

North Pacific Fishery Management Council

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December 1, 1995

DRAFT AGENDA

**120th Plenary Session
North Pacific Fishery Management Council
December 6-10, 1995
Anchorage Hilton Hotel
Anchorage, Alaska**

The North Pacific Fishery Management Council will meet December 6-10, 1995 at the Hilton Hotel in Anchorage, Alaska. The meeting will begin at 8:00 a.m. on Wednesday, December 6. Other meetings to be held during the week are:

<u>Committee/Panel</u>	<u>Beginning</u>
Advisory Panel	8:00 a.m., Monday, Dec. 4
Scientific and Statistical Committee	8:00 a.m., Monday, Dec. 4

All meetings except Council executive sessions are open to the public. Other committee and workgroup meetings may be scheduled on short notice during the week. All meetings will be held at the hotel unless otherwise noted.

INFORMATION FOR PERSONS WISHING TO TESTIFY BEFORE THE COUNCIL

Sign-up sheets are available at the registration table for those wishing to testify before the Council on a specific agenda item. Sign-up must be completed before public comment begins on that agenda item. Additional names are generally not accepted after public comment has begun. A general comment period is scheduled toward the end of the meeting, time permitting, for comment on matters not on the current agenda.

Submission of Written Comments/Testimony. Any written comments and materials to be included in Council meeting materials must be submitted to the Council office **by 5:00 p.m. on Wednesday of the week before the Council is scheduled to begin (i.e., November 29 for this meeting).** Material received after the deadline may not be included in meeting materials. Written materials provided during the meeting for distribution to Council members should be provided to the Council secretary. A minimum of 18 copies is needed to ensure that Council members, the executive director, NOAA General Counsel and the official meeting record each receive a copy. If you wish copies to be available for the Advisory Panel (22), Scientific and Statistical Committee (12), staff (10) or the public (50), they must also be provided after the pre-meeting deadline.

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**120th Plenary Session
North Pacific Fishery Management Council
December 6-10, 1995
Anchorage Hilton Hotel
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	<u>Estimated Hours</u>
A. CALL MEETING TO ORDER	
(a) Approval of Agenda	•
(b) Approval of Minutes of Previous Meetings	•
B. REPORTS	
B-1 Executive Director's Report	•
B-2 Domestic Fisheries Report by ADF&G	•
B-3 NMFS Management Report (includes status of amendments and regulatory actions)	•
B-4 Enforcement and Surveillance Report	•
	(2 hours for A/B items)
C. NEW OR CONTINUING BUSINESS	
C-1 <u>Committee Memberships</u> Approve memberships on AP, SSC, and Pacific Northwest Crab Industry Advisory Committee.	(0.5 hours)
C-2 <u>Halibut/Sablefish IFQs</u> (a) Final action on Area 4 halibut catch sharing plan. (b) Initial review of plan amendment to allow use of large boat IFQs on smaller vessel size classes ("buy-down" provision).	(2 hours)
C-3 <u>Improved Retention and Utilization</u> Review analytical outline for plan amendment; further direction from Council.	(2 hours)
C-4 <u>Individual Bycatch Quotas/Comprehensive Rationalization</u> Review analytical outline for IBQ plan amendment; further direction from Council.	(2 hours)
C-5 <u>Observer Program</u> (a) Observer Oversight Committee Report. (b) Final Council decision on fee program.	(8 hours)

16.5 Agenda Hours

D. FISHERY MANAGEMENT PLANS

D-1 Final Groundfish Specifications for 1996 (8 hours)

- (a) Approve final BSAI SAFE.
- (b) Approve final 1996 BSAI groundfish and bycatch specifications. Includes recommendation on limiting amount of pollock that can be taken by non-pelagic trawl gear in a directed fishery.
- (c) Approve final GOA SAFE.
- (d) Approve final 1996 GOA groundfish and bycatch specifications.
- (e) Set discard mortality rates for halibut in the groundfish fisheries.
- ~~(f) Report on State groundfish management.~~ *Move to Jan.*

D-2 Groundfish Amendments (4 hours)

- (a) Final review of POP rebuilding revisions in GOA.
- (b) Initial review of pollock trimester allocations in GOA.
- (c) Structure alternatives for Pacific cod gear allocation amendment.

D-3 Staff Tasking (1 hour)

E. FINANCIAL REPORT

F. PUBLIC COMMENTS

G. CHAIRMAN'S REMARKS AND ADJOURNMENT

30.5 Total Agenda Hours

TIME SUMMARY

Total agenda hours	30.50 hours
Lunches - 5 days (1.25 ea)	6.25 hours
Breaks (4/day, 20 min ea)	<u>6.75 hours</u>
Total hours required:	43.50 hours

Meeting as follows: (Wednesday through Sunday only)

8 am - 5:30 pm, 5 days x 9.5 hours = 47.5 hours

FOR THOSE WISHING TO TESTIFY BEFORE THE ADVISORY PANEL

The Advisory Panel has revised its operating guidelines to incorporate a strict time management approach to its meetings. Rules for testimony before the Advisory Panel have been developed which are similar to those used by the Council. Members of the public wishing to testify before the AP must sign up on the list for each topic listed on the agenda. Sign-up sheets are provided in a special notebook located at the back of the room. The deadline for registering to testify is when the agenda topic comes before the AP. The time available for individual and group testimony will be based on the number registered and determined by the AP Chairman. **The AP may not take public testimony on items for which they will not be making recommendations to the Council.**

FOR THOSE WISHING TO TESTIFY BEFORE THE SCIENTIFIC AND STATISTICAL COMMITTEE

The usual practice is for the SSC to call for public comment immediately following the staff presentation on each agenda item. In addition, the SSC will designate a time, normally at the beginning of the afternoon session on the first day of the SSC meeting, when members of the public will have the opportunity to present testimony on any agenda item. The Committee will discourage testimony that does not directly address the technical issues of concern to the SSC, and presentations lasting more than ten minutes will require prior approval from the Chair.

COMMONLY USED ACRONYMS

ABC	Acceptable Biological Catch	MFCMA	Magnuson Fishery Conservation and Management Act
AP	Advisory Panel	MMPA	Marine Mammal Protection Act
ADF&G	Alaska Dept. of Fish and Game	MSY	Maximum Sustainable Yield
BSAI	Bering Sea and Aleutian Islands	mt	Metric tons
CDQ	Community Development Quota	NMFS	National Marine Fisheries Service
CRP	Comprehensive Rationalization Program	NOAA	National Oceanic & Atmospheric Adm.
EA/RIR	Environmental Assessment/Regulatory Impact Review	NPFMC	North Pacific Fishery Management Council
EEZ	Exclusive Economic Zone	OY	Optimum Yield
FMP	Fishery Management Plan	POP	Pacific ocean perch
GOA	Gulf of Alaska	PSC	Prohibited Species Catch
IBQ	Individual Bycatch Quota	SAFE	Stock Assessment and Fishery Evaluation Document
IPHC	International Pacific Halibut Commission	SSC	Scientific and Statistical Committee
ITAC	Initial Total Allowable Catch	TAC	Total Allowable Catch
IVQ	Individual Vessel Quota (Bycatch)	VIP	Vessel Incentive Program

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Certified by _____

Date _____

ADVISORY PANEL MINUTES SEPTEMBER 25-28, 1995 SEATTLE, WASHINGTON

Advisory Panel members in attendance:

Bruce, John (Chair)
Alstron, Ragnar
Benson, Dave
Burch, Alvin
Cotton, Bruce
Falvey, Dan
Fraser, David
Fuglvog, Arne
Jones, Spike
Madsen, Stephanie

Maloney, Pete
Nelson, Hazel
Paddock, Dean
Roos, John
Sevier, John
Stevens, Michael
Stewart, Beth (Vice-Chair)
Wurm, Robert
Westman, Gary
Yeck, Lyle

Absent are Scott Highleyman and Doug Ogden.

C-2 Sablefish/Halibut IFQs

The AP recommends that the Council adopt the Implementation Team's recommendation regarding the Aleutian Island Sablefish season opening. The AP believes that it would be better to take final action on this issue when there is more information (i.e., will IPHC allow retention of halibut? what information will be available from RAM?). The AP requests the Council ask IPHC to resolve the issue of halibut retention in the Aleutian Island sablefish fisheries at its January meeting. Motion carries unanimously (20/0).

The AP recommends that the Council request that IPHC retain the historical allocation in Area 4 for the 1996 season while alternatives 1 and 2 are developed into an EA/RIR and a permanent allocation is established. Motion carries 18/1.

The AP further recommends that the Council include an alternative to separate the CDQ portion of Areas 4C, D and E halibut TAC from the overall area TAC formula and allow the distribution of the CDQ halibut to be done through the State of Alaska. Motion carries unanimously.

The AP requests the Council initiate action at the December meeting on the following issues and that the IFQ Implementation Team review and comment:

With respect to the IFQ Program in general:

- (1) Establish a working overage plan for small IFQ landings (i.e., 400 lbs or 10% of the trip, which ever is greater,
- (2) Establish provisions allowing IFQ deliveries to tenders,
- (3) Allowing quota share to be used on vessels in the same size class or smaller,
- (4) Adjusting the 12-hour unloading period annually to meet the needs of different regions,
- (5) Allowing immediate transfer of IFQ to a surviving spouse, with leasing provisions, for a period of three years,
- (6) Examine and consider the emergency transfer provisions contained in the Commercial Fisheries Entry Commission's statutes and regulations,
- (7) Eliminating the requirements for QS holders to remain on board when waiting to unload, and
- (8) Consider higher BSAI ownership caps for the Bering Sea.

With respect to the Block Plan:

- (1) Increasing the sweep-up provisions as follows:

Halibut	3,000 - 20,000 lbs
Sablefish	5,000 - 20,000 lbs
- (2) Applying the 10% leasing provisions to blocks, and
- (3) Deleting the block provisions in all or some areas.

Motion carries unanimously.

C-3 CRP

License Limitation

For issues that needed clarification, the AP reaffirmed its June recommendations to the Council for issues where the Council's actions differed from the APs. The AP also makes the following additional recommendations:

The AP recommends that the Council use June 17, 1995 to define "current owners." (Transfers of rights are recognized.) Motion carries 16/1/1.

The AP recommends that no additional special exceptions be made for "lost vessels." Motion carries 16/1/1.

The AP understands that a problem of equity may have been created in the attempt to provide for crossovers. This problem can be addressed by the AP's June action, as excepted below:

The AP also recognized that moratorium crossovers on or before December 11, 1994 were allowed for all legal gears and that crossovers using "pot gear only" may continue through the moratorium period. The 6/15/95 date prevents vessels from crossing into groundfish or crab and receiving a license after this date. The AP also extended the EQP to 6/15/95 to allow vessels which receive a general license to qualify for endorsements and to recognize current participation.

Motion carries unanimously.

The AP recommends that a federal permit requirement be added to the license limitation eligibility requirements for the Endorsement Qualifying Period (EQP). The motion carries 14/2/2.

The AP recommends the Council allow an additional comment period on the License Limitation package before a package is sent back to the Secretary. Motion failed 5/12 (Minority Report).

The AP recommends that the Council set up an industry implementation work group for the License Limitation program. The motion carries 17/1.

Pollock ITQ Program

The AP recommends that the Council direct staff to analyze both a pollock only and an all groundfish BSAI program. Motion failed 6/13 (Minority Report).

The AP recommends that the Council include analysis of 1-pie which would include allocation to both harvesters and processors, and a 1-pie system which incorporates inshore/offshore allocation with the pollock ITQ analysis. Motion carries 13/4.

The AP recommends that the Pollock IFQ analysis includes a discussion of a mechanism for a scheduled reduction in PSC bycatch. This motion was amended to state that the Pollock IFQ analysis include a built-in bycatch reduction plan for all current and proposed IFQ fisheries (amendment carries 17/2). Motion is further amended to apply bycatch reduction plan to all CDQ fisheries as well and carries 17/0. The main motion then failed 9/9.

MINORITY REPORT C-3 CRP - LICENSE LIMITATION

Having put together the vast array of elements into an integrated License Limitation Program it is time to look at the program as a whole and judge it against the objectives. This should be done at the Council level before it is submitted to the Secretary where it is subject to an all or nothing decision on approval.

Particular concerns exist with the completed License Limitation Program with regard to equity and efficacy. The Western GOA/BSAI qualification criteria of only one landing of any amount rewards speculative entry and contrasts with Central and Eastern GOA multi-year multi-landing requirements leaving this area as a dumping ground for excess effort. This departure from the AP recommendation which included a threshold poundage requirement and consistent number of landings requirement amongst areas takes away any attempt to consider dependency and to treat vessels equitably in different areas.

Signed: Beth Stewart David Fraser
 Dave Benson Mick Stevens

MINORITY REPORT C-3 CRP - POLLOCK ITQ

Initial overview of a pollock only ITQ reveals a number of serious issues that will arise from a single species ITQ with regard to bycatch of other groundfish and impacts on other groundfish and crab fisheries. Dealing with these problems may be as complex as administering a full ITQ system for BSAI groundfish fisheries.

Consideration of a pollock only ITQ should be compared to an all species system so that an informed choice can be made between alternatives. The argument that it is premature to consider all groundfish species is not valid in light of the Council decision to proceed with an all species CDQ program which will involve all the same monitoring and enforcement issues.

Signed: David Fraser Beth Stewart
 Dave Benson Mick Stevens

C-5 Full Utilization and Discard Reduction

The AP recommends that the Council continue to move forward with **Improved Utilization and Improved Retention** as a means for reducing bycatch and discards. The analysis should include a species by species approach to improving utilization. The analysis should first focus on the following discarded species in three fisheries:

- (1) pollock and cod in the midwater BSAI/GOA pollock fishery,
- (2) rock sole, pollock and cod in BSAI/GOA rock sole fishery, and
- (3) pollock, rock sole and P. cod in the BSAI/GOA P. cod fishery.

Note: The AP prefers the term improved utilization to full utilization because it is more accurate. The AP also believes that the analysis should include a range for full utilization and full retention. Further, the AP remains concerned about NMFS's ability to implement any of the proposals to date that may reduce bycatch and discard. The AP recommends the Council establish an industry work group to begin to develop methods to address those issues. Motion carried 13/4.

D-3 (a, b) BSAI SAFE/'96 Specifications

TACs

The AP recommends that the Council rollover the 1995 BSAI TAC with the following changes and notes: Atka mackerel should be reapportioned consistent with the Plan Team findings as follows:

Western	51.9%	=	41,520
Central	14.0%	=	11,200
Eastern	34.1%	=	27,280

The AP would also like to flag the following concerns:

The AP recommendation to rollover 1995 TACs for initial 1996 is convenient because it does not address any potential adjustments of individual species TACs that might be appropriate (recognizing the need to stay within the 2 million mt cap). The most recent scientific data indicates a significant increase in the area 518 pollock biomass for which an ABC has been recommended by the Plan Team. A substantial increase in the area 518 pollock TAC for 1996 and the initial TAC for management purposes at the beginning of 1996 will have to be addressed at the December meeting.

Concerns exist relative to the pollock ABC related to the higher exploitation rate used in the BSAI in the 1990s relative to the GOA and 1980s in the BSAI. A further concern relates to uncertainty about the strength of the 1992 year-class as a component of the ABC based on the chart which shows a strong 1992 year-class in the 1994 hydro acoustic survey which does not appear in the 1995 trawl survey. Motion carries unanimously.

Crab PSC

The AP recommends that the Council rollover 1995 Crab PSC limits, but the AP flags any zone closures in the rock sole fishery that may cause redistribution of crab bycatch at the December meeting, will probably result in changes. Motion carries 18/1.

Halibut PSC

Rollover the Halibut PSC amounts from 1995, except for halibut in the sablefish/turbot/arrowtooth category. The AP recommends a zero (0) halibut allocation. The 120 mt to be distributed evenly between other flats and yellowfin sole. An amendment was made that would take the entire 120 mt and move it to P. cod, but the amendment failed 2/10. The motion was further amended to evenly distribute the 120 mt as follows: 40 to P. cod, 40 to O. flats and 40 to yellowfin sole. The amendment carried 12/3. The main motion carries 14/1.

D-3 (c, d) GOA SAFE/'96 Specifications

The AP recommends that the Council:

TACs

Set the 1996 TACs equal to the 1996 ABCs as recommended by the SSC except for POP where the AP recommends the proposed 1996 TAC (which is determined by the rebuilding plan) and that the deep water flatfish, rex sole, flathead sole, shallow water flat and arrowtooth be set at 1995 TAC. Motion carries unanimously.

Halibut

Rollover the 1995 halibut apportionment (without seasonal apportionment). Motion carries unanimously.

VIP GOA/BSAI

The AP was quite concerned that over half the fleet appeared to be exceeding the current 4% VIP rate. Given the changes made two years ago (not allowing vessels to use arrowtooth to dilute the rate and separating the deep and shallow water flat fisheries), the AP recommends that the Council raise the GOA VIP rate to 5%. The AP further recommends that the Council ask staff to begin developing an analysis of an amendment to shift to a VIP rate based on retention and an analysis of appropriate VIP rates under such a program. Motion carries unanimously.

Halibut Mortality GOA/BSAI

The AP recommends that the Council send the IPHC 1996 recommendations for halibut mortality rates out with the package for the December meeting for both BSAI and GOA.

The AP notes that the sablefish numbers are based on the fishery before implementation of the ITQ program. IPHC may have new data at the December meeting which would help reassess that rate.

D-4 Crab Bycatch Management

The AP recommends that the Council establish a closure to bottom trawling in area bounded by 56°00' to 57°00' and 162°00'W and 164°00' for the period January 1 - March 31 annually. The area bounded by 56°00' to 56°10' will be removed from the closure parameters during the years in which a GHL for Bristol Bay red king crab is established. The motion carries 15/4. The AP considered a separate king crab cap for the March 31 - December 31 period.

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Certified Law Bendurein
Date 11/24/95

MINUTES Scientific and Statistical Committee September 25-28, 1995

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met September 25-28, 1995 at the Radisson Hotel in Seattle. All members were present:

Terrance Quinn II, Chair
Doug Eggers
Rich Marasco
Jack Tagart
Phil Rigby
Marc Miller

Keith Criddle, Vice-Chair
Al Tyler
Harold Weeks
Bill Aron
Sue Hills
Doug Larson

The morning of September 25 was devoted to a video and slide presentation of ocean circulation in the Gulf of Alaska (Jim Ingraham, AFSC) and a workshop on the stock synthesis model used in many Council stock assessments (Jim Ianelli, AFSC). The SSC thanks both for excellent presentations.

B-5 STELLER SEA LION REPORT

Richard Merrick provided a status report on the Steller sea lion status review under the ESA. The species is currently listed as threatened and is considered to be one stock. It is under consideration for relisting as an endangered species. If so, it is likely that the stock will be considered in two parts, an eastern component which would retain threatened status and a western component (west of Prince William Sound) that would be listed as endangered.

The implications to management for an endangered listing are not clear, but it is likely that no further restriction on commercial fisheries will be legally required by the revised listing because no Alaska fishery has been designated as having a high interaction rate with marine mammals. However, increased public sensitivity generated by the new status could increase pressure to further restrict commercial fisheries and possibly reduce the number of animals taken by subsistence hunting.

Cluster analysis of the rate of decline at sea lion rookeries, combined with diet analysis from 560 scats from the same rookeries, showed that large rates of decline were correlated with less diverse diets. The proportion of pollock in the diet declines from east to west while the proportion of Atka mackerel in the diet declines from west to east. Diets in the Dutch Harbor-Unimak Island area were the most diverse and the rate of decline was lowest there.

Examination of the possibility of sleeper shark predation as a source of sea lion mortality has begun through a request to industry contacts for information and stomach samples from sharks taken during fishing operations. Sleeper sharks are well known as mammal predators in the North Atlantic and the one record of a 13 foot specimen from Kachimak Bay indicated that 3 harbor seals were in its stomach.

C-2(a) HALIBUT/SABLEFISH IFQ's

The SSC heard the presentation about an IFQ Evaluation Plan by Phil Smith of the RAM Division, NMFS. The SSC commends the Division for undertaking this project, as so often fishery management measures get approved and are never evaluated again. The SSC suggests a further improvement for the Plan, which would make it a more complete evaluation: to include a section which relates information gained about the program back to the myriad problems identified in the EA/RIR.

C-2(c) EARLY SABLEFISH OPENING IN ALEUTIAN ISLANDS

The SSC reviewed the RIR and found that it contains sufficient information to evaluate the proposal to extend the sablefish season. However, a review of recent (1994 and first half of 1995) price data indicated lower prices during the first quarter of each of these years. This is contrary to the price pattern suggested by the proposers of the amendment. Nevertheless, the alternatives provide additional flexibility to harvesters in this area, without any substantial biological impacts. Extension of the season may result in a small increase in halibut mortality, unless sablefish harvesters are required to hold IFQ shares for the bycaught halibut. The SSC also considered whether season extensions would be desirable in other areas. However, the situation in other areas is quite different in terms of bycatch so further analysis would be required.

C-2(e) HALIBUT BYCATCH COMPENSATION

The SSC heard a presentation by Bill Clark and Steve Hare describing a proposed revision to the halibut bycatch compensation procedure used by IPHC. The SSC also heard public testimony concerning the procedure from Joe Blum. The proposal seeks to improve halibut bycatch accounting by incorporating stock migration and by separating juvenile and adult bycatch. The principal issue in making the change is whether sufficient information exists to unambiguously apply the new procedures; a simpler approach may be warranted depending on how sensitive the new procedure is to migration schedules. The proposed procedure may reduce the quantity of halibut available to the directed fishery in some areas. The SSC suggests that the Plan Teams review this model and examine the potential consequences that the proposal may have on Council fisheries.

C-3(c) POLLOCK IFQ WORKPLAN

The SSC heard a presentation from Marcus Hartley about the workplan for preparing an EA/RIR for pollock IFQs. The SSC also received public testimony by John Gauvin of AFTA. The workplan provides extensive detail on the possible features of an IFQ system for pollock but does not contain any detail about how the benefits and costs (item 5e) or distributional impacts (item 5f) are to be analyzed. To enable the staff to do a more effective and complete job, the SSC encourages the Council to simplify, to the extent possible, the list of proposed features or "decision points" for detailed analysis.

The SSC discussed the importance of assessing the changes in price of pollock and the costs of both harvesting and processing that will likely occur as a result of this fundamental change in management strategy. Predicting changes in the fishery, estimating changes in benefits and costs, and forecasting distributional consequences will necessitate considerable effort. It is unlikely that rigorous quantitative analyses of these issues can be concluded in time for public review in June 1996. If the Council desires to proceed with a June release of the draft EA/RIR, it will probably be necessary to settle for a qualitative assessment. The SSC is further

concerned that a qualitative analysis may not provide an adequate documentation of the net economic benefits of the proposed action as well as its distributional consequences.

Forecasting changes in the pollock fishery is difficult because basic economic data on fishing and processing are unavailable and because firms can be expected to change their business practices in ways that may not be reflected by their current operation. These changes are difficult to predict by statistical or mathematical modeling even when extensive data are available. Alternatively, industry participants can be directly surveyed and asked to predict their response to proposed management actions. While the latter approach is appealing, it is possible that industry participants may not have a sound basis for formulating their predictions or that their answers may be strategic and chosen to influence management actions. The SSC generally favors the spirit of this approach, though it may be difficult to use the resulting information in a formal analysis of benefits and costs. One way to help ensure that this survey occurs would be through formation of a small industry advisory group to help in formulating the analysis.

Difficulties encountered in development of cost data series have been discussed previously in the context of License Limitation and CRP and were the subject of a meeting of the SSC Economics Subcommittee in August. Dave Colpo (Alaska Fishery Science Center) indicated that efforts to define representative vessels and to develop cost estimates for vessel categories were frustrated by the extent of heterogeneity within the industry and a reluctance by industry to reveal sensitive information. John Gauvin indicated that some industry segments might be willing to support a data collection comparable to the OMB survey if they were convinced that it was necessary. The SSC cautions the analysts to be careful to justify the approach chosen for collecting cost data based on analytical needs. Because of the importance of cost data in analyses of the economic impacts of management actions, the SSC recommends that a system be implemented for collecting and monitoring cost data. Data provided would make it possible to evaluate the economic effects of future proposed IFQ programs. A report by the SSC subcommittee will be given to the SSC soon.

Potential changes in the magnitude of benefits and costs and changes in distribution should be examined in the analysis. It can be anticipated that there will be significant changes in the revenues earned by and costs incurred by harvesters, catcher processors, and shore-based processors. In turn, these changes could affect the regional distribution of economic activities. The SSC concurs with Council staff's decision to examine distributional impacts using a combination of the Fisheries Economics Assessment input-output model (FEAM) for large communities and economic base models for smaller communities. The EA/RIR should reference relevant sections of the community profiles that have already been developed.

The SSC's Economics Subcommittee also conducted a preliminary review of the paper, "Toward A More Complete Model of Individual Transferable Fishing Quotas: Implications of Incorporating the Processing Sector," by Professor Scott Matulich and his colleagues at Washington State University, which was received last week. We commend the authors for contributing a timely piece of public policy analysis to the Council's deliberations. The paper establishes that a likely effect of allocating IFQs to harvesters only is that processors will suffer a loss in short-run profits. While the direction of impact is clear, the magnitude of the impact, large or small, is unknown and will vary from fishery to fishery. It depends on the extent to which processors have non-moveable capital invested in the fishery, how much higher variable costs of processing are under a derby fishery than an IFQ fishery, and relative bargaining power of processors in the ex-vessel market. The SSC notes that it has brought issues contained in this paper to the Council's attention before. As noted in our January 1994 minutes,

"It's important to recognize that access control will affect wealth, the worth of assets, in both the harvesting and processing sectors. Under a harvester-shareholder-only ITQ system, wealth is foregone by, for example, recent entrants not qualifying for an initial allocation and qualified active participants if their holdings are diluted by liberal qualification standards. Loss of wealth can also occur in the processing sector especially if capital doesn't have alternative uses. In this situation, some processors would be willing to bid the price of raw fish up until they cover only average variable costs. This

willingness to pay higher raw fish prices results in redistribution of wealth from processors to harvester shareholders. The degree to which this will occur is difficult to predict, a priori, because of lack of information on alternative uses of capital and the relative bargaining power of individual processors and harvesters."

While the insights contributed by the paper are interesting and suggest that the Council may wish to allocate harvest shares to processors, the SSC wishes to caution that there is no scientific basis for recommending a 50/50 split of harvest quota shares between processors and harvesters as suggested by the paper's concluding paragraph.

C-4 OBSERVER PROGRAM/DATA QUALITY

OBSERVER PROGRAM

The SSC received a report from Chris Blackburn, Observer Oversight Committee Chair, and discussed the possible loss of the research plan.

The SSC has serious concern over future data quality. Regardless of the funding mechanism chosen, the SSC believes there are several elements essential to an effective program:

- * **Observer placement must be flexible, in order to be representative of the fleet.**
- * **Compensation and treatment of observers must be sufficient to retain experienced and well-trained personnel.**
- * **There is need for flexibility in establishing coverage levels and distribution of coverage across the fleet. Although well distributed observer coverage at 20 to 30% may be adequate for stock assessment, bycatch estimation levels for some species are closer to 90%, and management programs requiring individual compliance will require 100% (or more).**
- * **The Observer Program should undergo a periodic, independent evaluation of objectives, methodologies and data collected.**
- * **Annually, data needs and priorities should be assessed and provided to the observer program managers.**

DATA QUALITY

Successful management of North Pacific fisheries is critically dependent upon the availability of high quality data. The current data collection system includes the use of a variety of methods ranging from research surveys to the submission of reports by participants in fisheries that are managed by the Council.

The current commercial fishery data collection system was implemented in the early 1990s. This program has not been reviewed, but problems with the system surface from time to time (e.g. see SSC Teleconference minutes, August, 1995). The SSC was informed that NMFS and ADF&G have initiated an examination of the system to determine if management needs are being met and if improvements can be made. Council staff will be included in the effort. The SSC believes that this evaluation is both needed and timely.

The SSC also was told that NMFS has funded a contract that will examine observer program procedures for the collection of data necessary for stock assessments and management. This examination is timely and the SSC looks forward to receiving the report that describes the results.

The SSC notes that Congress is in the process of examining alternative ways to conduct stock surveys, such as using commercial vessels. The SSC notes that at-sea surveys are essential for collecting data for the assessments of changes in the stocks of ocean fish. These surveys provide the biological information necessary for estimating

biomass, distribution, and recruitment to fish stocks, as well as other biological parameters including size-at-age, maturity, and reproductive condition. These attributes of stocks change radically during the course of a decade as they are influenced by oceanographic factors and the fishery. The SSC has identified a need to expand particular surveys to provide essential information on stock structure and other population parameters. **Without the work at sea on research ships, the management work of the North Pacific Fisheries Management Council could be severely compromised.** Reductions in the present level of surveys will increase the uncertainty associated with stock biomass estimates and thus increase the risk of overfishing.

C-5 FULL UTILIZATION AND DISCARD REDUCTION

The SSC received reports on these issues at its April 1995 meeting. Presentations highlighted implementation issues. With respect to harvest priority, the SSC suggested in September 1994 that the approach should be experimented with on a small scale prior to full implementation. Experience gained will assist in the avoidance of potential design flaws.

Once the Council is ready to have EA/RIRs developed for these two proposals, the SSC is prepared to comment on study content as necessary.

D-1 CRAB MANAGEMENT

The SSC received the report of the Bering Sea/Aleutian Islands Crab Plan Team. The SSC supports the Crab Plan Team request that an economist be assigned to the Team. Regarding status of stocks, Bristol Bay red king crab is projected to be below threshold for adult females and the fishery will not be opened in 1995. Other king crab stocks will support small fisheries. C. bairdi Tanner crab continues to decline; the guideline harvest level will be 5.5 million pounds, a 27% decrease from 1994. C. opilio snow crab has declined, but strong recruitment is expected.

D-3(a) BERING SEA/ALEUTIAN ISLANDS

The SSC is not providing comments on those ABCs which are unchanged from 1995. Summaries of Plan Team and SSC recommendations are found on the attached tables.

EBS AND ALEUTIAN ISLANDS POLLOCK

Preliminary 1996 ABCs represent no change from those adopted in December 1995.

BOGOSLOF POLLOCK

New hydroacoustic estimates of pollock biomass in the Aleutian Basin and specifically in the Bogoslof area were available in 1996. Estimated biomass is 1,020,000 mt. The new biomass estimate represents a doubling in biomass over the 1994 estimate. Biomass has increased with the recruitment of the 1988 and 1989 year classes and is anticipated to continue to increase as these year classes are completely recruited to the basin population. Given the variability inherent in surveys, the SSC requests that the Team examine the spreadsheet model developed at international workshops as a possible alternative for estimating Bogoslof biomass.

The SSC recommends setting an ABC for the Bogoslof area based on an M/2 exploitation rate. The SSC's 1995 ABC recommendation was based on an M/4 exploitation rate. The factor 1/4 is the OFL adjustment, reflecting the ratio of current stock biomass to the level which produces MSY. Because the stock has doubled, the OFL adjustment is now equal to 1/2. The substantial increase in abundance also alleviates our concern regarding fishery impacts on marine mammals and birds and, like the Team, we no longer recommend the fishery be prosecuted as bycatch only.

Natural mortality for this stock is 0.20, therefore, the SSC's recommended ABC is 102,000 mt. The overfishing level is equal to the ABC. The SSC notes that the Plan Team's OFL was derived using the $F_{30\%}$ exploitation rate (0.30). At this rate, their OFL is 306,000 mt.

BSAI - GREENLAND TURBOT

The SSC continues to recommend an ABC of 7,000 mt. The downward biomass trend and lack of strong recruitment were reasons for the SSC's conservative 1995 ABC recommendations. This recommendation will be re-evaluated in light of the updated analysis that will be presented at the December 1995 Council meeting.

BSAI - SABLEFISH

In the absence of new survey information and analyses, the SSC concurs with the Plan Team's rollover of 1995 ABCs as preliminary 1996 specifications. These are 1,600 mt in the Bering Sea and 2,200 mt in the Aleutian Islands. The preliminary overfishing level is 4,900 mt for the combined BS/AI area. No new survey information is expected to be incorporated into the final 1996 SAFE document.

BSAI - PACIFIC OCEAN PERCH COMPLEX

The analyses for Bering Sea/Aleutian Islands rockfish are not complete at this time. Based on the 1994 triennial survey biomass estimates and inclusions of 1994 catch and length composition-data, the Plan Team expects 1996 ABC estimates to be similar to those of 1995. These 1995 ABCs for the complex follow:

<u>Eastern Bering Sea</u>		<u>Aleutian Islands</u>	
True POP	1,850 mt	True POP	10,500 mt
Other Red Rockfish	1,400 mt	Northern/Sharpchin	5,670 mt
		Rougheye/Shortraker	1,220 mt

Other Rockfish Complex

The rollover of 1995 ABCs for thornyheads and the other remaining rockfish combined are:

Eastern Bering Sea	365 mt
Aleutian Islands	770 mt

The SSC recommends that the analysts proceed with an analysis looking at managing rockfish in the Aleutian area by subarea.

BSAI - SQUID AND OTHER FLATFISH

The SSC concurs with the Plan Team's recommendation to rollover the 1995 ABC of 3,110 mt for squid and 27,600 mt for other species pending incorporation of 1996 trawl survey into the final 1996 SAFE document.

BSAI - ATKA MACKEREL

The recommended ABC (138,000 mt) for this species was developed by applying the $F_{35\%}$ rate to the projected 1996 exploitable biomass (578,000 mt) obtained from the stock synthesis model. The SSC supports the recommended ABC as the initial specification for this species; however we suggest that the Team consider applying the $F_{40\%}$ rate for calculating ABC appropriate for a species with recruitment that's highly variable and

uncertain. The SSC notes a correction in the regional apportionment of ABCs. The Eastern region's ABC should be 47,100 mt rather than 47,600 mt as indicated by the Plan Team.

D-3(c) GULF OF ALASKA

GOA POLLOCK

The SSC reviewed an updated stock assessment for GOA pollock. New information provided in this analysis includes (1) biomass estimates from the 1995 echo integration trawl survey of Shelikof Strait, (2) age data from the 1994 fishery, (3) 1995 length frequency data from the Shelikof survey, (4) revised biomass estimates for a portion of the hydroacoustic survey time series, 1981-1985, (5) revised estimates of weight-at-age, and (6) updated catch data.

Four versions of the stock synthesis model were presented. The plan team accepted, and the SSC concurred, that Model C was the preferred configuration. Model C changes the configuration used in 1994 by estimating the initial age composition rather than assuming it to be in equilibrium prior to the onset of the fishery and incorporating revised weight-at-age parameters.

The SSC notes that while the population biomass is estimated to continue to decline through 1996, biomass is projected to increase in subsequent years following recruitment of the strong 1994 year class. The appearance of this year class is good news in light of the downward trend in this population over the past few years.

Considering the projected improvements in stock biomass the SSC endorses the stock assessment authors' recommended 1996 ABC's of 50,000 mt for the Western and Central Gulf, and 2,700 mt for the Eastern Gulf. This ABC is the upper bound of the range proposed by the Plan Team. The lower bound comes from the fishing mortality that results in less than a 5% chance that the stock drops below the threshold, which was used last year ($F=0.20$). The new fishing mortality rate ($=0.30$) is a tradeoff between the risk of spawner biomass falling below the threshold and increasing yield as a function of fishing mortality.

This rate is less than the $F_{40\%}$ rate and as such is regarded as a conservative exploitation strategy. The overfishing rate is obtained from the $F_{30\%}$ fishing mortality level (0.50) and is equivalent to a harvest of 79,000 mt in the Western and Central Gulf and 4,300 mt in the Eastern Gulf.

One issue of some concern is the status of the stock found in Prince William Sound. This aggregation may represent a segment of either the western/central or eastern pollock population, or it may be a separate stock entirely. If it is a separate stock, the allowable catch would have to be determined independently of the other stocks in the Gulf of Alaska. If it is part of a recognized stock, the catches from this fishery must be appropriately credited to the catch. The SSC has requested that the Plan Team examine available biological data (length, age, sex, weight) from the Prince William Sound samples and contrast these data with data obtained from the recognized stocks and then report back to the SSC at the December meeting with any evidence linking Prince William Sound pollock to currently recognized stocks.

GOA - PACIFIC COD

The Plan Team developed a range of ABC values of 65,000 to 110,000 mt, with the best fit of the Stock Synthesis model being at the 110,000 mt level. The analyst used the more conservative $F_{40\%}$ catch rate level that the SSC recommended last year. There was discussion of the difficulties of simultaneously fitting the asymptotic survey selection curve and a natural mortality rate. The best curve fit for survey selectivity was with a combination of a high natural mortality rate and a dome shaped selection curve. Discussion followed on the difficult interpretation of dome-shaped selection. It was also noted that the higher natural mortality rate was biologically possible. Because of the difficulties of interpretation, the fact that the stock has been fished since

1977 at levels less than 80,100 mt, and that the stock has been declining since 1987 (according to the Synthesis model), the SSC recommends that the Council select the lowest ABC value provided by the Plan Team, namely 65,000 mt.

Concerns regarding the continuing decline of spawning stock leads the SSC to request that the analysts and Plan Team develop a threshold approach to the assessment next year. This practice has been developed with other stocks, especially where declining trends have been a concern, e.g. GOA walleye pollock. There are existing approaches to setting a threshold that might be adopted, or the Team might develop a new method of calculation.

GOA - SABLEFISH

The SSC recommends that the 1995 ABC of 21,500 mt (apportioned as 2,600 mt to the Western Gulf, 8,600 mt to the Central Gulf, 4,100 mt to West Yakutat, and 6,200 mt to Southeast Outside be rolled over as the preliminary 1996 ABC. The Gulf-wide preliminary overfishing level of 28,040 mt would also roll over from 1995. Incorporation of 1996 longline survey data is expected in the final 1996 SAFE document.

The SSC does not concur with the Plan Team recommendation that was developed by projecting the 1995 biomass ahead to 1996 taking into account 1995 catch and recruitment. While the spirit and intent of this adjustment is appreciated, supporting documentation that could be used to evaluate the Team's recommendation was not given (there is no sablefish section in the SAFE).

The SSC appreciates the efforts taken by longline fishers to avoid interfering with the 1995 longline survey. During discussion of this issue, it was noted that trawl vessel activity in early July may have inadvertently affected the longline survey in the Chirikof area. The SSC has asked the analysts to investigate which target fisheries may have been involved, and to work with industry to identify possible mechanisms to avoid future interference, for inclusion in the final 1996 SAFE document.

GOA - ROCKFISH

Pacific Ocean Perch

The synthesis model, first used for the 1993 assessment, for Pacific ocean perch was updated with 1995 fishery data and run ahead for one more year using the 1995 GOA TAC as the 1996 projected catch. New maturity data and information were summarized in the analysis but were not incorporated in the synthesis model. Further significant changes to the model will wait until new fecundity and survey biomass estimates are available in late 1996. For December, the SSC asks the Plan Team and analysts to report on the feasibility of running the model separately for the Western/Central and the Eastern areas, providing two ABCs for POP in the Gulf.

An estimate of current exploitable biomass of 163,220 mt is an increase above last year's estimate of 142,470 mt. The ABC was calculated using the optimal fishing mortality (F_{msy} of 0.078 adjusted by the ratio of the current (125,704 mt) to target (150,000 mt) females spawning biomass to provide for rebuilding, which results in an ABC of 10,165 mt, an increase of 1,935 mt over the 1995 analyst's estimated ABC. Because this ABC is equal to the overfishing level, the Plan Team further reduced this number by $F_{35\%}/F_{30\%}$ to provide a buffer between the ABC and OFL. The SSC does not agree with the latter adjustment. As it did last year, the SSC accepted the analysts' ABC, which is also equal to OFL. The ABC was apportioned by management area based on the area biomass estimates from the 1987, 1990, and 1993 trawl surveys; weighting each previous survey at 2/3 of the next later survey, a ratio of 4:6:9, respectively. The SSC ABC area allocations for the Western (18.1%), Central (47.9%), and Eastern (34.0%) areas are respectively, 1,840 mt; 4,869 mt; 3,456 mt and for the Team are 1,460 mt; 3,860 mt; and 2,740 mt. Under the POP rebuilding plan, TAC is calculated from the average of the optimal F and the fishing mortality rate sufficient to provide for unavoidable bycatch (based on 1992 rates). For 1996

this fishing mortality corresponds to $F_{55\%}$. To calculate TAC, this rate is further reduced by the ratio of current biomass to optimal-biomass (corresponding to $F=0.44$).

Other Rockfish

ABCs for the following rockfish species groups were rolled over from 1995:

Shorthead/rougheye	1,910 mt
Northern	5,270 mt
Other slope	7,100 mt
Pelagic shelf (dusky)	5,190 mt
Demersal shelf	580 mt

Pelagic Shelf Rockfish

For pelagic shelf rockfish, the Plan Team recommended that dusky rockfish be separated from the other species in the group. Black rockfish, and other nearshore pelagics, are not protected from overharvest because the current assessment is dominated by dusky rockfish, which is much more abundant in the offshore trawl surveys. The Plan Team has proposed an amendment for alternative management of the nearshore component of the assemblage. The SSC requests the Team to provide a more extensive report in December on management and stock assessment alternatives and recommends that the Council proceed with the development of a plan amendment analyzing management alternatives for pelagic shelf rockfish.

GOA- THORNYHEADS

For the second year a length based synthesis model has been used for the assessment. For 1996 analysts examined geographic distribution and incorporated 1994 fishery and longline survey data. The primary reason for the reduced 1996 ABC (1,560 mt) from the 1995 ABC (1,899 mt) was the incorporation of an increased size at 50% maturity. The analysts and Team expressed concern that future shifts toward trawl gear not accounted for in the model could potentially exceed the overfishing level because of the greater vulnerability of younger fish.

GOA - ATKA MACKEREL

For the 1996 fishing year, the SSC recommends that the Team's calculated ABC be reduced by one-half, consistent with last year's recommendation. This conservative approach is recommended because of uncertainty in the abundance of Atka mackerel and concerns for marine mammals. Atka mackerel is an important prey species for sea lions and occurs in abundance near sea lion rookeries. Following this procedure, the ABC is 3,240 mt ($M/2 = 0.15$ times the projected 1996 biomass of 21,600 mt). We recommend this rate be used until the next survey is completed and incorporated into the assessment; we thus abandon the stair-stepping of F until an improvement in stock condition is seen. The SSC agrees with the Team's overfishing limit of 9,800 mt.

D-3 ECOSYSTEMS

The SSC thanks the Plan Teams for their continued efforts to highlight additional ecosystem information and concerns and agrees with their plan to continue yearly additions with periodic revisions and updates of the entire package of ecosystem information. We reiterate our recommendations from January 1995 that a working group including members from the Plan Teams, SSC, AP, Council, and industry be formed to further discuss possible approaches to incorporating ecosystem concerns more fully.

D-3(f) HALIBUT DISCARD MORTALITY RATES

The SSC received a report from Gregg Williams of the IPHC. Halibut bycatch rates in the groundfish fishery have been computed with available data through 1994 (and 1995 for the Pacific cod longline fishery). Fishery-specific 1996 bycatch rates are estimated from the mean of the 1993 and 1994 rates. Prior to the December Council meeting, Gregg will review the high 1994 bycatch rate in the BSAI sablefish line fishery, examine the possibility of separating the BSAI and GOA Atka mackerel fishery, as well as the flathead and rex sole fisheries, and further examine the recommended bycatch rate for the Pacific cod line fishery. **The SSC concurs with the need for the review of these bycatch rates, but otherwise concurred that these rates should be used as preliminary specifications.**

D-4(b) PACIFIC OCEAN PERCH REBUILDING AMENDMENT

The SSC received a report from Kaja Brix and Sally Bibb on the draft EA/RIR to modify the Pacific ocean perch rebuilding amendment. The SSC recommended that the authors add the following information to the draft document:

1. A statement which notes that harvest at the prescribed rates under the current rebuilding plan is not regarded as jeopardizing the rebuilding of Pacific ocean perch.
2. Provide information on the accuracy of catch monitoring, the size of vessels participating in the fishery, and the observer coverage provided. Describe as well as possible the likelihood of exceeding the prescribed TAC when a directed fishery occurs versus a bycatch only fishery.
3. The SSC noted that presently the calculation of TAC is not directly linked to ABC. With respect to the flexibility in setting TAC, the document should note the possibility that ABC could be set lower than TAC under the current rebuilding plan. For example, due to concerns for recruitment, survey accuracy, or other ecosystem considerations, the plan team or SSC may recommend an ABC which is lower than one computed using the optimal F. While this outcome may be unlikely it can not be excluded as a possibility.
4. Provide a catch history table reflecting the bycatch and directed fishing history.

Once these elements are in the document, it can go out for public review.

D-4 (d) KING CRAB RECRUITMENT AND TRAWLING CLOSURES

Dave Ackley (ADF&G) presented the revised EA/RIR for a contemplated Bering Sea trawl closure to protect red king crab between 164 degrees to 162 degrees W. longitude. The SSC commends Dave for his incorporation of requested changes to the EA/RIR document before its release for public review.

The SSC also commends Dave Witherell and Gretchen Harrington for their report evaluating alternative management measures to reduce the impacts of trawling and dredging on Bering Sea crab stocks. This paper represents a report of the Fluharty committee investigating means to rebuild Bering Sea crab stocks; **the SSC recommends that this committee continue its work to address crab rebuilding in a comprehensive fashion.** As a contribution to crab rebuilding, bycatch management should be reviewed in perspective with other actions that have been or could be taken to attain a rebuilding goal.

With the emergency closure in place during the early part of 1995, the Council has a unique opportunity to view the impact of one of its alternatives prior to adoption. **It appears that the rock sole fishery successfully harvested similar levels of retained rock sole as in 1992 and 1993, but with substantially lower red king**

crab bycatch than in previous years. However, direct comparisons of the 1995 rock sole fishery with prior years are confounded by other natural and management changes. The changes in net benefits projected by the EA/RIR to result from the contemplated closures are small, and likely well within the range of uncertainty of the information.

The SSC repeats its previous recommendation that the Council address bycatch management in a comprehensive fashion. The widespread distribution of prohibited species in the Bering Sea for which bycatch management measures are in place, and the fully subscribed nature of groundfish fisheries which are limited by PSC caps as much as quota attainment, means that individual bycatch management measures can only be evaluated for efficacy, efficiency and allocative fairness when viewed in a broader context. For example, public testimony indicated that a likely effect of additional trawl closures to protect red king crab is an increase in bairdi and opilio Tanner crab and halibut bycatch in other areas and other fisheries. Overall, it appears that Bering Sea trawl fisheries may take 1 - 1.5% of the mature red king crab. However, the actual impact of trawling on RKC populations is unknown.

Public testimony to the SSC suggested that hot-spot closure authority or seasonal closures could have the same effect in reducing RKC bycatch with less disruption to fisheries or displacement to other areas with consequent constraints imposed by other PSC limits. Given the time available, the SSC did not consider a seasonal option to the 7 alternatives. The SSC does note that the 1995 emergency closure from 20 January through 21 April - effectively a seasonal closure - greatly reduced king crab bycatch in Zone 1. In this sense, the EA/RIR contains information analyzing the efficacy of a seasonal closure.

In general, area closures to protect species and their habitat can contribute to successful recruitment and population rebuilding. Witherell & Harrington review evidence that specific early-life history stages of red king crab require rocky bottom with living substrate for settling and then gravel sediments in the early juvenile stages. These bottom types are limited in extent and lie towards the shore in Bristol Bay. There is sufficient evidence of the importance of these sediments, and consequently proposals for the protection of these areas from trawling activities have to be taken seriously. It was proposed that the effects of closures be evaluated against their effects on brood strength of the king crab stocks. It must be realized, however, that the life history of red-king crab is extremely complex, much more so than many groundfish species. There are several critical control points in the life history that have to be factored into any evaluation of the development of king crab brood strength. This means a multivariate study of factors, only one of which is improved survival while juveniles are on rocky and cobble bottom. Some of the needed time-series of data are not being collected at the present time. Because of these deficiencies it would not be possible to quantify the effects of protecting benthic habitat on year-class strength.

D-4 (e) FORAGE FISH

The SSC regards forage fish as a group of great importance and potentially an indicator of ecosystem health and a source of socio-economic interest. In discussing the draft plan the SSC suggested a number of modifications:

- (a) Reframe the plan to manage the forage fish, rather than provide a blanket prohibition on taking.
- (b) Clarify the relationship of the plan to ongoing and potential artisanal fisheries.
- (c) Consider the species covered in the plan to eliminate those that are exclusively in State waters and those (such as sandfish) that may not be true forage fish.

The SSC suggests the author revise the plan for further review by the Council family prior to public review.

D-5(a) GROUND FISH AMENDMENT PROPOSALS

The SSC did not have time to review the 41 new proposals from the public. However, it is clear from the Plan Team's summary of the proposals that most proposals deal with management and allocative problems. However, the SSC urges the Council to maintain priority for comprehensive solutions to overcapitalization and bycatch management (which repeats our recommendation from January 1995).

D-5(b) TRAWL MESH STUDY AND REVIEW

The SSC received a brief report from Sue Salveson (NMFS-AKR) on the proposed regulatory amendment to adopt minimum mesh sizes in pollock, cod, and rock sole fisheries and the related Alaska Fishery Development Foundation (AFDF) pollock cod-end mesh study.

The AFDF study is suggestive that larger mesh sizes select for larger pollock by allowing increased escapement of smaller pollock. Square mesh appears to show substantially greater size selectivity than diamond mesh for round fish such as pollock. However, the study also suggests that escapement diminishes at large tow sizes, due to plugging of the codend. When trawls catch more than 40 mt, the increased size selectivity of larger meshes is insignificant. The potentially confounding effects of vessel size and power, particularly as they relate to tow size, are not addressed in this study.

The AFDF raises the possibility that mesh size regulation might be ineffective when large catches occur or diamond mesh is used. However, the results from the AFDF study cannot be directly extrapolated to the NMFS proposed rule, as mesh sizes proposed in the rule are smaller than those used in the study and the study involved only pollock, not rocksole or cod. This affirms our previous conclusion from September 1994 that further research is necessary to determine if mesh restrictions can reduce the catch of smaller fish.

GROUND FISH PLAN TEAMS

The SSC agrees with the Teams that adding a seabird specialist is desirable. The SSC reviewed the qualifications of Victoria O'Connell, Ivan Vining, and William Bechtol and recommends they be appointed.

Gulf of Alaska Groundfish

Species	Area	PT ABC	SSC ABC	PT OFL	SSC OFL
Pollock	W/C	34,000 - 50,000	50,000		79,000
	E	1,800 - 2,700	2,700		4,300
	Total	35,800 - 52,700	52,700		83,300
Pacific cod		65,000 - 110,000	65,000		149,000
Deepwater flatfish			14,590		17,040
Rex Sole			11,210		13,091
Shallow water flatfish			52,270		60,262
Flathead Sole			28,790		31,557
Arrowtooth flounder			198,130		231,416
Sablefish		18,700		22,400	28,040
Other slope rockfish			7,110		8,395
Northern rockfish			5,270		9,926
POP Complex					
	W	1,460	1,840	1,840	1,840
	C	3,860	4,870	4,870	4,870
	E	2,740	3,455	3,455	3,455
	Total	8,060	10,165	10,165	10,165
Shortraker/Rougheye			1,910		2,925
Pelagic Shelf rockfish			5,190		8,704
Demersal Shelf rockfish			580		1,044
Thornyhead rockfish			1,560		2,200
Atka mackerel		6,480	3,240		9,800
GOA TOTAL		460,640 - 522,540	479,215	744,525	750,165

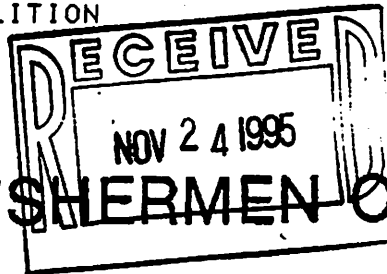
Bering Sea and Aleutian Islands Groundfish

Species	Area	PT ABC	SSC ABC	PT OFL	SSC OFL
Pollock	EBS		1,250,000		1,500,000
	AI		56,600		60,400
	518	265,000		102,000	306,000
Pacific Cod	EBS/AI		328,000		390,000
Yellowfin Sole	EBS/AI		277,000		319,000
Greenland Turbot	EBS/AI	18,500		7,000	27,200
Arrowtooth	EBS/AI		113,000		138,000
Rock Sole	EBS/AI		347,000		388,000
Flathead Sole	EBS/AI		138,000		167,000
Other flatfish	EBS/AI		117,000		137,000
Sablefish	EBS		1,600		
	AI		2,200		
	Total		3,800		4,900
POP Complex					
True POP	EBS		1,850		2,910
Other POP	EBS		1,400		1,400
True POP	AI		10,500		15,900
Sharp/Northern	AI		5,670		5,670
Short/Roughey	AI		1,220		1,220
Other rockfish	EBS		365		365
	AI		770		770
Atka mackerel	Western		71,600		
	Central		19,300		
	Eastern		47,100		
	Total		138,000		164,000
Squid, Other species	EBS/AI		30,710		139,100
BS/AI TOTAL		3,104,385	2,929,885	3,768,835	3,564,835

LETTERS/PROPOSALS RECEIVED FOR ISSUES NOT ON CURRENT AGENDA

1. Correspondence on king crab trawl closure:
 - a. Copy of October 20, 1995 ltr to Larry Engel, Chairman, Alaska Board of Fisheries, from United Fishermen of Alaska; requesting Board of Fisheries to comment to NMFS on proposed rule.
 - b. November 26, 1995 letter to Richard Lauber, NPFMC Chairman, from Gordon Kristjanson; comments on Council action.
 - c. Copies of October 23, 1995 letters to Larry Engel (BOF); ADF&G Commissioner Frank Rue, and Mary McDowell (Office of the Governor) from Kodiak Vessel Owners' Assn; requesting Board of Fisheries to comment to NMFS on proposed rule.
 - d. November 7, 1995 letter to Richard Lauber from Larry Engel, regarding Council action on king crab trawl closure.
 - e. October 2, 1995 memo to Richard Lauber from Alaska Crab Coalition, regarding Council action on king crab trawl closure.
 - f. November 27, 1995 letter to Clarence Pautzke, NPFMC Executive Director, regarding Council action on king crab trawl closure.
2. Correspondence on chinook bycatch issue:
 - a. Copy of October 20, 1995 letter to Ron Berg, NMFS, from Oceantrawl; comments on proposed rule.
3. Proposal submitted by U.S. Marine Corporation to allow shallow water complex bycatch only in a directed arrowtooth flounder fishery.

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UNITED FISHERMEN OF ALASKA

October 20, 1995

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Mr. Larry J. Engel, Chairman
Alaska Board of Fisheries
Post Office Box 25526
Juneau, Alaska 99802-5526

FOR YOUR INFORMATION
From: Arni Thomson

**RE: Recent NPFMC Decision to Modify Bristol Bay King Crab Protection Area,
From Year-Round -- to Seasonal -- Closure to All Bottom Trawling**

Dear Chairman Engel:

At its recently concluded Fall Board of Directors Meeting in Anchorage, the Alaska Crab Coalition (ACC) and the Bristol Bay Driftnetters Association (BBDA) provided the UFA Board with a copy of an ACC letter explaining the recent Council decision regarding the Bristol Bay trawl closure zone and requesting the State of Alaska to comment to the NMFS during preparation of the final rule.

After reviewing the request of the ACC, the UFA Board adopted a motion in support of the ACC position calling for a year-round closure to bottom trawling in the area 162 W. to 164 W. and 56 N. to 57 degrees N. (see the attached copies of ACC correspondence to the Office of the Governor and to the NPFMC). UFA also requests the Alaska Board of Fisheries to comment to the NMFS in support of improving the proposed rule to close the protection area year-round to bottom trawling. King crab stocks are very depressed and the king crab fishery has been closed for two years as the stock level of mature females is below the minimum threshold for conducting a commercial fishery.

In supporting this action, UFA is aware that the seasonal closure ignores considerations of habitat and that the area in question is a year-round habitat for large aggregations of king crab. Bottom trawl gear impacts sensitive habitat and also results in a substantial, but unquantified unobserved mortality to benthic organisms and king and tanner crabs. The seasonal closure will enable large scale bottom trawling for yellowfin sole in this area and it will be a setback to the protection efforts started under the emergency rule adopted for 1995.

Thank you in advance for your consideration.

Sincerely,
Jerry McCune

Jerry McCune
UFA President

cc: Frank Rue, Commissioner, ADF&G
Mary McDowell, Office of the Governor of Alaska
Steve Pennoyer, Regional Director, NMFS, AKR
Rollie Schmitt, Assistant Administrator, NMFS

MEMBER ORGANIZATIONS

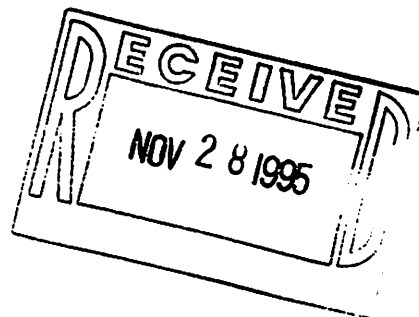
Alaska Crab Coalition • Alaska Longline Fishermen's Association • Alaska Trollers Association • Area K Seiners Association
Bristol Bay Driftnetters Association • Concerned Area "M" Fishermen • Cook Inlet Aquaculture Association
Cordova District Fishermen United • Kenai Peninsula Fishermen's Association • Kodiak Regional Aquaculture Association
North Pacific Fisheries Association • Northern Southeast Regional Aquaculture Association • Peninsula Marketing Association
Petersburg Vessel Owners Association • Prince William Sound Aquaculture Corporation • Purse Seine Vessel Owners Association
Southwest Alaska Seiners Association • Southern Southeast Regional Aquaculture Association • United Cook Inlet Drift Association

16

Gordon Kristjanson
FV Aleutian Mariner
20301 191st AVE. N.E.
Woodinville, WA 98072

November 26, 1995

Richard B. Lauber, Chairman
N. P. F. M. C.
605 West 4th Avenue, Suite 306
Anchorage, AK 99501-2252



Dear Mr. Lauber,

I am aware that the NPFMC has taken steps to reduce crab bycatch with the implementation of the seasonal non-pelagic trawl closure in the Bristol Bay Red King Crab Savings Area. Because Bristol Bay king crab stocks are in such a depressed state that they haven't warranted a commercial harvest in the last two years, I believe the non-pelagic trawl closure should be year round.

The seasonal closure has had little or no adverse effect on the Rock Sole Fishery, yet it has resulted in a very large reduction in king crab bycatch. If this closure remains only seasonal, it will allow the Yellow Fin Sole fishery to invade this crucial area and destroy any chance for recovery of the Bristol Bay King Crab and Bairdi Crab stocks. Yellow Fin Sole are widely distributed in the Bering Sea. I would expect the Yellow Fin Sole fishery would also harvest its TAC with a year round area closure of the Bristol Bay Red King Crab Savings Area, while substantially reducing the King and Bairdi Crab bycatch.

It is very difficult, as crab fishermen, to accept the fact that we cannot harvest Bairdi east of 163W, when we use only a three inch tunnel opening (which eliminates King Crab bycatch) yet the trawlers can drag the bottom and destroy would be harvestable King and Bairdi Crab to obtain fish

Please convert the Bristol Bay Red King Crab Saving Area (56N-57N and 162W-164W) from a seasonal non-pelagic trawl closure to a year round non-pelagic trawl closure.

Sincerely,

Gordon Kristjanson
Captain, FV Aleutian Mariner
President, AMK fisheries Inc.

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ASSOCIATION**

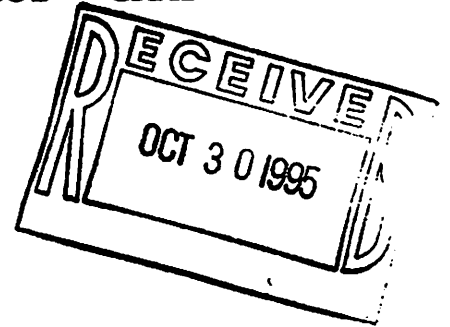


1c
326 Center Avenue, Suite 2
P.O. Box 1
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HALIBUT • SABLEFISH • PACIFIC COD • CRAB

October 23, 1995

Larry J. Engel
Chairman
Alaska Board of Fisheries
P.O. Box 25526
Juneau, AK 99802-5526



Dear Larry:

During the September meeting of the North Pacific Fishery Management Council, the Kodiak Vessel Owners' Association was well represented and the issue of a year-round bottom trawl closure in the Bristol Bay red king crab protection area was a high priority.

To say the least we were, and are, dismayed by the NPFMC action: protection of the area (162°W to 164°W, 56°N to 57°N) from non-pelagic trawl activity for a mere three (3) months of each year (January 1 - March 31). We find such minimal regard for depressed red king crab stocks disheartening.

Implementation of a seasonal closure fails to reasonably consider the impacts of trawl gear on habitat and unobserved mortality of king and tanner crab. It is illogical to allow large scale bottom trawling for yellowfin sole in this area when red king crab stocks are depressed and female abundance is so low as to prohibit a directed commercial fishery for the second consecutive year. A protective closure must be year-round to effectively address habitat and bycatch concerns.

The KVOA fully supports a year-round closure of the area to non-pelagic trawling. Additionally, we request the Board of Fisheries comment to NMFS in support of a year-round closure of the area.

We appreciate your consideration and support in this matter.

Sincerely,

Lisa Polito
Assistant Director

cc: Frank Rue, Commissioner ADF&G
Mary McDowell, Office of the Governor of Alaska
Steve Pennoyer, RD, NMFS, AKR
Rollie Schmitten, Asst. Admin. NMFS
Richard Lauber, Chair, NPFMC

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HALIBUT • SABLEFISH • PACIFIC COD • CRAB

October 24, 1995

Frank Rue
Commissioner
Alaska Department of Fish & Game
P.O. Box 25526
Juneau, AK 99802-5526

Dear Frank:

At the September meeting of the North Pacific Fishery Management Council in Seattle, the Council took final action on the issue of restricting non-pelagic trawl gear use in Bristol Bay for the protection of red king crab stocks. The final action taken by the Council closes the area from 162°W to 164°W longitude, 56°N to 57°N latitude for a period beginning January 1 through March 31 each year. A provision was added stipulating the area from 56°N to 56°10'N latitude be open to non-pelagic trawling during the period of January 1 - March 31 in years in which a guideline harvest level for Bristol Bay red king crab is established.

Last fall, when the area to be closed in the emergency order was being defined, the Council identified the area from 162°W to 164°W longitude, 55°45'N to 57°N latitude as its preference. After the analysis was released this summer and the full range of options identified, the KVOA advocated a year-round closure of the most conservative option before the Council. This option would have established an area from 162°W to 164°W longitude, 56°N to 58°N latitude closed to non-pelagic trawling. We preferred the most conservative option because we believe this issue represents a great deal more than a reduction in bycatch, it is a matter of conservation and habitat protection as well. In the decision of this matter by the Council there existed a very real and achievable opportunity for effective conservation measures to be implemented.

Compelling testimony was presented to the Council from many representatives of and participants in Alaska's crab fisheries. Crab industry testimony and Crab Plan Team meeting minutes stressed the need for a year-round closure in order to adequately protect red king crab stocks and habitat from the impacts of trawl gear. Although the majority of the testimony recommended a year-round closure of the area, final Council action took the form of a diluted three month closure while completely exposing the area from 56°N to 56°10'N latitude to trawl gear impacts any year in which a GHL is established.

Along with many others, we were dismayed and disappointed by the final action taken by the Council. We believe it is imperative that the closure be, at the very least, a year-round reflection of the emergency closure implemented for 1995.

In light of the importance of the state managed Bristol Bay red king crab fishery to Alaska's fishermen and coastal communities, I request that the Alaska Department of Fish and Game make comment to NMFS in support of a year-round closure of the area.

In advance I would like to thank you for your assistance in this matter and your continued support of our conservation efforts.

Sincerely,



Lisa Polito
Assistant Director

cc: Mary McDowell, Office of the Governor of Alaska
Steve Pennoyer, RD, NMFS, AKR
Rollie Schmitten, Asst. Admin., NMFS
Richard Lauber, Chair, NPFMC
Jim Ayers, Office of the Governor of Alaska

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326 Center Avenue, Suite 2
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HALIBUT • SABLEFISH • PACIFIC COD • CRAB

October 24, 1995

Mary McDowell
Office of the Governor of Alaska
P.O. Box 110001
Juneau, AK 99811

Dear Mary:

The North Pacific Fishery Management Council recently took final action on an issue relative to Bristol Bay red king crab protection. The action, considered a groundfish amendment, determined the boundaries and time for restriction of non-pelagic trawl activity in an area of Bristol Bay with historically high concentrations of red king crab. The final action closes the area from 162°W to 164°W longitude, 56°N to 57°N latitude to non-pelagic trawling from January 1 through March 31 each year, with a provisional opening of the area from 56°N to 56°10'N latitude in years in which a guideline harvest level is established for Bristol Bay red king crab. The seasonal aspect of this action seriously handicaps the conservation effects of the original options for year-round closure which were analyzed, released for public review and presented to the Council for final action.

In 1994 the NMFS survey data of red king crab stocks in Bristol Bay indicated that the stocks were at continuing low levels and that the abundance of mature females was below threshold; the result was no directed commercial fishery for red king crab in Bristol Bay. With no directed red king crab fishery State regulation (5 AAC 35.510) prohibits directed fishing for Tanner crab in the area east of 163°W longitude. The Crab Plan Team and industry requested the Council close some areas of Zone 1 to trawling in order to provide additional protection of red king crab stocks. In a November 1994 teleconference the Council recommended the Regional Director of NMFS take Emergency Action to close the area from 162°W to 164°W longitude, 55°45'N to 57°N latitude to all trawling. The Emergency Action taken by the Regional Director resulted in a 120 day closure of an area from 162°W to 164°W longitude, 56°N to 57°N latitude to trawling.

The emergency action resulted in a dramatic reduction in red king crab bycatch in the rock sole fishery, down to 20,524 animals in 1995 from 193,016 animals in 1994 and 133,810 animals in 1993. In light of such dramatic effects, the crab industry eagerly anticipated the Council's decision on a protective closure with hopes for a continuation and reinforcement of these conservation measures. Those hopes were not realized by the Council's final action for a seasonal closure; a closure thirty (30) days shorter than the Emergency Action implemented this year.

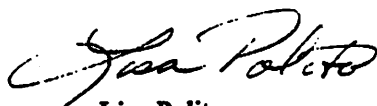
Implicit in the concept of a seasonal closure is the idea that impacts to red king crab habitat from trawl gear occur only during winter months. However there are conservation concerns, regarding impacts on habitat and

the unobserved detrimental effects on non-retained crab, which warrant a year-round closure. A point which was stressed by the Crab Plan Team in their recommendations to the Council.

Alaska's crab fisheries are state managed and of extreme importance to coastal communities. A year-round closure to bottom trawling would be a strong conservation measure in protecting red king crab stocks and habitat. The KVOA will be commenting to NMFS on this action, in support of a year-round closure. We would appreciate the Governor's office issuing similarly supportive comments to NMFS on this subject.

We are encouraged in expecting your assistance in this matter as we are well aware of the Governor's support for the benefit of Alaska's coastal communities, maintaining state control of state managed fisheries, and effective conservation measures. We appreciate your attention to this matter and thank you for your support.

Sincerely,



Lisa Polito
Assistant Director

cc: Frank Rue, Commissioner ADF&G
Jim Ayers, Office of the Governor of Alaska
Steve Pennoyer, RD, NMFS, AKR
Rollie Schmitten, Asst. Admin. NMFS
Richard Lauber, Chair, NPFMC

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

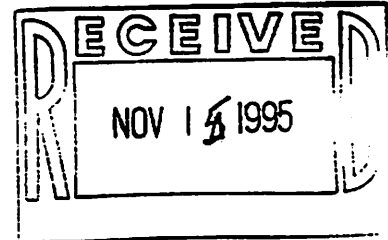
BOARD OF FISHERIES

1d
TONY KNOWLES, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4110
FAX: (907) 465-6094

November 7, 1995

Richard Lauber, Chairman
North Pacific Fisheries Management Council
605 West 4th Avenue, Suite 306
Anchorage, AK. 99501-2252



Dear Mr. Lauber:

During our October work session, the Alaska Board of Fisheries (board) received a staff report on the recent North Pacific Fishery Management Council (council) action regarding the non-pelagic trawl gear closure to protect Bristol Bay red king crab. The board is concerned that the alternative selected by the council may have adverse impacts on these already depressed king crab stocks.

According to the Alaska Department of Fish and Game (department), 1995 estimates of pre-recruit male and mature male and female red king crab abundance remains low and has declined from 1994. More importantly, the mature female red king crab population at or below the threshold level of 8.4 million animals for the second consecutive year. Concurrent with the decline in abundance, the distribution of red king crab has geographically contracted. Most of the stock now resides within Area 512 and the non-pelagic trawl closure area. Based on this information, we believe the stock remains in a depressed condition. A closure of the 1994 and 1995 directed king crab fishery and restrictions on *C. bairdi* Tanner crab east of 163 degrees W. longitude was necessary in accordance with Board's Policy on King and Tanner Crab Resource Management and the Council's Fishery Management Plan for Commercial King and Tanner Crab Fisheries in the Bering Sea and Aleutian Islands.

The board is very concerned with the continued protection and rebuilding strategy for Bristol Bay red king crab stocks, and that the less conservative trawl closure option chosen by the council may not afford the necessary protection. In 1994, the council adopted an Emergency Rule which closed red king crab habitat sensitive areas to all non-pelagic trawling. This closure, coupled with a closure of the directed crab fishery, prevented a further decline in the stocks. A less restrictive closure at this time may undo these conservation savings.

The department scientists and managers, the crab industry, and this board believes a comprehensive year round closure of non-pelagic trawling in this area is essential for protecting crab stocks during their sensitive life history periods and migration cycles.

The Board of Fisheries wants to discuss this subject with the council at our joint meeting on January 9, 1996. We understand that the council can not revisit this issue at its December meeting without jeopardizing protective regulations which will be in effect for the 1996 "A" season.

I look forward to your consideration of this issue.

Sincerely;

A handwritten signature in black ink, appearing to read "Larry Engel". The signature is written in a cursive, flowing style.

Larry Engel, Chairman
Alaska Board of Fisheries

cc: David Benton
Earl Krygier
Steve Pennoyer



ALASKA CRAB COALITION

3901 Leary Way (Bldg.) N.W., Suite #6 • Seattle, WA 98107 • (206) 547-7560 • FAX (206) 547-013

DATE: October 2, 1995 *(REVISED 11/22/95 FOR RESUBMISSION)*

TO: Rick Lauber, Chairman
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

FROM: Arni Thomson, Executive Director *AT*
Alaska Crab Coalition

RE: AGENDA ITEM D-4(d), FINAL REVIEW OF BRISTOL BAY
RED KING CRAB PROTECTION AREA

ACC RECOMMENDATION:

The ACC supports the adoption of Alternative 3, implementation of a permanent rule that is identical to the emergency rule adopted in 1995. This rule would close the area from 56 N latitude to 57 N latitude and from 162 W longitude to 164 W longitude to bottom trawling year round. This rule would allow for mid water trawling in the protection area provided there is 100% observer coverage.

In addition, ACC recommends 100% observer coverage in the yellowfin sole fishery in the Zone 1 area, a condition of the emergency rule in 1995.

NPFMC CRAB PLAN TEAM RECOMMENDATION:

The Team concluded that an area closure will reduce king crab bycatch. The emergency rule did reduce king crab bycatch (from 216,000 king crabs in 1994 to 19,000 king crabs in 1995). The EA/RIR projects bycatch reductions in all alternatives to the status quo.

The recommendation for a year-round closure is supported by the NPMFC Crab Plan Team for conservation reasons related to unobserved gear contact to non retained crabs and concern for disruption of crab habitat. Additional conservation concerns include estimated removals from the mature crab stock range from .75% to 1.5% of the mature crab stock each year, in addition to natural mortality that removes 25% of the stock each year. The Bristol Bay red king crab stock is depressed and stable.

DISCUSSION:

1. In making these recommendations, the ACC wishes to remind the NPFMC that for the second year in a row, the Bering Sea crab fleet has essentially been allowed no

1. In making these recommendations, the ACC wishes to remind the NPFMC that for the second year in a row, the Bering Sea crab fleet has essentially been allowed no withdrawals of king crab in the Bristol Bay area for conservation. In addition, the Board of Fisheries took action in 1993 that disallows bairdi fishing east of 163 W longitude. Last year this resulted in the fleet foregoing \$30 million in revenue from the bairdi fishery as a condition to protect king crab from handling mortality.
2. The Crab Plan Team recommendations relative to crab habitat disruption and impacts to larval settlement areas are supported by the scientific investigations of Dr. David Armstrong et al. 1993 as referenced in the EA/RIR, page 5. There are additional references to habitat concerns referenced in David Witherell and Gretchen Harrington's discussion paper prepared for the NPFMC, September 14, 1995.
3. Industry concerns about the overriding impacts of groundfish, and in particular yellowfin sole predation on king crab stocks and the need to harvest those stocks to encourage crab rebuilding is not supported in the EA/RIR. Note page 5; Jewett and Onuf 1988; Haflinger and McRoy 1983; Livingston 1989. The general conclusions based on the little information that is available indicate that predation is insignificant and not responsible for observed declines from 1981 to 1985.

Yellowfin sole stocks are in abundance in several areas in the Eastern Bering Sea, it does not seem necessary to harvest them in areas of high crab abundance. Area 514, north of 58 N latitude is an area of high abundance of yellowfin sole, with few concentrations of crab or halibut.

4. The Bering Sea simulation model estimating economic benefits to the nation does not take into account the benefits to the region as a result of the crab saved by the Emergency Rule in 1995 and the future benefits to stock rebuilding that will occur from the continuation of the crab protection area. It should also be noted that this particular area has in recent years, been the prime area for harvest of a substantial portion of the king crab quotas. This is supported by ADF&G records of catch reported by statistical areas.
5. Although the trawl fleet and their supporters claim lost revenues as a result of being closed out of high abundance areas, this should only be considered one of a number of annual variations. As the EA/RIR shows (Table 1, page 7) the rock sole value for 1995 is similar to that for 1992 and 1993. The higher value for 1994 is only comparable to one previous year in the analysis, 1991. To conclude that the Emergency Rule protection zone has a direct cause and effect relationship with foregone revenues by making comparisons with one previous year's catch is a very

questionable economic conclusion upon which to even begin to formulate as critical a decision as the one facing the NPFMC on king crab conservation.

The EA/RIR makes no allowance for the net benefits to the nation and the region, if king crab stocks are allowed to rebuild with protection measures from the notoriously destructive impacts of the hard on bottom trawl gear employed in the rock sole fishery. According to ADF&G, average exvessel revenue for 1990-1993 for the Bristol Bay king fishery exceeded \$60 million.

6. Gordon Blue, a Bering Sea crab fishermen has prepared a paper for the NPFMC providing scientific information on the management and regulations of the king crab stocks off Western Kamchatka in the Sea of Okhotsk. The USSR/Russia has experienced sustained yields of over 30 million pounds for the past two decades. Regulations include large areas off the coast of Kamchatka closed to bottom trawling for many years.

CONCLUSION:

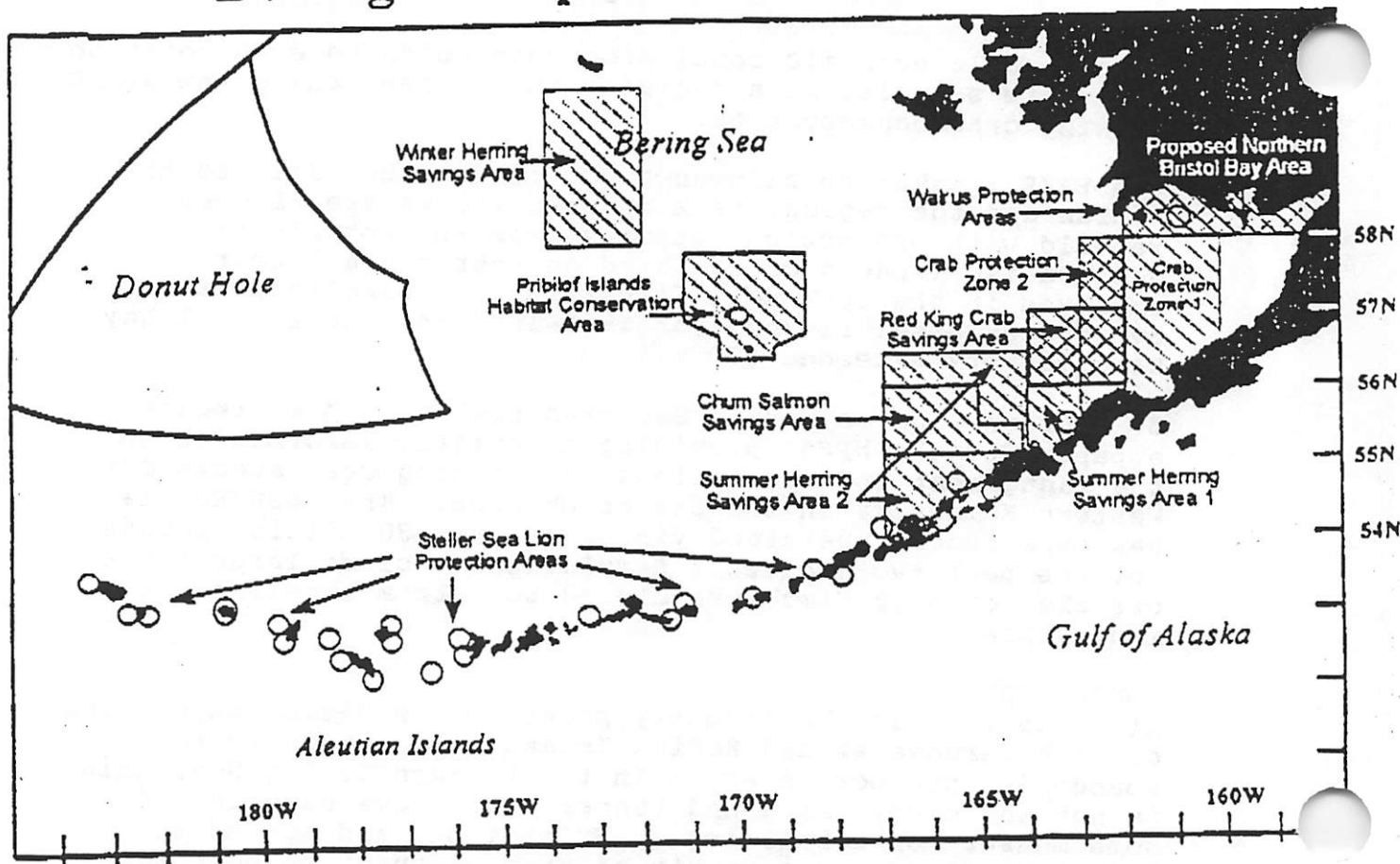
Although some in the industry point to the dismal experience of crab refuges around Kodiak Island as a rationale for abandoning protection areas in the Eastern Bering Sea, this is not the case. King and tanner crabs have experienced some measure of rebuilding in Bristol Bay and around the Pribilof Islands as a result of area closures to both trawl gears and directed crab fishing with pot gear. There was a small rebound of king crab in Bristol Bay prior to the 1994 directed fishing closure. A dynamic rebound of bairdi has also occurred in Bristol Bay since the inception of the Zone 1 closure area and caps, although these stocks are now in sharp decline. In the case of king crab, the trawl closure area was likely not large enough.

In 1993, 1994 and 1995 we have experienced a reopening of Pribilof Islands king crab fisheries. The ACC supported a lengthy closure of the directed fishery for rebuilding, beginning in 1990 that was finally supported by implementation of a no trawl zone in January 1995 that is now providing protection for an estimated 90% of the Pribilofs Islands king crab habitat defined by Dr. David Armstrong.

With current scientific information leading more and more to the conclusion that crab refuges are important to the survival of not only mature king crabs, but to king crab in their early life history stages, it is important to maintain the Bristol Bay king crab protection area adopted in 1995 as a permanent protection area and an integral part of a long term king and tanner crab rebuilding program in the Eastern Bering Sea.

Enclosure: Bristol Bay red king crab protective area, NPFMC

Bering Sea Species Protection Areas



Proposed Northern Bristol Bay Area: closed year-round to all trawling (proposed).

Chum Salmon Savings Area: closed to all trawling August 1-31 with provisional extension to October 5.

Bristol Bay Red King Crab Area: closed ^{11/1 - 3/31} year-round to non-pelagic trawling (proposed). → *year-round*

Pribilof Islands Habitat Conservation Area: closed year-round to all trawling.

Crab Protection Zones: Zone 1 closed to trawling year-round (with exceptions).
Zone 2 closed to trawling March 15 - June 15 (with exceptions).

Walrus Protection Areas: closed to all fishing April 1 - September 30.

Steller Sea Lion Protection Areas: closed to all trawling year-round with some extended seasonally on January 20.

Herring Savings Areas: closed to all trawling when trigger reached.
Summer Area 1 closed June 15 - July 1
Summer Area 2 closed July 1 - August 15.
Winter Area closed September 1 - March 1.

North Pacific Fishery Management Council, March 3, 1995

Pacific Northwest Crab Industry Advisory Committee

20 October, 1995

Garry M. Loncon
Chairman

Larry J. Engel
Chairman
Alaska Board of Fisheries
P.O. Box 25526
Juneau, Alaska 99802-5526

Re: Request For Board of Fisheries To Support Year-Around Closure To Bottom
Trawling In The Bristol Bay King Crab Protection Area

Dear Larry:

The Pacific Northwest Crab Industry Advisory Committee hosted a well attended and rather successful Annual Meeting of the Alaska Department of Fish & Game with the Bering Sea crab industry October 16 and 17 of this week.

During the course of discussions on a wide range of issues, the subject of bycatch of king crab in the trawl fisheries surfaced a number of times. The bycatch discussion focused on the inequity between the conservation measures being practiced by crabbers and the NPFMC permissiveness in regards to trawlers continuing to be allowed king and tanner crab bycatch quotas and to use bottom trawl gear in the Bristol Bay area.

There was also considerable discussion and vehement opposition to the NPFMC recent action to modify the 1995 emergency rule regarding the expanded Bristol Bay king crab protection area, making the bottom trawl closure, merely a seasonal measure from January 1, to March 31st.

After polling the members of the PNCIAC, I wish to state for the record that the PNCIAC reiterates its support for the year-around closure in the Bristol Bay Protection area. The area in question, from 162 to 164 W. and 56 to 57 N. is a historic habitat for mature king crabs, not just during the winter season, but on a year-around basis.

At this time, the PNCIAC respectfully requests the Board of Fisheries to comment to the NMFS to change the final rule to a year-around closure.

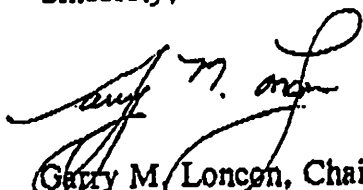
In closing, I wish to point out to the Board of Fisheries, that the House version of the MFCMA amendments was approved by a vote on the floor of the House yesterday. HR 39 has just been amended to include significant bycatch and habitat restrictive

Pacific Northwest Crab Industry Advisory Committee

20 October, 1995

language. Prior to this, the NMFS had already proposed substantive habitat protection language. Thus the NMFS has the opportunity to take timely action in recognition that habitat protection, as it applies to fishing gear, is not just the concern of a few isolated sectors of the fishing industry and some environmentalists, it is now an issue of widespread national significance.

Sincerely,



Garry M. Loncon, Chairman
Pacific Northwest Crab Industry Advisory Committee
c/o Royal Aleutian Seafoods, Inc.
701 Dexter Avenue, Suite #403
Seattle, WA 98109
(206) 283-6605 fax (206) 282-4572

cc: Frank Rue, Com. ADF&G
Mary McDowell, Office of the Governor of Alaska
Steve Pennoyer, RD, NMFS, AKR
Rollie Schmitten, Asst. Admin. NMFS


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November 27, 1995



Clarence Pautzke
 North Pacific Fishery Management Council
 605 West 4th Avenue, Suite 306
 Anchorage, Alaska 99501-2252

Dear Clarence:

We are writing to express our concern about non-pelagic trawling in the Red King Crab Savings Area. We believe that this area should be closed year-round to all bottom trawling.

The entire crab industry is distressed about the declining abundance of red king crab stocks. In 1994 the red king crab fishery did not open because of stock conditions. According to the Alaska Department of Fish and Game 1995 estimates, red king crab stocks continue to be in decline since 1994. The geographic distribution of red king crab has also contracted so that most all of the stock now resides within Area 512 and in the Red King Crab Savings Area.

In the November 7, 1995, letter to the Council, the Alaska Board of Fisheries requested the Council adopt a year-round closure of the area to bottom trawling to prevent any further reduction in crab stocks due to unnecessary trawl bycatch. The Board of Fisheries believes that a year-round closure for bottom trawling is essential to protect crab stocks from further declines.

Trident supports the Board of Fisheries' position, and believes that this issue should be placed on the Council's January meeting agenda.

Sincerely,

Bart Eaton
 Bart Eaton

Alaska

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Oceantrawl

2.
C

AMBASSADOR EDWARD E. WOLFE
Vice President Corporate Affairs

October 20, 1995

Mr. Ronald J. Berg
Chief, Fisheries Management Division
Alaska Region
National Marine Fisheries Service (NMFS)
P.O. Box 21668
Juneau, AK 99802

Sent by telefax: 907 586-7465

Re: Bering Sea Fishery Management Plan Amendment 21(b) and Related Proposed Rule -- Chinook Bycatch

Dear Ron:

The purpose of this letter is to provide Oceantrawl's comments concerning the Fishery Management Plan Amendment and Proposed Rule referenced above.

"Trigger and closure" forms of bycatch management of the type proposed under Amendment 21(b) are of questionable value for dealing with widely distributed, randomly encountered species such as chinook salmon. General multi-year patterns of chinook bycatch are not a valid basis for predicting locations of increased bycatch in any given year. Conversely, any trigger which closes an area is more likely to be reached in years of increased chinook abundance (when there is less need to constrain bycatch) than in years of low chinook abundance.

In light of the foregoing general considerations, we believe very strongly that NMFS should strictly scrutinize any chinook "trigger and closure" management actions, and require that they be very well justified on a cost/benefit basis and narrowly tailored in scope before qualifying for approval. The proposed regulatory action does not satisfy either of these criteria. We are particularly concerned that the procedures used to estimate chinook bycatch during the base years were fundamentally flawed. There are significant problems associated with estimation of chinook bycatch rates and amounts. [See Council Scientific and Statistical Committee (SSC) Minutes, April 1993, Item D-2(e).] As the SSC has consistently stated, because the number of chinook taken as bycatch is so low relative to the tonnage of pollock and cod harvested, basket sampling and extrapolation cannot be relied on to produce an accurate chinook bycatch estimate. This flaw was recognized and addressed in adoption of the "retention and counting" salmon bycatch regulations. Retention and counting data suggest that sampling and extrapolation

Oceantrawl

Mr. Ronald Berg
October 20, 1995
Page 2.

overestimate chinook bycatch. However, the latter methodology was used to generate bycatch estimates for the base years referenced in support of this proposed management action.

In addition to our previous concerns with the Rule, the Amendment has the potential of imposing extreme costs on the pollock and cod fleet, while providing little benefit to the salmon fisheries of western Alaska. Even if one assumes that the bycatch estimates for the relevant years are accurate (which, as noted above, is not a fair assumption), Amendment 21(b) is not supported by any reasonably constructed cost/benefit analysis.

As an example of the above-referenced costs and benefits, if all chinook bycatch had been eliminated during 1979-1991, the number of chinook returning to the Nushagak River during that period would have only increased by an estimated average of 4.6%, and the number of chinook returning to the Yukon would have only increased by an estimated 1.7%. See, Amendment 21(b) Draft Environmental Analysis/Regulatory Impact Review ("EA/RIR"), August 16, 1995, pgs. 1-11 - 1-13. The economic benefits to the commercial and recreational fisheries of those rivers would have been \$65,400 per year for the Bristol Bay commercial fishery, and \$183,340 per year for the Yukon. While subsistence use of chinook may have social and economic importance, there is no demonstrated impact of chinook bycatch on the subsistence fisheries of western Alaska. On the other hand, the Bering Sea areas that would be closed to fishing upon the 48,000 chinook trigger being reached are of critical importance to the pollock roe and cod fisheries. A closure of the proposed chinook "savings area" during the pollock roe fishery could reasonably be expected to impose an annual cost in the millions of dollars.¹

In addition, further analysis of the model used to evaluate the potential impacts of Amendment 21(b) reveals that the Rule did not incorporate significant management actions (such as crab related closures) which have displaced pollock and cod fishing effort. Further, the model as presently constructed cannot predict more bycatch than occurred in the source year, and thus cannot predict costs resulting from a cap set equal to or higher than that level. We believe these factors caused the model to understate the potential cost and displacement impacts of Amendment 21(b). In summary, a reasonably constructed cost/benefit analysis would weigh heavily against the proposed management action. The analytic model used in connection with the proposed Amendment failed to include readily available and relevant data and, therefore, produced a biased and inaccurate result.

¹ It is not possible to more precisely state the adverse economic impact on the pollock and cod fleet, as it is not specified on the same "dollars per year" basis in the EA/RIR as the benefits to the Yukon and Nushagak of no chinook bycatch. The failure to evenhandedly assess the cost/benefit impact of this proposed action on the affected salmon and groundfish fisheries constitutes a substantial flaw in the record, and should in itself be sufficient basis for rejecting the Amendment and the Proposed Rule.

Oceantrawl

Mr. Ronald Berg
October 20, 1995
Page 3

Another significant defect in the Proposed Rule is the compilation of tow-by-tow data used in support of this action which did not accurately represent bycatch rates, and failed to identify reasonable alternatives that should have been considered. The Alaska Department of Fish and Game (ADF&G) graphics presented to the SSC, the Advisory Panel and the Council in connection with this Amendment derived closure alternatives by plotting tows that exceeded specified numbers of chinook per tow. However, those graphics did not display that information relative to the locations of all tows (those with and without chinook bycatch) during the years in question. As a result, the graphic analysis failed to accurately illustrate the difference in chinook bycatch rates among the various closure alternatives, and the balance between trawl fleet effort redistribution and chinook savings associated with each of them.

More accurate analyses taking into account rate-based information could have been easily constructed from the ADF&G data set. Without conceding that any chinook management action is justified, we submit that a properly constructed correlation of chinook bycatch and fleet fishing patterns would show that an increase in net savings of chinook and a reduction in fleet displacement could be achieved by reducing fishing effort in the block extending from 54.30 N. to 55.00 N. and from 164.30 W. to 166.00 W. ADF&G's failure to present to the Council this relevant, significant data in connection with its consideration of Amendment 21(b) constituted a material omission from the record, and as with the cost/benefit analysis flaws noted above, clearly warrants rejection of Amendment 21(b) and the Proposed Rule.

We believe that until the NMFS reforms its chinook bycatch estimation procedures, Amendment 21(b) cannot be enforced on a rational basis. Accordingly, unless chinook bycatch is monitored on the basis of retention and counting, whole haul sampling or an equivalent accurate methodology, there will be an inadequate basis for determining when the trigger amount is reached. Areal closures made on the basis of extrapolated chinook bycatch estimates would be arbitrary and capricious. However, as a matter of practice, NMFS defaults to sampling and extrapolation estimates in connection with its salmon bycatch estimates and management actions. ~~If adopted, this Plan Amendment and regulation will be unenforceable or improperly enforced until NMFS implements a reliable chinook bycatch estimation procedure. NMFS has not yet indicated its willingness or readiness to do so.~~

In summary, we believe that Amendment 21(b) and the Proposed Rule in their present form are not supported by the record, are not supportable in their present form, and should be rejected. Further, no chinook bycatch management action should be approved unless it is supported by a sound and balanced cost/benefit analysis or legitimate conservation considerations. The Plan clearly should be tailored to have the lowest feasible displacement impacts on the affected fisheries. However, if the Amendment and Proposed Rule are approved, no enforcement action should be taken until chinook bycatch estimates used to measure progress against the 48,000 fish

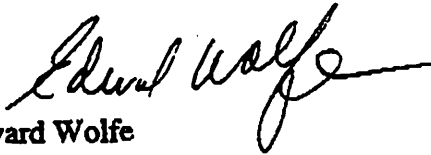
Oceantrawl

Mr. Ronald Berg
October 20, 1995
Page 4

trigger are based on whole haul sampling, retention and counting, or a method of demonstrated equivalent accuracy.

Thank you for considering our comments, and please do not hesitate to contact me for further clarification.

With best regards,



Edward Wolfe

EW:jys

cc: ✓ Rick Lauber, Chairman
North Pacific Fisheries Management Council

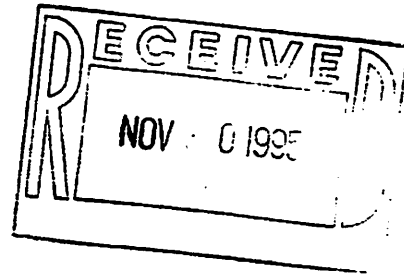
U.S. MARINE CORPORATION

712 MARINE WAY, KODIAK, AK 99615

(907) 486-4038 FAX (907) 486-5709

November 29, 1995

To: North Pacific Fishery Management Council
Attn. Chairman Richard Lauber



Dear Chairman Lauber,

Attached is a proposal to amend a fisheries related CFR that currently prevents fishermen from retaining any bycatch against arrowtooth flounder. This species was targeted upon by our fleet in 1995, and we expect to do so again in 1996 a filet market.

Since there is currently no allowable bycatch against this species we are running into problems of waste and NOVAS.

I know time is short and I apologize for the tardiness of this proposal. Please review it and if at all possible have your staff place it in the book for this Decembers meeting in Anchorage. I plan to be in Anchorage for the meeting and would be pleased to discuss this issue with you there if you so wish.

Sincerely,

A large, stylized handwritten signature in black ink, appearing to read "Jonathan Spool".

Jonathan Spool
Vice President AK Operations
U.S. Marine Corporation

GROUND FISH FISHERY MANAGEMENT PLAN AMENDMENT PROPOSAL
North Pacific Fishery Management Council

Name of Proposer: Jonathan Spool

Address: U.S. Marine Corporation
 712 Marine Way
 Kodiak, AK 99615

Fishery Management Plan: Gulf of Alaska

Brief Statement of Proposal:

Modify 50 CFR 672.20 (h) (1) (ii) in order to allow shallow water complex bycatch only, in a directed arrowtooth flounder fishery.

The CFR currently reads:

(ii) Arrowtooth flounder, or any groundfish species for which directed fishing is closed, may not be used to calculate retainable amounts of other groundfish species under paragraph (g) of this section.

Objectives of Proposal/Problem Statement:

Currently, vessels which are catching arrowtooth flounder cannot legally retain any bycatch of species for which directed fishing is closed. This set out as 50 CFR 672.20 (h) (1) (ii), was designed to prevent retained bycatch of high value blackcod against discarded arrowtooth flounder. When this ruling was set it was also stated that it would be reviewed at such a time that arrowtooth flounder became a directed fishery. The objective of this regulatory amendment is to allow only shallow water complex bycatch against arrowtooth flounder since it has now become a targeted resource being utilized for viable products, and to put an end to the mandatory, wasteful discard of pollock and cod, when directed fishing for those species is closed, as soon as possible.

Need and Justification For Council Action:

Arrowtooth flounder has now become a directed fishery for two or three plants in Kodiak producing surimi, H&G, and filet products from this resource. The problem is that the vessels targeting upon arrowtooth cannot legally retain any of their bycatch of pollock and cod, when directed fishing for those species is closed. Pollock and cod inevitably get caught with the flounder forcing the discard at sea of most of the pollock and cod when directed fishing for these species is closed. In my opinion this is an example of where an outdated regulation is forcing the fishermen to discard valuable resource.

The other problem is that since it is virtually impossible to pick out all the pollock and cod before even a small amount slips down into the fishhold, especially in rough weather, our vessels are sometimes coming to the dock in a state of violation of current bycatch regulations since even one pollock or cod retained as bycatch against arrowtooth flounder is now illegal under the current regulations.

In order to demonstrate that we are not targeting arrowtooth flounder in order to retain valuable bycatch this proposal only includes allowable bycatch of low value shallow water complex species which does not include blackcod, idiotfish, and rockfish.

Foreseeable Impacts of Proposal:

The foremost impact of this proposal is that some additional proportionment of pollock and cod might need to be reserved from the TAC in order to cover the bycatch caught while targeting on Arrowtooth.

There might be apprehension that this is a ploy to retain blackcod or rockfish, which it is not, and demonstrated by allowing only shallow water complex as bycatch.

The other impact, which is a positive one is that the development of this fishery would indirectly help other groundfish and crab fisheries to develop due to the predatory nature of arrowtooth flounder. More research would have to be done on predatory impact in order to assess it's actual impact.

Alternative Solutions:

There might be concern that a twenty percent bycatch rate of pollock and cod be too high and put too much restriction on the TAC for those species. In this event it would be acceptable to lower the shallow water complex bycatch rate against arrowtooth to a rate that your staff deems workable.

The Need for Timely Action:

I am aware that this is an out of sequence proposal and would require a council member to deem it important enough to bring it up on the agenda this December meeting. In light of the seriousness placed upon moving toward fuller utilization of our fisheries resources I sincerely hope that one of you will do so. Due to the potential amount of pollock, cod, and Arrowtooth flounder that could be wasted in 1996 as this fishery inevitably develops it is my opinion that your staff be directed to begin an analysis on this issue to be completed prior to the January meeting from where it can go out for public comment.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center
7600 Sand Point Way N.E., Bin C15700
Seattle, Washington 98115-0070

(206) 526-4000

FAX: (206) 526-4004

30 November 1995

MEMORANDUM FOR: Clarence Pautzke, Director NPFMC

FROM: William Aron, Director AFSC

SUBJECT: Request for voluntary collection of biological samples
by the Alaska fishing fleet

We are examining the possibility that sharks may play a role in the decline of Steller sea lions and other marine mammals in Alaska. Unfortunately, we have no recent data pertaining to this question. A 13-foot Pacific sleeper shark (*Somniosus pacificus*) was collected in Kachemak Bay in 1958 that contained parts of three harbor seals in its stomach (see attached note from *Copeia*), but we are aware of no other such reports.

During informal discussions at recent fisheries-management meetings, several members of the fishing industry, particularly those participating in long line fisheries, expressed interest in the problem and suggested that the Alaska fishing fleet may be able to collect samples on behalf of the Alaska Fisheries Science Center. Such samples could help the AFSC determine if a full-scale research effort is warranted. The attached information sheet summarizes the problem and describes the samples and accompanying data that would be necessary to initiate a preliminary investigation into the potential impact of shark predation on pinnipeds in Alaska. The Alaska Fisheries Science Center would appreciate the assistance of the North Pacific Fisheries Management Council in making this information request available to the Alaska fishing fleet.



**REQUEST FOR SAMPLES TO EXAMINE THE FOOD HABITS OF SHARKS
AND THEIR POSSIBLE PREDATION ON MARINE MAMMALS IN ALASKA**

**National Marine Fisheries Service
Alaska Fisheries Science Center
7600 Sand Point Way NE
Seattle, Washington 98115**

The National Marine Fisheries Service (NMFS) would like to collect stomach contents and other data from sharks caught incidental to commercial fisheries in Alaska. This is a pilot project to explore the food habits of sharks in Alaska and their possible predation on marine mammals. Studies elsewhere suggest the possibility that sharks could be a significant predator on pinnipeds in Alaska. A 13-foot Pacific sleeper shark (*Somniosus pacificus*) was collected in Kachemak Bay in 1958. It contained parts of three harbor seals in its stomach. We are aware of no other such reports and we have no data pertaining to this question. Results from this pilot project will help determine if a research effort should go forward.

To collect the best possible food habits data, we prefer that shark stomachs be collected and frozen intact. Small food particles, many of which may be sufficient to identify prey species, can be lost easily if the stomachs are opened at sea. Stomachs should be removed as quickly as possible, tied off at both ends, placed in a plastic bag, and stored in a freezer. A tag, written in pencil, with the date and some means for identifying the stomach sample must be attached. **Do not sample stomachs from spiny dogfish.** We are particularly interested in **sharks greater than 8 feet in length.** To optimize the value of these samples, we would like to have as much of the following information as possible:

Vessel name (Optional)
Date of capture
Time of capture (if known)
Latitude and longitude
Type of fishing gear
Depth of fishing gear - estimated depth of shark capture
Target species of fishery
Species of shark (see drawings on the reverse side)
SEX (see drawings on the reverse side)
Total length (snout to tip of tail - estimate if not landed)

Record the date, location, and as much other data as possible, including species and an estimate of overall length, of all sharks that are not landed. Frozen stomachs and data can be delivered to the following:

Kodiak

National Marine
Fisheries Service
P.O. Box 1638
Kodiak, AK 99615
(907) 487-5961

Dutch Harbor

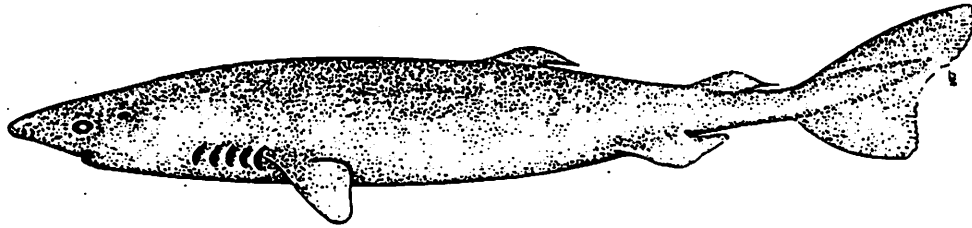
National Marine
Fisheries Service
P.O. Box 638
Dutch Harbor, AK
99692
(907) 581-2062

Seattle

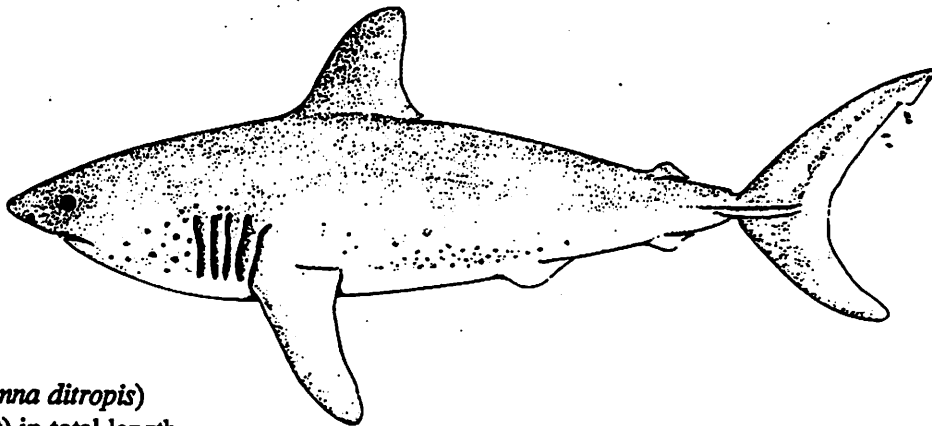
Alaska Fisheries Science Center
7600 Sand Point Way NE, Bin C15700
Seattle, Washington 98115-0070
(206) 526-4000

Species of sharks most frequently encountered in Alaska waters.

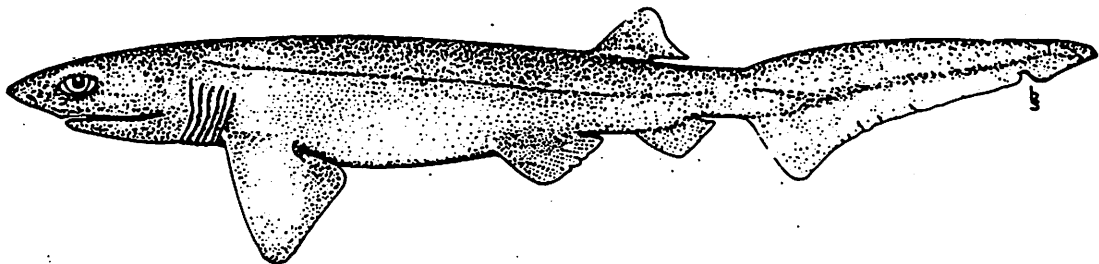
NOTE: Incidental catches of other species is possible



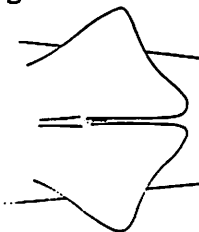
Pacific sleeper shark (*Somniosus pacificus*)
may exceed 7.0 m (23 ft) in total length



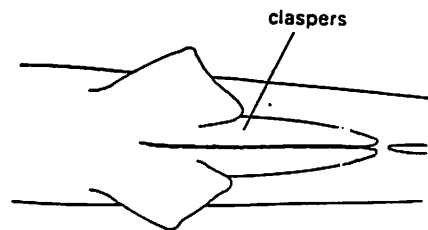
Salmon shark (*Lamna ditropis*)
up to 3 m (10 ft) in total length



Sixgill or mud shark (*Hexanchus griseus*)
may exceed 8 m (26 ft) in total length



pelvic fins, female (ventral view)



pelvic fins, male (ventral view)

Ventral view of pelvic fins, showing difference between males and females