

MEMORANDUM

TO: Council, SSC and AP Members
FROM: Chris Oliver *Ch*
Acting Executive Director
DATE: September 25, 2000
SUBJECT: Pacific Cod/Steller Sea Lions

ESTIMATED TIME 2 HOURS

ACTION REQUIRED

Brief status report on analysis and provide direction as appropriate.

BACKGROUND

At the September meeting, the Council reviewed of an analysis of the Pacific cod fisheries and alternatives to minimize possible competitive interactions with the endangered western population of Steller sea lions. The Council added additional alternatives to be analyzed, and recommended that additional information be examined to evaluate potential for competition. A copy of the full motion, as adopted is attached as Item C1(a).

At this meeting, NMFS staff will provide only a brief report on the status of the analysis. Final action is scheduled for a special meeting to be convened November 17-20, with implementation of the preferred alternative by emergency rule prior to January 1, 2001.

Council Action on Steller Sea Lion/Pacific Cod Interactions

September 11, 2000

Final Draft

Draft Problem Statement

Steller sea lion (SSL) populations have declined and there are numerous reasons hypothesized for the decline. Recently, Steller sea lions have been listed as endangered in the western portion of their range under the Endangered Species Act (ESA), and it is suggested that they may be nutritionally stressed. Pacific cod is one of many recognized food items of Steller sea lions and the Pacific cod fishery has been identified as a potential source of competition that might result in jeopardy to Steller sea lions as that term is used in the ESA.

Revised Purpose and Need Statement

The purpose of this action is to consider the need to develop and implement management measures that reduce competition between Pacific cod fisheries and sea lions if such competition is found to be a likely source of jeopardy as that term is used in the ESA. This action must provide research and adaptive management measures for the evaluation of the likelihood that fishery removals of Pacific cod are a significant factor in the failure of sea lion populations to increase.

Management Measures

The Council concurs with the SSC that the premise upon which Council action is based is so tenuous that adoption of the alternatives is imprudent and may deprive individuals and communities of their livelihoods without justification. However, because this is the initial review and NMFS has requested that the Council develop alternatives, the following is proposed for further analysis:

Alternatives for the GOA:

- A. Divide fishery into two seasons. ("A" & "B")
 - 1. 'A' Season: January 1 - April 30
 - 2. 'B' Season: May 1 - December 31

- B. Phase in implementation of seasonal and critical habitat Total Allowable Catch (TAC) limits.
 - 1. 'B' season Critical Habitat (CH) limit to be frameworked and based annually on biomass distribution in summer survey.
 - 2. No 'B' season limit in CH.

Option 1:

- 1. 2001 'A' Season: No more than 80 % of TAC and no more than 60% in critical habitat.
- 2. 2002 'A' Season: No more than 70% of TAC and no more than 50% in critical habitat.

Option 2:

- 1. 2001 'A' Season: No more than 60% of TAC and no more than 40% in critical habitat.
- 2. 2002 'A' Season: No more than 50% of TAC and no more than 30% in critical habitat.
- 3. 2003 'A' Season: No more than 40% of TAC and no more than 20% critical habitat.

NOTE: The phase in would be superseded when winter survey data on biomass distribution is available.

- C. Option 1: Keep federal waters open under current regulations around rookeries and haulouts open to all gear types.

Option 2: Allow the following:

a. Rookeries

<u>0-3nm</u>	<u>3-10nm</u>	<u>10-20nm</u>	<u>outside 20nm</u>
no fishing	pot (60 pot limit) jig (5 machines) CV longline	pot jig longline (all) Trawl <80' (suboption) Trawl <100' (suboption) All trawl vessels (suboption)	all vessels

b. Haulouts

<u>0-10nm</u>	<u>10-20nm</u>	<u>>20nm</u>
pot (60 pot limit) jig (5 machines) CV Longline	pot longline (all) jig trawl <80' (suboption) trawl <100' (suboption) All trawl vessels (suboption)	All vessels

- NOTES:
1. Section C, Option 2, pertains to directed cod fisheries.
 2. Rookeries and haulouts would be defined as those designated in the Reasonable and Prudent Alternatives for pollock.

D. During the parallel fishery that takes place within State waters (zero to three miles), the fishery will start on January 1 and fishing may occur within currently open rookeries and haulout areas. The fishery is limited to longline, pot, and jig vessels with the following restrictions:

1. Pot Limits:
Option a. 60
Option b. 75
Option c. 100
2. A limit of 5 mechanical jigging machines for vessels using jig gear.
3. Retain inside trawl exemptions provided by Board of Fisheries in Shumagins.

E. Remainder of seasonal and critical habitat limits in federal waters is allocated to catcher vessels, catcher processors and pot fisheries by gear type based on historic catch and percent within critical habitat.

Alternatives for the Bering Sea

An additional alternative would be added to the EA/RIR for the Bering Sea, with the following elements:

A. Management measures

1. Two seasons: 'A' and 'B'.

Rationale: This measure would spread harvest across the year in CH* waters of the Bering Sea.

*For the purpose of this motion, CH does not include haulouts.

2. 'A' season start/end dates:

	<u>Trawl</u>	<u>Fixed Gear</u>
'A' season start	January 20	January 1
'A' season end	May 31	May 31
'B' season start	June 1	June 1
'B' season end	November 15	December 31

Rationale: This 'A' season start provides to fixed gear fleet the advantage of access to their traditional fishing grounds and reduces the potential for high catch rates at the outset of the season by delaying the start of the trawl fishery until January 20. The 'B' season start for the fixed gear sector should balance catch objectives with potential for significant rollovers and bycatch considerations. The end date for the 'B' season for trawl is the date used for the Atka mackerel trawl fishery.

Option 1:

1. Critical Habitat limit on Pacific cod removals in the 'A' season.

The 'A' season TAC=60% of annual TAC, and 60% of the 'A' season TAC can be taken in CH in 'A' season.

NOTE: This season split should be used to determine the 'A' season harvest limit for CH. This alternative does not limit the amount of cod that can be harvested outside of CH.

Rationale: This is a mechanism to ensure a balanced harvest of cod in CH throughout the year, while still preserving some element of the basic nature of the fishery which is that cod are best fished when they are aggregated during the first part of the year.

The actual winter distribution of Pacific cod is currently not obtainable from available data, but distribution of cod fishing effort in the Bering Sea suggests that cod are mostly found in the Bering Sea CH for at least the first two to three months of the year. When a winter survey is conducted, the proportion of Pacific cod in CH can be substituted for the above CH fishing limit.

2. No 'A' or 'B' season limit outside CH.

Rationale: The objective is to spread fishing over the year to reduce potential for competition with Steller sea lion foraging. Given that increased fishing outside of CH has little or no impact on sea lion CH and serves to reduce overall CH removals to below the 'A' season CH limit, then fishing outside of CH should not be limited. This could also help the industry reduce the economic impacts of modifications to the cod fishery by increasing opportunity to harvest the entire TAC in an area that is less important to sea lion foraging, as per the designation of CH.

3. No "B" season CH limit.

Rationale: Cod are not primarily located in CH during the second portion of the year and little fishing occurs in CH for that reason. The creation of a "B" season limit could actually trigger a small "race for fish" inside CH.

4. CH cod catch in the "Residual CH" area do not count against CH catch limit.

Rationale: The "crescent" shaped area on the eastern edge of sea lion CH (also referred to in the analysis as "residual SCA") is **not** CH. This means that in designating CH, areas sufficiently distant from the feeding range of sea lions should not be included in the CH designation. The argument in the analysis that "edge effects" could occur could be said of any area adjacent to CH, regardless of how far that line is placed.

5. Attainment of CH 'A' season limit closes CH to directed cod fishing only. Bycatch in non-cod target fisheries should be deducted from individual gear and sector catch limits, based on historical usage. Attainment of the CH limit should trigger MRB (bycatch-only) status for cod in CH, not closure of area to non-cod target fisheries.

Rationale: Flatfish and other non-pollock fisheries that occur during the proposed 'A' season period do not generally take large quantities of cod as bycatch. Evidence of this is apparent when catch per week of cod is evaluated in weeks where Pacific cod is closed to directed fishing or in weeks when little or no cod effort is occurring. There is no reason to hamstring vessels targeting other species that need to fish in their traditional areas in order to maintain catches at economic levels, with low bycatch rates.

6. Rookery "no-trawl" areas to be maintained according to current regulations.

Rationale: Sea lions demonstrate no fidelity to haul outs and use of haul outs is variable (testimony of John Burns to NPFMC Advisory Panel on September 8, 2000). Existing measures restricting trawl fishing for non-pollock species to outside ten miles around sea lion rookeries (including the seasonal 20-mile closures at three specific sites) have not been tested for efficacy. Until this research is done, there is no evidence to suggest that extension of the rookery closures will benefit sea lions.

7. Fixed gear can continue to be fished in rookery "no trawl" zones. (NOTE: Fishing with any gear should not be restricted in haulouts).

Catch rates of cod per week by the portion of fixed gear vessels fishing in Bering Sea CH are relatively low. To force these vessels to fish outside of rookeries could impact their ability to fish (in the case of smaller vessels) and will create needless grounds conflicts and possibly gear conflicts.

Option 2:

Bering Sea east of Seguam Pass

a. Rookeries

<u>0-3 nm</u> no fishing	<u>3-10nm</u> pot (60 pot limit) jig (5 machines) CV longline	<u>10-20nm</u> pot jig longline (all) Trawl ≤100' (suboption) Trawl <125' (suboption) All trawl vessels (suboption)	<u>outside 20nm</u> all vessels
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b. Haulouts

<u>0-10nm</u> pot (60 pot limit) jig (5 machines) CV longline	<u>10-20nm</u> pot jig longline (all) Trawl ≤100' (suboption) Trawl <125' (suboption) All trawl vessels (suboption)	<u>>20nm</u> All vessels
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NOTE: Rookeries and haulouts would be defined as those designated in the Reasonable and Prudent Alternatives for pollock.

c. Critical Habitat

- pot
- jig
- longline (all)
- trawl <100' (suboption)
- trawl <125' (suboption)
- All trawl vessels (suboption)

B. Proposed distribution of allowed CH fishing between different gear sectors.

Option 1: The “pain sharing” formula will use historical dependence on fishing during the first half of the year and historical dependence on fishing in CH in the first half year, per gear and sub-sector.

The principle for compensation for pain sharing, as envisioned, would be that in the event of a significant rollover of cod from trawl to fixed gear, the trawl sector would work with the fixed gear sector to maximize the ability of the fixed gear sector to harvest the fish that are rolled over. A formula for rolling over cod earlier in the year so that the rollover works for the fixed gear sector should also be developed.

Option 2: Any ‘A’ season reduction in CH quota, to protect sea lions, would be absorbed by each subsector in direct proportion to its historical ‘A’ season catch in CH.

C. Rookery and Haulout Alternatives for All Areas

1. Closure in rookeries only.
2. Rookery no-trawl areas to be maintained according to current regulations.
3. Fixed gear can continue to be fished in rookery no-trawl zones.
4. Rookeries and important haulout closures as per pollock RFRPAs (generally 20 nm in BS and 10 nm in AI and GOA).

D. Vessel Safety

Analyze impacts of CH restrictions on the following size classes of vessels:

<u>BSAI</u>	<u>GOA</u>
-less than 125'	-less than 100'
-less than 100'	-less than 80'
-less than 60'	

Other Recommendations

The Council identifies Alternative I as the preferred option for both the Gulf of Alaska and the Bering Sea and Aleutian Islands.

Further, the Council requests that NMFS conduct annual winter biomass surveys in the GOA and BSAI, and that adaptive management research and surveys be allowed to continue in critical habitat.

The Council shares the concerns identified by the SSC regarding the EA/RIR. In addition to the changes recommended by the SSC, the analysis needs to be enhanced with the following information to better evaluate the question of competition between the fishery and the sea lions:

Where there is discussion in the text concerning elements of overlap (diet composition, fishing/diving depths, size composition, etc.), the text should avoid presenting information on the extreme ends of those ranges of data, without providing characterization about the distribution of the data that provides the reader with a clear understanding of the central tendency of the data. The presentation of fishery depths and sizes on pages 37 & 38 is an example of an appropriate presentation.

Examples of inappropriate presentations:

- Page 53 Sea lions dive up to 250 meters (doesn't represent the avg or range)
- Page 57 Sea lion scats contain up to 62% cod (doesn't give avg or range)
- Page 57 Sea lions consume cod up to 80 cm (nothing in data to support; only one data point of 75)
- Page 28 Mackerel, herring, capelin, etc. can be less than 5% of cod diet in any given year (no average given per year)

Though the EA "tiers" off the prior BiOps, the public would be better informed if important information regarding sea lions was recapped (and updated) in the EA:

- Population data (both counts and population estimates by year and area, including pup counts and pup population estimates by year and area). This should update and expand upon Table 7 from the December 1998 BiOp.
- Telemetry data on sea lion dive depths should include and update Figure 36 from the December 1998 BiOp. (Including similar data tables from the paper on diving behavior by Loughlin et al. 1998, as well as a review of information on ongoing research that may be available to the agency but not yet in press.)
- Expanded information on GIS analysis of foraging patterns (presented in such a way that the reader has an understanding of the central tendency of the data, as well as the extremes of the ranges), including a review of information on ongoing research that may be available to the agency but not yet in press.
- Presentation of quantitative data on estimated human-caused sea lion kills and an estimate of their contribution to the decline.
- Presentation of best available data on estimates of killer whale populations and their consumption of sea lions and the role they might play in impeding recovery.
- A review of the literature regarding the applicability of the "nutritional stress" hypothesis to the decade of the 1990s, with regard to data on condition factors of sea lions, including a review of information on ongoing research that may be available to the agency but not yet in press.
- A presentation of the case for "regime shift hypothesis."

The EA should also include a quantitative analysis of the probabilities of overlap and competition as outlined in the SSC minutes. This should include quantification of the area of overlap in depth by category of animal (ie: juveniles, lactating females, etc.) and by fishery and area. It should also include a quantification of overlap in diet in both weight/biomass consumed by the fishery and by sea lions by age/size class of cod by area.

The analysis of total groundfish consumption by Stellers presented on page 55 is based on 1980's population estimates and provides little area specific information. This portion of the EA needs to be updated using current population levels by area, and broken down by key prey species to the extent possible. A review of the current literature should be undertaken (including a thesis by Winship in 2000) for more recent estimates.

The size analysis of cod in sea lion scat shown in Figure 31 on page 235 is a much smaller data set than Table 3 of the June 2000 discussion paper. Both sets of information should be included in the EA. Additionally, the review of stomach content studies from the December 1998 BiOp should be included (Table 6 pages 147-157).

The preliminary CPUE analysis presented on page 34-37 and in Figure 5 should be included only if the deficiencies noted by the SSC are incorporated. Additionally, the statement concerning interpretation of the Martin Smith analysis based on this work (page 49) should be deleted.

CPUE analysis should be undertaken to compare winter and summer CPUEs in CH as a potential index of abundance changes between seasons. However, any further CPUE work undertaken should avoid mixing CV and CP catches, as well as mixing target and non-target catches. Time series of CPUE data should clearly delineate the opening and closing of target fishing in the study areas, or sub-components thereof.

The EA should include a thorough review of the cumulative measures that constitute the current cod fishery management regime, together with the matrix of closures that apply to the cod trawl fishery, as well as a quantification of the reduction in fishing for pollock and mackerel in CH that has resulted from actions related to sea lion concerns.

The estimate of cod in the SCA based on the summer trawl survey should include the amount of cod estimated in the Southern Bering Sea portion of the AI survey.

The statement regarding bottom trawl and Spectacled Eiders on page 72 should be deleted.

Expand the trophic analysis relative to P. cod diet.

Include information on how rookeries and haulouts were identified, particularly the haulouts.

Discussion on page 41 regarding edge effects should be deleted from the document as the crescent is not designated as CH and edge effects, by definition, would occur anywhere the edge is replaced.

An expanded discussion on the ramifications of the state water fishery relative to the federal fishery.

For the Bering Sea/Aleutian Islands and Gulf of Alaska cod fisheries each sub-sector should be evaluated for spatial and temporal dispersion, and rate and volume of catch in critical habitat, and fixed gear and trawl sectors should be evaluated in the same manner.

NMFS Fisheries Research

Also, the Council will send a letter to the Secretary of Commerce, with a copy to the Alaska, Washington, and Oregon Congressional delegations, requesting that adequate funding be provided in the Department of Commerce's budget for Steller sea lion research for immediate use by NMFS RACE division to launch winter biomass surveys in sea lion critical habitat and the 3 aquatic foraging habitat areas this year. This letter should emphasize that an adequate level of funding is needed on an annual basis to provide essential data for managing fisheries. The Council further recommends that NMFS utilize commercial fishing vessels, crews and expertise, as well as collaborate with the State of Alaska to the extent possible to most efficiently use these limited funds to conduct stock assessment and management efficacy studies.

Fishery Rationalization

The EA should include a discussion of the regulatory changes that would be necessary to facilitate the voluntary formation of harvesting cooperatives in the BSAI and GOA cod fisheries, along with a proposed timetable for Council action that describes the steps necessary to enable the various sectors wishing to form cooperatives to do so as quickly as possible, hopefully in time for the 2001 fisheries.

Future Consultations on Commercial Fisheries and Steller Sea Lion Interactions

The Council will send a letter to the NMFS Alaska Region indicating its strong desire that the agency address, to every extent possible, the scientific concerns put forward by the SSC and AP as regards the cod-Steller sea lion EA as it completes the comprehensive FMP-level consultation that it will deliver on October 31, 2000.

ALASKA CRAB COALITION

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RECEIVED

SEP 26 2000

N.P.F.M.C

DATE: September 26, 2000

TO: Mr. David Benton, Chairman
NPFMC
605 West 4th Avenue, Ste. 306
Anchorage, AK 99501-2252

FROM: Ami Thomson, Executive Director  TOTAL: 3 Pages

RE: AGENDA ITEM C-1, PACIFIC COD/STELLER SEA LION
INTERACTIONS, FOCUS ON BSAI PACIFIC COD POT FLEET

REQUEST TO MAINTAIN HISTORIC CATCH PERCENTAGE
IN BERING SEA/ALEUTIAN ISLANDS CRITICAL HABITAT,
INCLUDING IN THE 3-10 MILE ZONE IN THE ROOKERIES
OF UNIMAK PASS AND CAPE SARICHEFF AREAS

COMMENTS:

Alternatives 2 and 3 of the Draft Environmental Assessment for Pacific Cod and Steller Sea Lions (August 23, 2000) to limit fishing in the Sea Lion Conservation Area (SCA), pose severe consequences for the already economically distressed Bering Sea pot fleet.

- **Fleet and fishery description:** There are an estimated 50-60 crab pot vessels of 100 to 125 feet in length that regularly participate in the BSAI pot cod fishery. Trips are normally limited to 72 hours of fishing time, as the fish are bled and held in recirculating sea water tanks. The 2000 season lasted 45 days and of that, vessels fished an average of 28 days. From this snapshot of the fleet and the fact that the pot fishery has a relatively low catch rate, it is clear the pot fishery cannot be characterized as a high impact pulse fishery. Vessels use an estimated 100 to 125 pots each in the fishery.
- As noted in the summary analysis of catches by gear type for 2000 (attachment), the pot fleet caught its share of the cod allocation (9% of the total TAC), during the winter trimester, since the opilio fishery was delayed until April first. Assuming the fleet's historic catch in critical habitat (CH) has been 77%, 13,145 mt of its Bering Sea catch of 16,918 mt was taken in the CH, and most of that catch was taken in the 3-10 rookery zones of Unimak Pass and Cape Saricheff. In 2001, the crab fleet will have another small season, and it is quite likely it will be delayed again until April, making the winter months prime time for the pot cod fishery.
- Using the NMFS preliminary cod models for allocating cod catches by gear type for 2001, in light of the recommendations under alternative 2, pot vessels would be limited to a catch of 1140 mt in Bering Sea CH in the winter of 2001. This equates to 8% of their Bering Sea sector allocation.

- Based on the NMFS cod models and allocation formula, a similar projection can be made for the Aleutian Islands. Pot vessels would be limited to 190 mt in CII, or 8% of their Aleutian Islands sector allocation.
- Pot vessel catch rates are relatively low. If pot vessels are required to fish outside CH and the SCA, lengthened travel time and reduced fishing time will make it financially unfeasible for the vessels to fish and return to markets. Similarly, mandating a limit of 60 pots per vessel, will also make the fishery financially unfeasible.
- Pot vessels fishing outside critical habitat will be forced into gear conflicts with trawlers, resulting in excessive amounts of lost pots and there will also be increased bycatch of king and Tanner crabs.

**Weekly Cod Catch
inBSAI by Gear
Type 2000**

	Trawl Metric Tons	% of TAC In of CH	Hook Metric Tons	% of TAC In of CH	Pot Metric Tons	% of TAC In of
01/01/00			662			
01/08/00			5061		45	
01/22/00	1324		5797		661	
01/29/00	3016		4973		1684	
02/05/00	5858		4882		2772	
02/12/00	3213		3979		2480	
02/19/00	6242		4441		2981	
02/26/00	5867		4993		4221	
03/04/00	4055		4515		2568	
03/11/00	5610		3789		2680	
03/18/00	7900		279		41	
03/25/00	7795		0.6		2	
04/01/00	7321		2.4		1	
04/08/00	5979		4		0.4	
04/15/00	5438		0.5		6	
04/22/00	4697		26		0.05	
04/29/00	2720		12		2	
Total 1st Tri	77035		43416.5		20130.5	
BS Catch	56272		37034.6		16918.5	
BS Catch in CH	36211.0	60%	7906.9	21.30%	13145.6	77%
AI Catch	20763		6382		3212	
AI Catch in CH	18095.0		5794.9		3035.3	
Weekly Average Catch	3800/15wks		4717/9wks		2000/8wks	

**NMFS Staff Interpretation of Council's September 2000 Motion for Analysis of
Alternative Management Measures to Address Interactions Between the
Pacific Cod Fisheries and Steller Sea Lions**

Bering Sea and Aleutian Islands

I. Seasonal apportionments and fishing zones.

A. Seasonal Apportionments:

Option 1: Bering Sea:

[Option 1 was interpreted as meaning the entire Bering Sea and Aleutian Islands Management Area]

Area	Seasonal % of Annual TAC	
	A Fixed gear (Jan. 1 - May 31) Trawl (Jan. 20 - May 31)	B Fixed gear (June 1 - Dec. 1) Trawl (June 1 - Nov. 15)
Limit on directed fishing for P. cod within listed rookeries	36%	None
BSAI harvest amount available outside listed rookeries	100%	

Option 2: Bering Sea east of Seguam Pass:

[Option 2 was interpreted as meaning the Bering Sea subarea only—Seguam Pass is close to the 170° line, which is the dividing line for the Aleutian Islands subarea and the Bering Sea subarea]

Area	Seasonal % of Annual TAC	
	A Fixed gear (Jan. 1 - May 31) Trawl (Jan. 20 - May 31)	B Fixed gear (June 1 - Dec. 1) Trawl (June 1 - Nov. 15)
Limit on directed fishing for P. cod within listed rookeries	36%	None
BS harvest amount available outside listed rookeries	100%	

B. Fishing Zones:

- Option 1: Maintain rookery no-trawl zones as currently defined in regulations (status quo).
- Option 2: Close rookeries as defined under the RFRPAs for pollock to all gear types.
- Option 3: Close rookeries and important haulout as defined under the RFRPAs for pollock to all gear types.
- Option 4: Restrict fishing in rookeries and important haulouts as defined under the RFRPAs for pollock as follows:

Restricted directed fishing zones for Pacific cod				
Rookeries	0-3 nm	3-10 nm	10-20 nm	outside 20 nm
Closed to vessels other than: (vessels fishing within rookeries are subject to TAC limit during "A" season)	no fishing in parallel fishery in State waters	pot (60 pot limit) jig (5 machines) CV longline 75 100	pot jig all longline trawl ≤100' (suboption) trawl ≤125' (suboption) all trawl (suboption)	all vessels
Haulouts	0-10 nm		10-20 nm	outside 20 nm
Closed to vessels other than:	pot (60 pot limit) jig (5 machines) CV longline 15 100		pot jig all longline trawl ≤100' (suboption) trawl ≤125' (suboption) all trawl (suboption)	all vessels
Foraging Areas	for Option 1: Bogoslof and Seguam foraging areas for Option 2: Bogoslof foraging area			
Closed to vessels other than:	pot jig all longline trawl ≤100' (suboption) trawl ≤125' (suboption) all trawl (suboption)			

II. Distribution of allowed CH fishing between different gear sectors.

Option 1:

Historical dependence on fishing during the first half of the year and historical dependence on fishing in CH in the first half year, per gear and subsector.

Option 2:

Any "A" season reduction in CH quota to protect sea lions would be absorbed by each subsector in direct proportion to its historical "A" season catch in CH.

GOA

I. Seasonal Apportionments and fishing zones.

A. Seasonal Apportionments:

Option 1:

[Under Option 1, the inside CH limits for the "A" season were determined by multiplying the GOA overall percentage for the "A" season with the percentage indicated as the inside CH limit in the council motion, e.g., for 2001, 80% was multiplied by 60% to arrive at 48%. This methodology made the most sense for this option, given the overall goal of reducing catch in CH. This methodology was not used for the other option]

Year	Area	"A" Season (Jan. 1 - April 30)	"B" Season (May 1 - Dec. 31)
2001	GOA overall	80%	20%
	Inside CH limit	48% (or 60%)	Suboption A: Based annually on the biomass distribution in the summer survey Suboption B: No limit
2002	GOA overall	70%	30%
	Inside CH limit	35% (or 50%)	Suboption A: Based annually on the biomass distribution in the summer survey Suboption B: No limit

Option 2:

Year	Area	"A" Season (Jan. 1 - April 30)	"B" Season (May 1 - Dec. 31)
2001	GOA overall	60%	40%
	Inside CH limit	40%	Suboption A: Based annually on the biomass distribution in the summer survey Suboption B: No limit
2002	GOA overall	50%	50%
	Inside CH limit	30%	Suboption A: Based annually on the biomass distribution in the summer survey Suboption B: No limit
2003	GOA overall	40%	60%
	Inside CH limit	20%	Suboption A: Based annually on the biomass distribution in the summer survey Suboption B: No limit

B. Fishing Zones:

Option 1: No gear or vessel length restrictions in areas currently open (status quo).

Option 2:

Restricted directed fishing zones for Pacific cod				
Rookeries	0 - 3 nm	3 -10 nm	10 - 20 nm	Outside 20 nm
Closed to vessels other than:	no fishing	pot (60 pot limit) jig (5 machine limit) CV longline	pot jig all longline trawl ≤ 80' (suboption) trawl ≤ 100' (suboption) all trawl (suboption)	all vessels
Haulouts	0 - 10		10 - 20 nm	Outside 20 nm
Closed to vessels other than:	pot (60 pot limit) jig (5 machine limit) CV longline		pot jig all longline trawl ≤ 80' (suboption) trawl ≤ 100' (suboption) all trawl (suboption)	all vessels

II. Parallel Fishery (state waters):

[Although some catch numbers can be analyzed, this management action would need to be implemented by the State of Alaska]

- Fishing would be divided into "A" Season (Jan. 1 - April 30) and "B" Season (May 1 - Dec. 31)
- Fishing could be conducted by the following vessels:
 - a. jig vessels (5 machine limit)
 - b. longline vessels
 - c. pot vessels with the following pot limits:
 - Option 1: 60 pot limit
 - Option 2: 75 pot limit
 - Option 3: 100 pot limit
- Inside trawl exemptions provided by the Board of Fisheries in the Shumagins will remain in effect