifies regulations which only serve to allocate a limited take of scallops among the few vessels in the fishery. At present, only eight vessels operate in the weathervane scallop fishery. The recommended measures would significantly impact only the larger vessels, including ours.

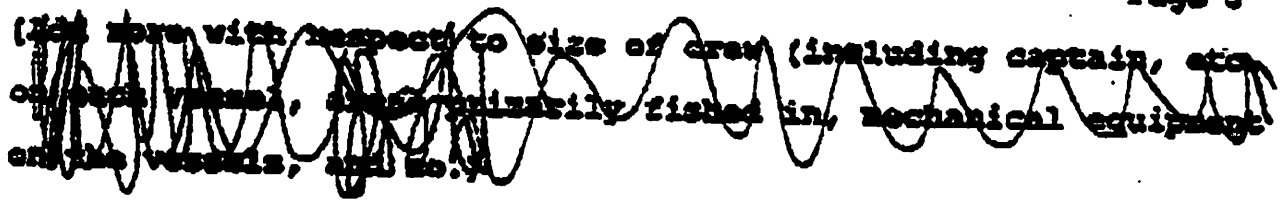
(2) The actions recommended by the petition will not have any meaningful conservation effect in the fishery over and above DFG's Interim Plan.

(3) The measures recommended in the petition will make a few vessels less economic and efficient in what is considered a newly emerging fishery, and would exclude one or two completely.

(4) The crew size limit reduces safety on our vessels to an unacceptable level.

Background of Our Company

Wanchese Alaska, Inc. currently operates two scallop vessels in the State, F/V MISTER BIG (size 146) and F/V TRADEWIND (size 99). Both are registered with and fully licensed by the State of Alaska. We are also outfitting another vessel which will begin scallop fishing on July 1, 1992. Wanchese has been in the scallop business in North Carolina for 35 years. We began our scallop operations here in Alaska in 1991. Our company employs 35 individuals in Seward, including 3 administrative personnel and 30 on our vessels as crew. We landed over 500,000 pounds last year. Our total investment in Alaska is approximately $ 1,500,000 excluding landed catch value.



We have made a major commitment to the fisheries of this State and we believe that the scallop resources, if properly managed, offer a long-term commercial opportunity for our company, and others. Therefore, we support interim measures to set sensible rules for a viable weathervane scallop fishery until a more comprehensive plan can be prepared.

The Scallop Petition Pending Before the Board

In July, 1992, DFG announced its intent to adopt an Interim Plan for the weathervane scallop fishery. This action is based on 5 AAC 39.210, which provides the Department authority to issue management measures for High Impact Emerging Fisheries pending approval of a permanent plan by the Board. In September, 1992, the KFC provided comments to the Department on the proposed Interim Plan in which KFC recommended, among other restraints on the efficiency of scallop vessels, a limit on crew sizes and a ban on shucking devices. In those comments, KFC claimed that limits on entry and efficiency such as they were suggesting were the best way to conserve the scallop resource rather than limits on total harvest. KFC also recommended that "crew sizes be limited to ten plus the captain, mate and engineer (and additional licensed personnel if required by law)."

DFG did not accept these recommendations when, on February 24, 1993, it approved five basic elements for the Interim Plan:

(1) registration requirements for eight scallop fishing areas; (2) gear restrictions for weathervane scallops set at a maximum 15 foot limit on dredge with rings not less than four inches inside diameter; (3) guideline harvest limits (GHLs), in pounds of shucked meat, for each of the traditional weathervane scallop areas; (4) two half-year fishing periods with GHLs split equally between each season; and (5) an observer program, which is still being developed and will not be implemented until July 1, 1993. Upon learning that the Department was not going to adopt a limit on crew size nor a ban on mechanical shucking, KFC filed its petition with the Board.

1. No Emergency Exists.

The petition does not indicate the basis for requesting emergency action by the Board. DFG has just gone through an six month review of the scallop fishery in drafting its Interim Plan. The agency did not adopt either a crew limit or a ban on mechanical shucking, even though such measures were suggested and then considered. These measures will be considered again in connection with next year's permanent plan. The adoption of the Interim Plan--in particular, the GHLs--has resolved the conservation concern identified by DFG as the primary reason for taking emergency regulatory action this year. 5 AAC 39.210 requires DFG to ensure resource conservation while minimizing impact on "existing users" and providing for orderly "development" of new fishery resources. That is what was has already been accomplished by adoption of the Interim Plan.

2. No Conservation Benefit From Either Measure.

A limit on crew size is not an appropriate management tool for a scallop fishery that is made up of so few vessels. Crew size limits are being applied in the Atlantic Sea Scallop Fishery because over 150 vessels operate in that fishery. Crew size limits serve both to protect smaller scallops in that large fishery and to allocate the catch among all participating vessels. The four inch limit on rings adopted by DFG we believe adequately addresses the problem of harvesting smaller scallops. Using a crew limit or a ban on mechanical shucking to allocate the catch is not necessary in a fishery with so few vessels and is contrary to the legislative mandate in 5 AAC 39.210. In an emerging fishery, the first action should not be to limit efficiency of the existing participants

3. The Measures Affect Only Two Participants.

With only eight participants in the fishery, it is unfair to adopt measures that have the greatest impact on three of the participating vessels. The crew size limits and mechanical shucking ban hit our two boats and one owned by Arctic Alaska more directly than the other participants in the fishery. The ban on mechanical shucking will put ~~one~~ vessel(s) out of the fishery. Thus, the proposal, because no clear conservation benefit will result, is unfair and does not minimize impact on existing users, as required by statute.

4. Crew Limits Are Inherently Unsafe.

You will note that KPC has changed its position on whether the captain, mates, engineers, or product packagers should be included in the limit. KPC's position in the petition before you--asking for a limit of 12 on total crew, not just shuckers--could very well create real safety problems on our vessels, which are larger and require more crew to operate safely. This problem was brought to the attention of DFG during consideration of the Interim Plan. The Board should not adopt management measures that decrease safety on scallop fishing vessels.

Scallop Management Measures, Generally.

We also want to mention briefly our views on a number of other issues relating to scallop management in light of the recent actions by DFG and the impending development of a permanent plan.

Research. A key reason for adopting the DFG Interim Plan is the need to be conservative in the absence of adequate biological information about scallops. We know that, in the past, scallop fishermen have harvested as much as 1.9 million pounds of shucked meats in a single year and then the catch declined dramatically over a ten year period. The fishery has been subject to few regulations. However, it is also true that the stocks have not been thoroughly assessed by agency scientists. Nor have all potential scallop beds in the state been investigated.

Consequently, we urge DFG to undertake further stock assessment and to allow exploratory fishing for new scallop beds in those areas soon to be subject to GHLs. We recognize that

exploratory fishing is allowed in other areas not subject to GHLs. But we believe that unfished beds may still be found within the more traditional areas. The presence of observers on our vessels will assure compliance with conservation measures in GHL areas during exploratory fishing. Fisheries participants should be assessed a fee or other charge to finance the research effort.

Limits on Entry. DFG and the North Pacific Fishery Management Council have proposals under consideration to limit entry into Alaska's scallop fisheries. Concern has been raised about an invasion of scallop vessels from the East Coast. The North Pacific Council staff concluded that only about 10 to 14 of the vessels now in the Atlantic Sea Scallop Fishery "have the potential" to move to Alaska. Although we do not believe an invasion is on the way, nonetheless we support the concept of limits on entry. A quick review of the records shows that from 1987 to 1992 the number of vessels operating has ranged from 4 to 9, and remained steady in 1991 and 1992 at 7. One of these vessels

Observers. We support requiring industry-funded observers on vessels in the scallop fisheries. We suggest, however, that the number be limited when a group of vessels are all fishing in the same areas. Observers will also serve to determine if by-catch problems in fact exist.

Guidance Harvest Levels. Our company remains concerned that the GHLs adopted by DFG are too conservative. We believe a state-wide limit of 1.52 million pounds of shucked meat is sustainable. The Interim Plan of 390,000 pounds is too limited. A research plan should be instituted to determine if higher GHLs can be sustained.

Summary and Conclusion.

Wanchese Alaska, Inc. is strongly opposed to the petition filed with the Board by KFC to limit efficiency in the scallop fisheries. We submit that KFC has already taken appropriate and adequate steps to address the issues that are the subject of the petition through adoption of the Interim Plan. We ask that the Board deny KFC's scallop petition.

Thank you for the opportunity to present our views.