

Public Testimony Sign-Up Sheet

Agenda Item D-4(a) AI Area Adjustment

	NAME (PLEASE PRINT)	AFFILIATION
1	JOHN GAUVIN	H+S WORK GROUP
2	Jon Wardenchuk	Oceanq
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NOTE to persons providing oral or written testimony to the Council: Section 307(1)(I) of the Magnuson-Stevens Fishery Conservation and Management Act prohibits any person "to knowingly and willfully submit to a Council, the Secretary, or the Governor of a State false information (including, but not limited to, false information regarding the capacity and extent to which a United State fish processor, on an annual basis, will process a portion of the optimum yield of a fishery that will be harvested by fishing vessels of the United States) regarding any matter that the Council, Secretary, or Governor is considering in the course of carrying out this Act.

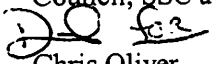
Public Testimony Sign-Up Sheet Bering Sea

Agenda Item D - 4(b) Habitat Conservation

	NAME (PLEASE PRINT)	AFFILIATION
1	Dorothy Childers	AMCC
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MEMORANDUM

TO: Council, SSC and AP Members
FROM:  Chris Oliver
Executive Director
DATE: February 1, 2007
SUBJECT: Habitat Conservation

ESTIMATED TIME 6 HOURS

ACTION REQUIRED:

- a) Initial review of the analysis to adjust the AI Habitat Conservation Area.
- b) Preliminary review of the analysis to conserve Bering Sea habitat.

BACKGROUND:

The Council took action in February 2005 to conserve essential fish habitat (EFH) from potential adverse effects of fishing. EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. The EIS prepared for the action concluded that while fisheries do have long term effects on benthic habitat, these impacts were minimal and had no detrimental effects on fish populations. The Council adopted several new measures to minimize the effects of fishing on EFH in the Aleutian Islands and Gulf of Alaska.

The Aleutian Island Habitat Conservation Area (AIHCA) was adopted as part of a suite of conservation measures to minimize the adverse effects of fishing in the Aleutian Islands subarea. The AIHCA prohibits the use of non-pelagic trawl fishing gear in designated areas of the AI to reduce the effects of fishing on corals, sponges, and hard bottom habitats, while allowing most fishing areas that have been trawled repeatedly in the past remain open.

During the June 2006 meeting, fishery participants requested that the open area boundaries be slightly modified to allow fishing in areas historically fished and to prevent bottom trawling in areas that have not been repeatedly fished. One location near Agattu Strait had been historically fished and was included into the closure area. A second location near Buldir Island was included in the portions of the AIHCA open to bottom trawling but has some documented presence of sponges. The proposed amendment would open the Agattu area and close the Buldir area. The Council made a preliminary review of the analysis in October. The analysis for initial review was mailed to you two weeks ago; the executive summary is attached as Item D-4(a)(i).

Bering Sea Habitat Conservation

The EFH EIS evaluated a suite of alternatives for the eastern Bering Sea (EBS). Based on that analysis, the Council determined that additional habitat protection measures in the EBS were not needed right away, and that an expanded analysis of potential mitigations measures for the EBS should be conducted prior to taking action. In December 2005, the Council discussed alternatives to conserve habitat in the EBS and finalized a problem statement.

The Council intends to evaluate potential new fishery management measures to protect Essential Fish Habitat (EFH) in the Bering Sea. The analysis will tier off of the 2005 EFH Environmental Impact Statement and will consider as alternatives open and closed areas and gear modifications. The purpose of the analysis is to consider practicable and precautionary management measures to reduce the potential adverse effects of fishing on EFH and to support the continued productivity of managed fish species.

In December 2006, the Council reviewed three discussion papers regarding alternatives to minimize (to the extent practicable) the effects of fishing on EFH in the Bering Sea. The first paper addressed open area approaches that would include recent fishing effort distribution. The second paper reviewed recent research on gear modification in the Bering Sea to mitigate the effects of bottom trawl fisheries. The third paper reviewed scientific information regarding sub-marine canyon areas and skate nursery areas. The Council further refined alternatives and options for the analysis based on those items. The December Council motion is attached as item (Item D-4(b)(i)). Staff reformatted the alternatives and the options from the motion into a clear list of alternatives and options for analytical purposes.

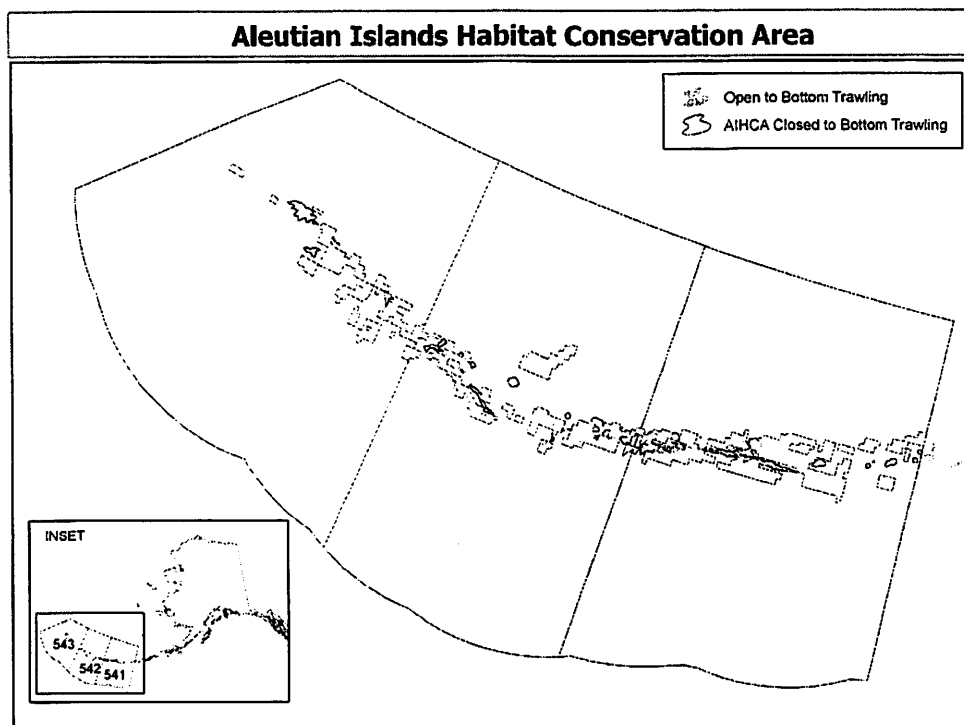
A preliminary draft analysis on was mailed to you two weeks ago; the executive summary is attached as Item D-4(b)(ii). Initial review of the analysis is scheduled for the March meeting, with final action in June.

At this meeting, the Council may wish to modify the alternatives or suggest refinements to the analysis.

Executive Summary

The Aleutian Island Habitat Conservation Area (AIHCA) was adopted as part of a suite of conservation measures for essential fish habitat (EFH) to minimize the adverse effects of fishing in the Aleutian Islands subarea (AI). The EFH rule became effective July 28, 2006 (71 FR 36694, June 28, 2006). The EFH action amended the Alaska fishery management plans (FMPs) to prohibit the use of certain bottom contact fishing gear in designated areas of the AI to reduce the effects of fishing on corals, sponges, and hard bottom habitats, protecting habitats from potential future disturbance without incurring significant short-term costs. The AIHCA closed most of the Aleutian Islands subarea to bottom trawling (279,114 square nautical miles). Most fishing areas that have been trawled repeatedly in the past remain open.

The designated open areas for bottom trawling were based on areas of high fishing effort from 1990 through 2003, with specific modifications based on data analysis, input from AI trawl fishermen, and with additional modifications to reduce those open areas to avoid coral habitat. These modifications were necessary because the observer data base has limitations on methods to document the actual path the fishers use and only records trawling start and end positions. Open and closed areas adopted under this action are shown in Figure ES-1. The closed areas are irregular in shape, and each latitude and longitude of the closure was designated in the FMP and regulations. After the proposed rule was published, careful review of the specific latitudes and longitudes of the AIHCA was conducted by participants of the fishery. Fishery participants determined that two changes to the areas described for the AIHCA were necessary to ensure the AIHCA met the intent to allow fishing in areas historically fished and to prevent bottom trawling in areas that have not been repeatedly fished. The Council recommended NMFS analyze the recommended changes and present the analysis at the February 2007 Council meeting for consideration.



ES- 1. The Aleutian Island Habitat Conservation Area (AIHCA), yellow areas, are closed to bottom trawling beginning July, 2006, implemented as part of Essential Fish Habitat mitigation action.

Two separate alternatives are analyzed in this EA as follows:

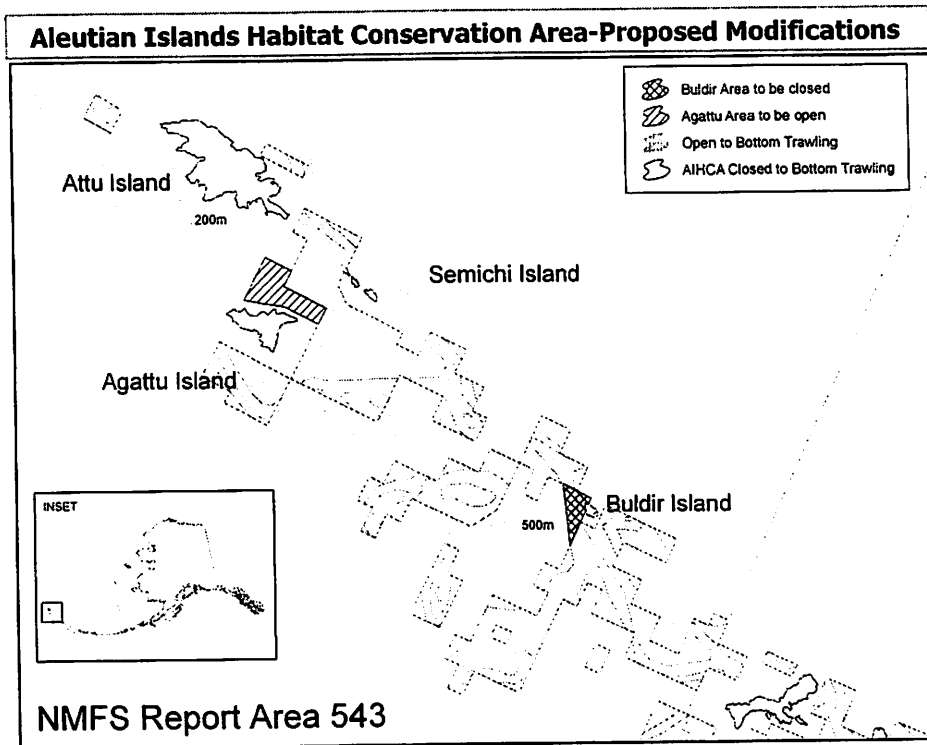
Alternative 1: No Action

Alternative 2: Modify the latitude and longitude definitions for open areas for the AIHCA which would effectively change the boundaries in two areas, one north of Agattu Island and one north of Buldir Island.

Table ES-Error! No text of specified style in document.-1 Name, location and area pf proposed AIHCA changes

Proposed AIHCA Area	Latitude	Longitude	Management	NOAA Chart number	Area
North of Agattu Island	52°40.0 N 52°40.0 N 52°40.0 N 52°29.0 N 52°31.0 N 52°32.0 N 52°32.0 N 52°36.0 N 52°36.0 N	173° 36.0 E 173° 30.0 E 173° 25.0 E 173° 25.0 E 173° 30.0 E 173° 40.0 E 173° 54.0 E 173° 54.0 E 173° 36.0 E	Remove from AIHCA closure (area will now be open)	530_1	128 nm ² or 383 km ²
North of Buldir Island	52°24 N 52°24 N 52°12 N	175°42 E 175°54 E 175°54 E	Add to AIHCA (area will now be closed)	530_1	50 nm ² or 149 km ²

(Alternative 2)



ES- 2. Proposed modifications of the AIHCA under Alternative 2. Yellow areas are closed to bottom trawling and the green areas are opened.

The analysis of direct, indirect and cumulative effects for the proposed action indicated no significant impacts on the human environment from the alternatives. The status quo provides EFH protection measures that provide habitat protection for vulnerable benthic habitat by bottom trawl closures. Thus Alternative 1 is not likely to result in any significant effects regarding habitat, target species, non-target resources, protected species or the ecosystem. The impacts of Alternative 2 likely are similar in magnitude to Alternative 1 due to the slight size change of the boundary areas and the trade off between the open and closed areas from an environmental perspective. Alternative 2 would provide some economic benefit to the fishery.

The proposed open area north of Agattu Island will likely cause an insignificant impact to habitat since the area has been historically fished for years according to industry sources, and fishing is of limited duration in the spring. Some coral is present close to Agattu Island, but these coral locations do not intersect with the proposed modified open area.

The Buldir Island location currently outside the AIHCA is proposed to be closed. This area contains both corals and sponges. This type of habitat is an example for vulnerable habitat that may be affected by fishing gear. A closure of this area would result in a slightly positive effect on habitat since no potential bottom trawling would occur in the area.

Because Alternative 2 may protect areas of known coral and sponge occurrence, Alternative 2 may be more protective of habitat than Alternative 1. By prohibiting bottom trawl in locations where coral and sponge occur, Alternative 2 may result in less mortality or damage to living substrate than Alternative 1. Our conclusions are based on very limited substrate data for these areas. Based on available data of coral and sponges occurrence, protecting the Buldir Area under Alternative 2 may be more protective of benthic diversity and habitat suitability than Alternative 1.

Considering all of the significance criteria for habitat effects, Alternative 2 effects are likely insignificant because the intensity of the proposed action is limited to two relatively small locations, few vessels fish in the area, and opening the Agattu Area is mitigated to some extent by the closure of the Buldir Area.

Bering Sea Habitat Conservation Alternatives
December 12, 2006 Council motion

The Council adopts the AP motion as alternatives for analysis under BSHC with the following modifications, and tasks staff to bring back an initial analysis for review.

Alternative 1: Status quo. No additional measures would be taken to conserve benthic habitat.

Alternative 2: Open area approach. This alternative would prohibit trawling with bottom trawl gear outside of a designated 'open area'. The open area would be designated by utilizing fishing effort data through 2005 to define the open area. The designated open area would include the areas north of Bogoslof and south of Nunivak Island. The 10 minute strip in the Red King Crab Savings Area would remain open pursuant to current regulations. The Northward boundary of the open area would be configured such that the area south and west of St. Matthew Island is excluded from the open area to conserve blue king crab habitat. ~~There are three options for establishing the northward boundary of the open area, based on bottom trawl effort distribution. There is also one option that would require an Exempted Fishing Permit to fish outside of the designated open area.~~

~~Option 1: Smallest open area. Northern open boundary based on high effort intensity.~~

~~Option 2: Slightly larger open area. Northern boundary based on medium effort intensity.~~

~~Option 3: Larger open area. Northern boundary based on low effort intensity.~~

~~Option 4: Require Exempted Fishing Permit. Bottom trawling in the closed areas north of the open area boundary would only be authorized under an Exempted Fishing Permit.~~

~~(Figure 1)~~

Suboption 1: This suboption would be analyzed with the other open area approaches. In the region of Etolin Strait (near Nunavak Is.) adopt a sub-option to depict the differences between the Alternative adopted in the October 2006 and the staff Option 1 configuration for the lines between 165° W and 163°30' W. (Figure 2)

Alternative 3: Gear modifications. This alternative would require gear modifications for all non-pelagic trawl gear used in flatfish target fisheries. Specifically, this alternative would require discs on non-pelagic trawl sweeps to reduce seafloor contact and/or increase clearance between the gear and substrate. A performance standard of at least 2.5 inches elevation of the sweep from the bottom would be required. NMFS will identify potential implementation options in the analysis for the management and enforcement of this standard.

~~Option 1: Gear modification and research closures. Areas would be closed to bottom trawling in the northern Bering Sea to research the impact of bottom trawling on benthic habitat and organisms, particularly *C. opilio*. The research areas would be located in areas that have not had much fishing effort between St. Matthew and St. Lawrence Islands. The research areas shall be established across bottom contours so as to include representative habitats and should focus on assessing habitat impacts of trawling by adopting a statistical design of open and closed areas.~~

Option 1: Gear modification and research closure area. The Northern Bering Sea Research Area closure would be located in area north of St. Matthew Island between St. Lawrence Islands. The area would be designated as closed to bottom trawl fishing. Future access to this area could occur

through the normal EFP or research fishing processes. Included in this area is a St. Matthew Island Crab Habitat Protection Area.

Alternative 4: Open area approach and gear modifications. This alternative would prohibit trawling with bottom trawl gear outside of a designated 'open area' (described in Alternative 2) and require gear modifications on all bottom flatfish trawl gear. The open area options are identical to Alternative 2. The gear modification language is the same as Alternative 3. There is also one option that would require an Exempted Fishing Permit to fish outside of the designated open area, and one option that establishes special open areas for research.

- Option 1: Smallest open area. Northern open boundary based on high effort intensity.
- Option 2: Slightly larger open area. Northern boundary based on medium effort intensity.
- Option 3: Larger open area. Northern boundary based on low effort intensity.
- Option 4: Require Exempted Fishing Permit. Bottom trawling in the closed areas north of the open area boundary would only be authorized under an Exempted Fishing Permit.
- Option 5: Special Open Areas for Research. Special open areas to the north of the Northern open area boundary will be established for the purpose of conducting research to assess the impact of bottom trawling on benthic habitat and organisms, particularly *C. opilio*. The research areas shall be established across bottom contours so as to include representative habitat types.

Option 1: Gear modification and research closure area. The Northern Bering Sea Research Area closure would be located in area north of St. Matthew Island between St. Lawrence Islands. The area would be designated as closed to bottom trawl fishing. Future access to this area could occur through the normal EFP or research fishing processes. Included in this area is a St. Matthew Island Crab Habitat Protection Area.

Other Comments:

The Council selects the open area approach depicted from the October, 2006 Council Motion to utilize the same methodology used in the EFH EIS with more updated fishing effort information. Medium and high suboptions are not sufficiently inclusive of historically fished areas and therefore do not meet the problem statement.

The Council acknowledges the flatfish trawl industry will be meeting with Western Alaska communities in the vicinity of Etolin Strait to address concerns on the location of the open area in proximity to these communities. This information will be brought back to the Council in February 2007 in the form of a suboption to Alternative 2.

Except for defining a bottom trawl closure for a Northern Bering Sea Research Area the Council recommends not specifying criteria for research in this analysis to ensure any future research is based on the best available scientific information. The Council strongly supports future research in the designated Northern Bering Sea Research Area to focus on a research design on the effects of trawling in previously untrawled areas.

The Council requests staff to provide map figures in the document to be provided as detailed color maps in a large enough scale to interpret the slope, and other bathymetric features.

Additionally the Council will consider Bering Sea skate nurseries as a priority in the next HAPC cycle.

Lastly, the Council adopts the SSC's recommendation to gather more information on the Bering Sea Slope canyons and suggests this be named a top priority for NPRB research.

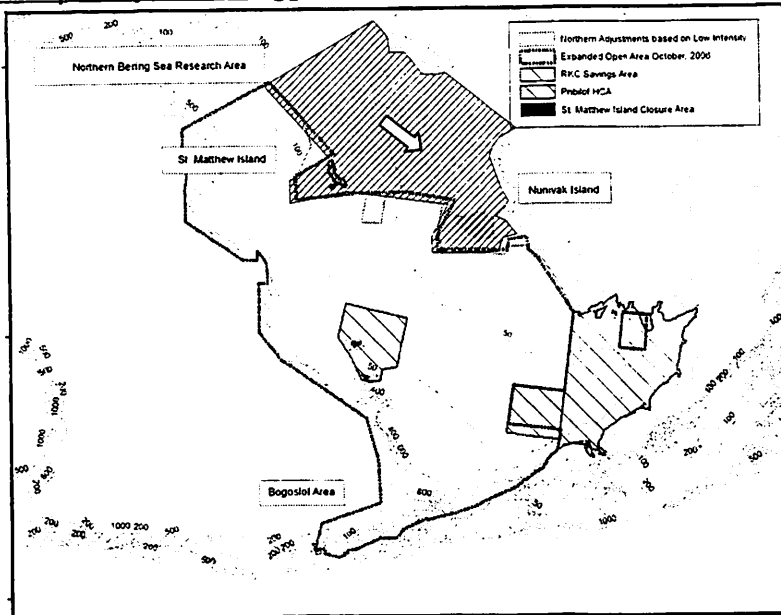


Figure 1. Open area approaches in Alternative 1, December 2006

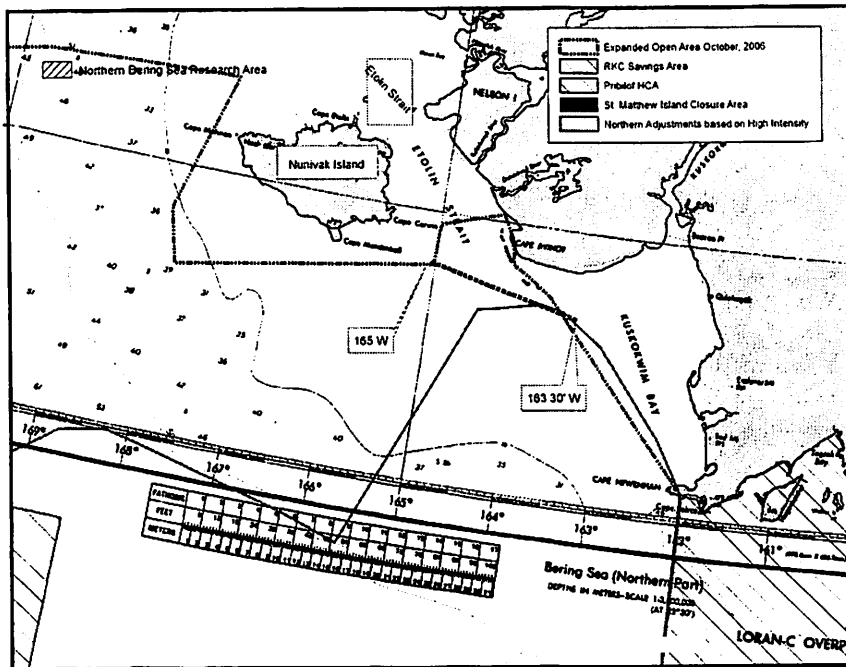


Figure 2. Proposed modification as a suboption to Alternative 1 in Etolin Strait.

Executive Summary

The purpose of this analysis is to evaluate impacts of alternatives to further conserve fish habitat in the Eastern Bering Sea. In February 2005, the Council took final action on the EFH EIS (NMFS 2006a) to adopt a suite of measures to conserve EFH in the GOA and AI from potential impacts due to fishing. At the time of final action, the Council took no action to implement additional conservation measures in the Eastern Bering Sea, as the analysis found such additional measures were neither required by law nor necessary or practicable measures. Further, the alternatives considered for Bering Sea habitat conservation required additional 'fine-tuning' before they could be considered as practicable measures. Alternatives to modify gear did not have sufficient research to understand what the scale of beneficial effects on habitat, and the alternatives for the open areas had left out historically important and lucrative fishing grounds, and included rotating closures that were found to have questionable merit. So to address these issues, the Council notified the public that it planned to take a more focused examination of potential measures to further conserve fish habitat, including EFH, in the Eastern Bering Sea by initiating a separate analysis that would tier off of the EFH EIS. This analysis provides an examination of a range of reasonable alternatives to conserve fish habitat in the Eastern Bering Sea.

The need for this analysis is the recognition that uncertainty exists in the conservation of fish habitat. Thus, evaluation of additional measures, and possible implementation of them, provides a precautionary approach to deal with uncertainty about our knowledge of fish dependence upon habitat, and the effects of fisheries on that habitat. The purpose and need statement adopted by the Council for this analysis is provided below:

Problem Statement: The Council intends to evaluate potential new fishery management measures to protect Essential Fish Habitat (EFH) in the Bering Sea. The analysis will tier off of the 2005 EFH Environmental Impact Statement and will consider as alternatives open and closed areas and gear modifications. The purpose of the analysis is to consider practicable and precautionary management measures to reduce potential adverse effects of fishing on EFH and to support the continued productivity of managed fish species.

This EA/RIR/IRFA evaluates the impacts of three primary alternatives to the status quo, along with several relatively minor elements which are considered as options to the alternatives. The alternatives and options are as follows:

Alternative 1: Status quo. No additional measures would be taken to conserve benthic habitat.

Alternative 2: Open area approach. This alternative would prohibit trawling with bottom trawl gear outside of a designated 'open area'. Bottom trawling would be thus prohibited in the northernmost shelf area and the deepwater basin area of the Bering Sea.

Option 1. Open area from EFH EIS as modified. The open area was be designated by utilizing fishing effort data through 2005 to define the open area. The designated open area would include the areas north of Bogoslof and south of Nunivak Island. The 10 minute strip in the Red King Crab Savings Area would remain open pursuant to current regulations. The Northward boundary of the open area would be configured such that the area south and west of St. Matthew Island is excluded from the open area to conserve blue king crab habitat.

Suboption 1: This suboption would further restrict the open area such that bottom trawling would be prohibited in the vicinity of Etolin Strait (near Nunavak Is.).

Option 2: Open area adjusted for fishing effort. The boundaries of this area were based on low effort intensity of historic bottom trawl fisheries.

Suboption 1: This suboption would further restrict the open area such that bottom trawling would be prohibited in the vicinity of Etolin Strait (near Nunavak Is.).

Alternative 3: Gear modifications. This alternative would require gear modifications for all non-pelagic trawl gear used in flatfish target fisheries. Specifically, this alternative would require discs on non-pelagic trawl sweeps to reduce seafloor contact and/or increase clearance between the sweep and substrate. A performance standard of at least 2.5 inches elevation of the sweep from the bottom would be required.

Option 1: Gear modifications and a Northern Bering Sea Research Area. The Northern Bering Sea Research Area would be established as the area north of St. Matthew Island to the St. Lawrence Islands. The area would be closed to fishing with bottom trawl gear. Future access to this area using bottom trawls could occur through an exempted fishing permit or research fishing. Included in this research closure area is a St. Matthew Island crab habitat protection area using the boundaries around that island as defined by the Alternative 2 open area.

Alternative 4: Open area approach and gear modifications. This alternative would prohibit trawling with bottom trawl gear outside of a designated 'open area' and require gear modifications on all bottom flatfish trawl gear. The open area options are identical to Alternative 2. The gear modification language is the same as Alternative 3.

Option 1. Gear modifications and an open area from EFH EIS as modified. This option would include the open area described in Alternative 2, Option 1, and the gear modifications of Alternative 3.

Suboption 1: This suboption would include gear modifications, and adjustment of the open area with regards to Etolin Strait as described in Alternative 2, Option 1, suboption 1.

Option 2: Gear modifications and an open area adjusted for fishing effort. This option would include the open area described in Alternative 2, Option 2, and the gear modifications of Alternative 3.

Suboption 1: This suboption would include gear modifications, and adjustment of the open area with regards to Etolin Strait as described in Alternative 2, Option 2, suboption 1.

Option 3: Gear modifications, an open area, and a Northern Bering Sea Research Area. This option would include the gear modifications, an open area defined as the slope and shelf areas, and a Northern Bering Sea Research Area as described in Alternative 3, Option 1. Under this option, the open area would be defined to exclude the deepwater basin of the Bering Sea (and existing bottom trawl closures areas), but unlike Alternative 2, the area north of St. Matthew Island would be designated as within the open area.

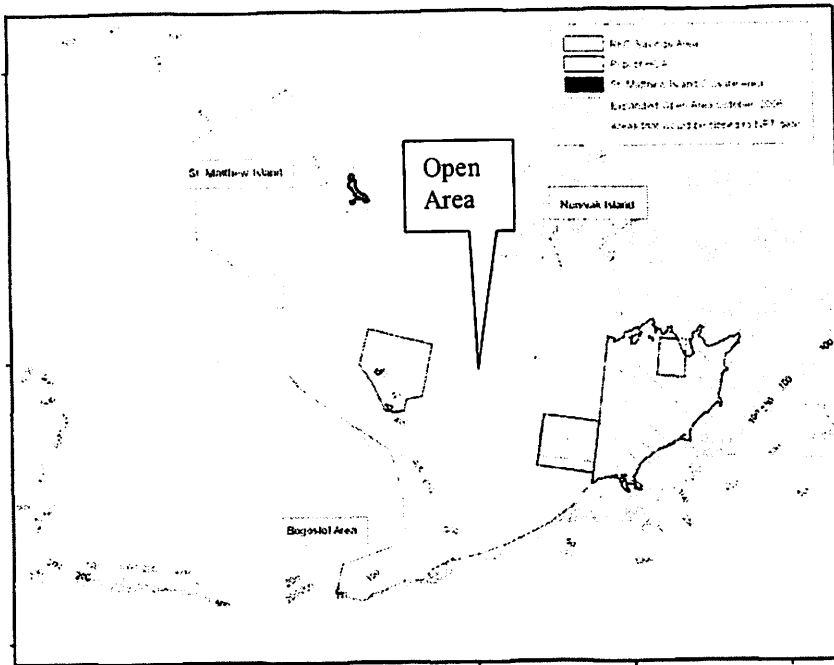


Figure ES- 1 Alternative 2 Option 1 Open Area Approach for Bering Sea.

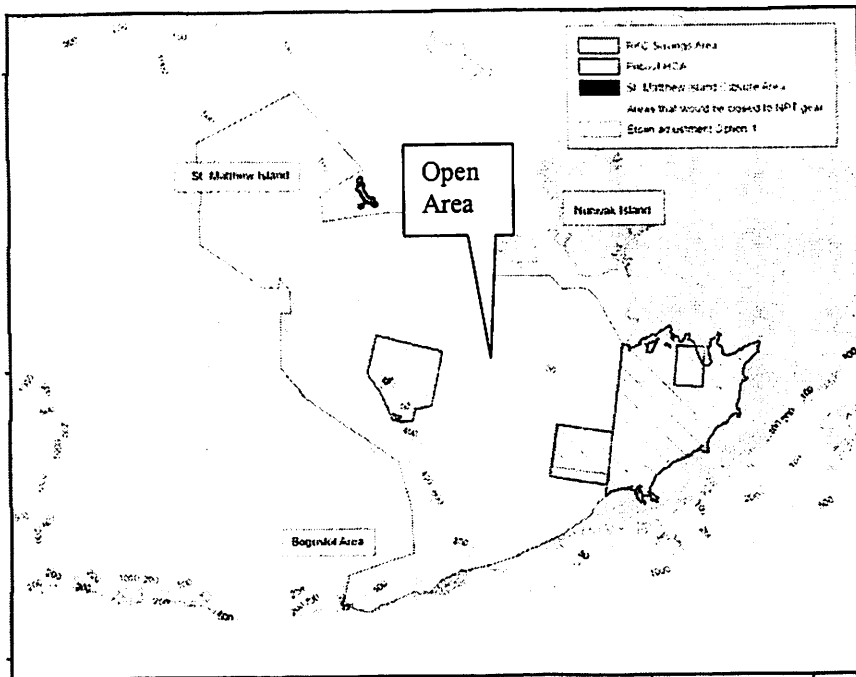


Figure ES- 2 Alternative 2 Option 1 suboption 1 Open Area Approach for Bering Sea with proposed Etolin Strait adjustment.

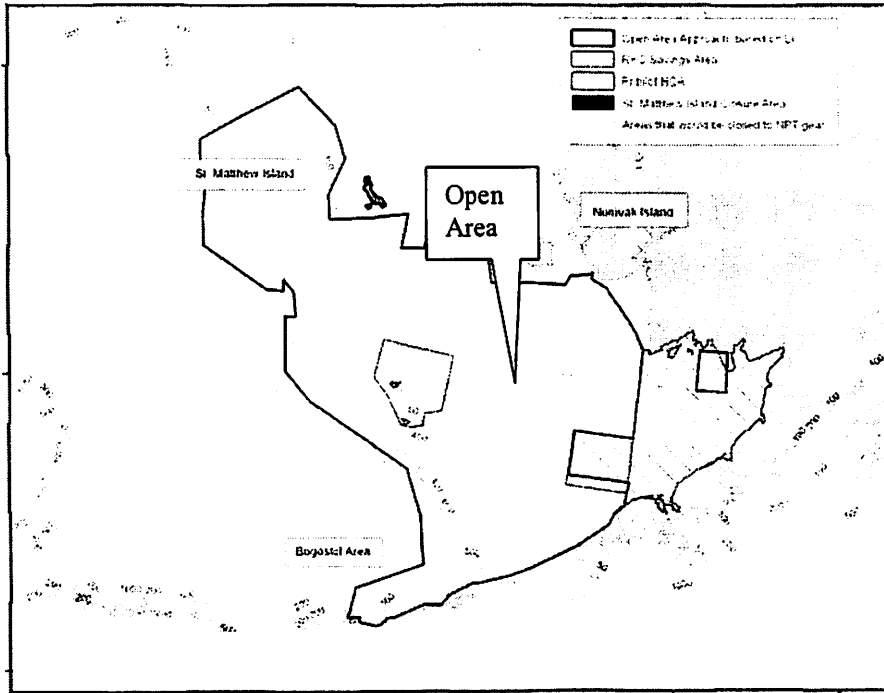


Figure ES- 3 Alternative 2 Option 2. Bering Sea Open Area Approach.

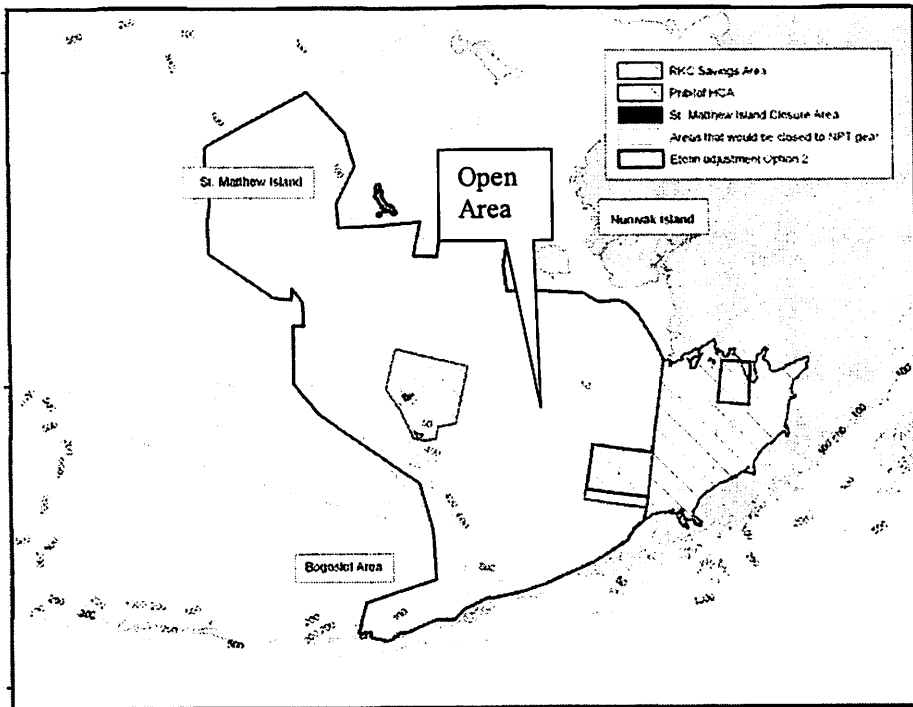


Figure ES- 4 Alternative 2 Option 2 Suboption 1. Bering Sea Open Area Approach with proposed Etoin Strait adjustment.

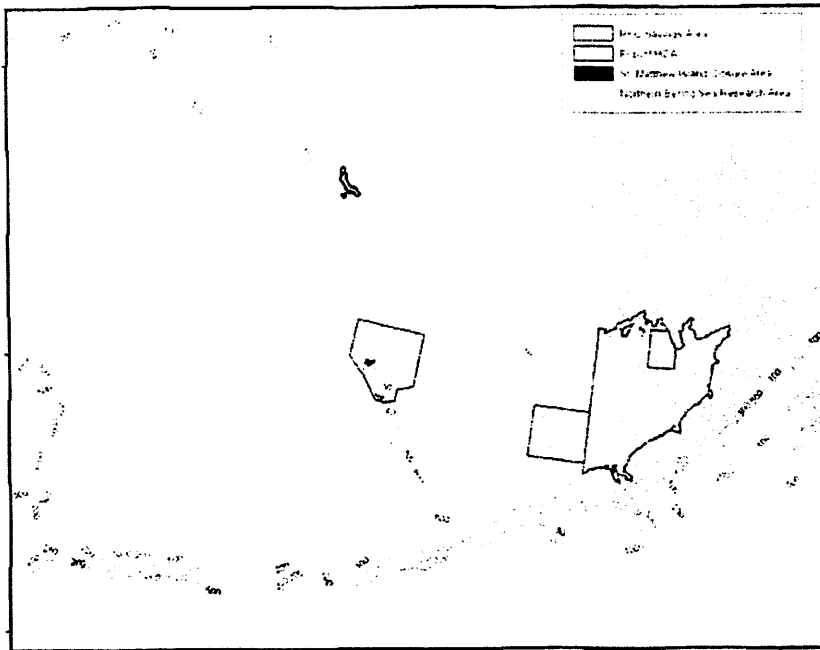


Figure ES- 5 Alternative 3 Option 1 The Northern Bering Sea Research Area would be closed to fishing with bottom trawl gear. Future access to this area using bottom trawls could occur through an exempted fishing permit or research fishing.

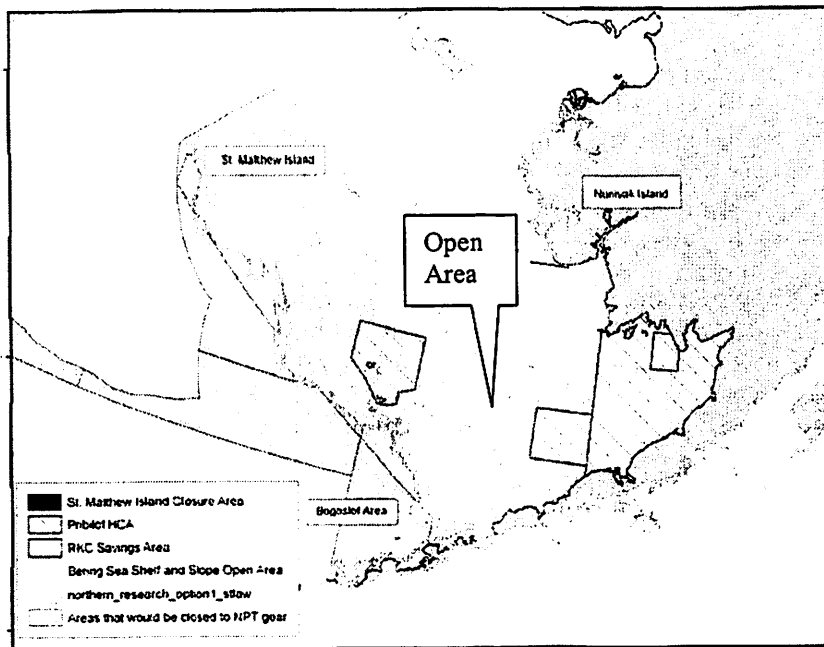


Figure ES- 6 Gear modifications, an open area, and a Northern Bering Sea Research Area. This option would include the gear modifications, an open area defined as the slope and shelf areas, and a Northern Bering Sea Research Area as described in Alternative 3, Option 1. Under this option, the open area would be defined to exclude the deepwater basin of the Bering Sea (and existing bottom trawl closures areas), but unlike Alternative 2, the area north of St. Matthew Island would be designated as within the open area.

The analysis of direct, indirect and cumulative effects for the proposed action indicated no significant impacts on the human environment from the alternatives. None of the Alternatives place significant gross first wholesale revenues at risk that cannot easily be mitigated with minimal to no added cost to the primary affected head and gut catcher processor fleet sector. Some Western community concern has been presented and may need addressing in this analysis in terms of buffer zones for subsistence use close to villages or used shorelines. Ongoing discussions are occurring amongst the fishing industry and the communities on this issue.

The status quo already provides EFH protection measures that provide habitat protection for vulnerable benthic habitat with existing trawl closures bottom trawl closures. Additionally the EFH EIS (NMFS 2006a) concluded that no additional measures were neither required by law nor necessary or practicable measures. Thus Alternative 1 is not likely to result in any significant effects regarding habitat, target species, non-target resources, protected species or the ecosystem.

The impacts of Alternative 2 likely are similar in magnitude to Alternative 1 due to the slight size change of the open areas and the status quo. From an environmental perspective Alternative 2 would have insignificant effects regarding habitat, target species, non-target resources, protected species or the ecosystem. Nevertheless, an open area approach may be a precautionary measure in terms habitat protection by preventing northward expansion of the bottom trawl fishery. Alternative 2 would provide some economic costs to the fishery relative to both options and their suboptions in particular to the H&G catcher processor sector. Table ES-1 provides cost estimates of past patterns of catch and revenue, and represents the relative proportion of catch outside the proposed open area to overall catch.

The impacts of Alternative 3 likely are similar in magnitude to Alternative 1 since the area currently accessible to fishing remains the same. From an environmental perspective Alternative 3 would have insignificant effects regarding habitat, target species, non-target resources, protected species or the ecosystem. There would be some minor costs associated with the gear modification; current estimates are less than 3,000/ operating vessel. The option to provide a closure area in the Northern Bering Sea may be a precautionary measure in terms habitat protection by preventing northward expansion of the bottom trawl fishery, however research and an exempted fishing permit would still provide future access to the area. Alternative 3 Option 1 has some economic costs to the fishery in particular to the H&G catcher processor sector 0.16% revenue at risk as a percent to status quo (Table ES-1)

The impacts of Alternative 4 likely are similar in magnitude to Alternative 1 due to the slight size change of the open areas and the status quo. The effects of Alternative 4 are also insignificant based on combined results from Alternatives 2 & 3. As with the other alternatives, Alternative 4 would have insignificant effects regarding habitat, target species, non-target resources, protected species or the ecosystem. However, there could be a slight positive increase in benefits to habitat by requiring gear modifications on flatfish bottom trawl vessels in the open area. Additionally, an open area approach may be a precautionary measure in terms habitat protection by preventing northward expansion of the bottom trawl fishery. Alternative 4 would entail some economic costs to the fishery relative to both options and their suboptions in particular to the H&G catcher processor sector, in addition to the costs of gear modifications. Table ES-1 provides cost estimates of past patterns of catch and revenue, and represents the relative proportion of catch outside the proposed open area to overall catch.

The impacts of Alternative 4 Option 3 likely are similar in magnitude to Alternative 1 since the area currently accessible to fishing remains the same. There would be some minor costs associated with the gear modification; current estimates are less than 3,000/ operating vessel. If the Northern Bering Sea research area would be considered part of the open area would have no costs associated with that of the closure.

Alternative	Description	BS Basin Area Closed to Fishing (sq.km.)	BS Shelf Fishing Area Closed (sq.km.)	% of Existing BS Shelf Open Area Closed	Annual Gear Modification Costs (\$/yr)	H&G Trawl CP First Wholesale Gross Revenue At Risk			
						Data Year	First Wholesale Gross Revenue (millions)	CP First Wholesale Gross Revenue At Risk (millions)	Percent of Status Quo Revenue at Risk
Alternative 1	Status Quo	None	None	100%	\$0	2003	\$161.72	\$0	0%
						2004	\$195.51	\$0	0%
						2005	\$247.96	\$0	0%
						Average	\$201.73	\$0	0%
Alternative 2	Option 1	160,938	355,245	44.9%	\$0	2003	\$161.72	\$0.29	0.18%
						2004	\$195.51	\$0.81	0.42%
						2005	\$247.96	\$0.09	0.04%
						Average	\$201.73	\$0.40	0.20%
Alternative 2	Option 1 Suboption	160,938	356,974	45.1%	\$0	2003	\$161.72	\$1.07	0.66%
						2004	\$195.51	\$3.34	1.71%
						2005	\$247.96	\$1.60	0.64%
						Average	\$201.73	\$2.00	0.99%
Alternative 2	Option 2	160,938	363,415	45.9%	\$0	2003	\$161.72	\$0.62	0.38%
						2004	\$195.51	\$1.68	0.86%
						2005	\$247.96	\$0.12	0.05%
						Average	\$201.73	\$0.81	0.40%
Alternative 2	Option 2 Suboption	160,938	366,390	46.3%	\$0	2003	\$161.72	\$1.24	0.77%
						2004	\$195.51	\$3.66	1.87%
						2005	\$247.96	\$0.22	0.09%
						Average	\$201.73	\$1.71	0.85%
Alternative 3	None	None	None	None	\$1,500 to \$3,000	2003	\$161.72	\$0	0.00%
						2004	\$195.51	\$0	0.00%
						2005	\$247.96	\$0	0.00%
						Average	\$201.73	\$0	0.00%
Alternative 3	Option 1	None	188,157	23.8%	\$1,500 to \$3,000	2003	\$161.72	\$0.27	0.16%
						2004	\$195.51	\$0.69	0.35%
						2005	\$247.96	\$0.04	0.01%
						Average	\$201.73	\$0.33	0.16%
Alternative 4	Option 1	None	355,245	44.9%	\$1,500 to \$3,000	2003	\$161.72	\$0.29	0.18%
						2004	\$195.51	\$0.81	0.42%
						2005	\$247.96	\$0.09	0.04%
						Average	\$201.73	\$0.40	0.20%
Alternative 4	Option 1 Suboption	None	356,974	45.1%	\$1,500 to \$3,000	2003	\$161.72	\$1.07	0.66%
						2004	\$195.51	\$3.34	1.71%
						2005	\$247.96	\$1.60	0.64%
						Average	\$201.73	\$2.00	0.99%
Alternative 4	Option 2	None	363,415	45.9%	\$1,500 to \$3,000	2003	\$161.72	\$0.62	0.38%
						2004	\$195.51	\$1.68	0.86%
						2005	\$247.96	\$0.12	0.05%
						Average	\$201.73	\$0.81	0.40%
Alternative 4	Option 2 Suboption	None	366,390	46.3%	\$1,500 to \$3,000	2003	\$161.72	\$1.24	0.77%
						2004	\$195.51	\$3.66	1.87%
						2005	\$247.96	\$0.22	0.09%
						Average	\$201.73	\$1.71	0.85%
Alternative 4	Option 3	None	188,157	23.8%	\$1,500 to \$3,000	2003	\$161.72	\$0.27	0.16%
						2004	\$195.51	\$0.69	0.35%
						2005	\$247.96	\$0.04	0.01%
						Average	\$201.73	\$0.33	0.16%

Table ES- 1. Revenue at Risk by Alternative for the Head and Gut catcher processor sector, be year, with areas affected and costs of gear modification.

Bering Sea Habitat Conservation Gear Modification Alternative

Prepared by Melanie Brown, NMFS Alaska Region (AKR) Sustainable Fisheries Division (SF), Craig Rose, Alaska Fisheries Science Center (AFSC) and Ken Hansen, NOAA Office of Law Enforcement (OLE) - January 25, 2007

Background

This document is an initial evaluation of methods to implement a program for gear modification under the Bering Sea (BS) Habitat Conservation action being considered by the North Pacific Fishery Management Council (Council). Alternative 3 of the Council's December 2006 motion for this proposed action stated that gear modifications would be required for all flatfish fishing in the Bering Sea. Discs or some sort of elevating device would be required for the sweeps to reduce seafloor contact and/or increase clearance between the gear and the substrate. A performance standard of at least 2.5 inches elevation of the sweep from the bottom would be required. NMFS will identify potential implementation options in the analysis for the management and enforcement of this standard.

Sweeps are not part of the trawl net itself, though they are certainly part of the trawl gear. On most, larger vessels, when the trawl is onboard the vessel, the trawl net is wound onto the reels on top of the sweeps. A few boats, including the smaller vessels, do not have net reels and wind the sweeps onto the main deck winches over the top of the trawl main wire (Jeff June, personal communication, January 9, 2007). The net has to be deployed or stacked onto the deck to access the sweeps. On vessels using 200 fathoms of sweeps, more than 70 elevating devices and 70 spaces would need to be checked to determine if the requirements are being met. The sweeps are much too long to be completely stretched across the deck. Onboard inspection would require examining the sweep by sections while stacking the remainder, putting it onto another net reel (if available), or setting it into the water.

To establish a requirement for modified trawl sweeps for the directed flatfish fishery in the BS, requirements for using the gear and standards for the gear must be stated in the regulations. NMFS would need to establish a method of ensuring that vessel owners and operators comply with the gear requirements. The program should ensure the gear is properly constructed, used, and maintained. Personnel from the Alaska Fisheries Science Center (AFSC), NOAA Office of Law Enforcement (NOAA OLE), North Pacific Groundfish Observer Program (NPGOP) and Sustainable Fisheries (SF) likely would be needed to develop and implement the program.

The following is a result of discussions among industry representatives, NMFS Alaska Region SF, the AFSC, NMFS Headquarters Vessel Monitoring System (VMS) Program, and NOAA OLE. This is the initial investigation of potential management and enforcement options.

Regulation Changes:

Several regulations in 50 CFR part 679 would need to be revised to implement a modified trawl sweep requirement.

1. A new definition under § 679.2 should be added for a non-pelagic trawl sweep. To ensure the correct species are included in the meaning of directed fishing for flatfish, a definition could be added for flatfish.

§ 679.2 Definitions

* * * * *

Flatfish means yellowfin sole, rock sole, Greenland turbot, arrowtooth flounder, flathead sole, other flatfish and Alaska plaice, as specified under § 679.20 for the BSAI for purposes of non-pelagic trawl restrictions under § 679.22 (X) and gear modification requirements under §§ 679.7(c)(3) and 679.24 (f).

Sweeps means the lines connecting the doors to the footrope on a non-pelagic trawl.

2. A new subparagraph (3) would also be added to § 679.7(c) to prohibit directed fishing for BS flatfish without sweeps that meets the standards specified at § 679.24(f).

§ 679.7(c)(3) Conduct directed fishing for flatfish in the Bering Sea subarea without meeting the standards and requirements for the trawl sweeps specified in § 679.24(f).

Should this include state waters or just the EEZ, or does it matter? As written, it would only apply to the EEZ. There are limited non-pelagic trawling and fishing closures in State waters of the Bering Sea. (5 AAC 39.164) (See maps)

3. To establish standards and requirements for the use of modified non-pelagic trawl sweeps, add paragraph (f) to § 679.24 Gear Limitations.

§ 679.24(f) Non-pelagic trawl sweeps for directed flatfish fishing in the BS subarea. (State waters?)

(1) Vessel owner or operators using non-pelagic trawl gear for directed fishing for flatfish in the Bering Sea subarea must have elevating discs, bobbins or similar devices installed on the sweeps that raise the sweeps at least 2.5 inches (6.35 cm) from the sea floor as measured adjacent to the device when resting on a flat surface, regardless of device orientation. Elevating devices must be secured along the entire length of the sweeps at the spacing specified under subparagraph (2), except within 25 fathoms (45.72 m) of the door or the footrope. The largest cross-section of the sweeps between elevating devices shall not be greater than at the nearest measurement location. Wider cross-sections resulting from doubling the line back for section terminations and devices required to connect sections are exempt from this requirement.

(2) The distance between elevating devices on the sweep must be between 25 feet (7.62 m) and 35 feet (10.67 m), unless the Regional Administrator specifies an alternative spacing specified an alternative spacing that is at least as effective at elevating the sweep and minimizing contact with the sea floor.

Additional Considerations for § 679.24:

- Do we need to add a requirement for a letter of approval to be available for inspection? The lack of such a document opens the possibility of requiring a potentially time-consuming measurement at-sea.
- What information should the fisher or manufacturer provide NMFS for approval? Options: a design identification corresponding to an approved design, or a listing of actual measurements (clearance and spacing) made after assembly, including a date of manufacture, measurement, and who did the measurements.
- If a letter of approval is required, what information should be in the letter to link the sweep with the approval? A serial number corresponding to a durable and tamper-proof (and hopefully visible from a distance) mark on the sweep may be a possibility.

- Should NMFS provide a discrete mode of identification that can't be tampered with like an embossed metal tag with the approval letter? NMFS could provide the tag to the manufacturer to place on the sweep before sale of the sweep.
- Would the information needed to get the approval trigger the Paperwork Reduction Act? **Bearden is checking on this 1-19-07.**
- Should the approval expire within a certain time period or after a certain amount of use? Time would be easier to track than usage. An annual remeasurement or replacement may be appropriate because the sweeps are usually replaced annually (Jeff June, personal communication, January 9, 2007).
- Do we require the fisher to allow for inspection of the sweep by NMFS-authorized personnel? With the approval letter, inspection should be limited to a cursory inspection to see if spacing and diameters appear correct (apparent problems could then trigger a measurement). If an approval document was not required, some actual measurements likely would be required. In any case the regulations should explicitly provide for enforcement to perform compliance inspections of the gear.

Enforcement Considerations:

How do we ensure the modified sweeps are meeting the standards?

Potential Methods for an Alaska NMFS sweep approval program

- Specify components and dimensions in the regulations and require fisher to supply documentation of sweeps meeting the standard;
- Establish manufacturer's approval program and require use of a sweep from the approved manufacturer which displays a NMFS approval tag;
- In both cases, follow up with inspections.

Examples of equipment approval programs:

VMS Program (Manufacturer Example)

OLE publishes a national directive in the *Federal Register* of standards to be met and the procedures for approval (71 FR 3053, January 19, 2006) for VMSs. The manufacturer submits an approval request that must address all of the standards in the directive and the equipment. OLE tests the equipment to ensure it meets the standards before giving approval. In addition, OLE publishes a list of approved devices for a region (AKR in 69 FR 19985, April 15, 2004). A national directive is used for the standards rather than proposed and final rule-making because VMS is a law enforcement investigative tool (J. Pinkerton, National VMS Program Manager, personal communication, December 21, 2006).

Regulations at § 679.7 prohibit fishing unless using VMS for certain fisheries and areas. Regulations at § 679.28 (f) require a NMFS-approved VMS transmitter, explain how to get approved, list NMFS *Federal Register* notices of unit specifications, approved units and amendments, and how the VMS is to be used.

If this type of program was applied to approving a modified sweep, the approval would need to occur at the manufacturer. This method would require a process similar to that used for VMS where manufacturers would apply to NMFS for approval and the vessel owner/operator would have to choose a sweep from an approved list. The vessel owner/operator would have to prove to NMFS that they are using an approved sweep. We may consider the use of tags added at the point of manufacture, as further discussed below.

Scales Program (Vessel Owner/Operator Example)

Prohibitions under § 679.7 require scale use in compliance with § 679.28. Section 679.28 refers to national manufacturing standards for scales for basing NMFS' approval. Vessel owners/operators must demonstrate that the unit initially met standards, meets annual inspection and is tested daily, and meets maximum permissible error. SF conducts the initial approval and annual scale inspections. Proof of approval is a letter from SF maintained on the vessel. Detailed performance and technical requirements are in Appendix A to 50 CFR part 679. The daily test is conducted by the vessel operator in the presence of an observer. At least two SF staff initially approve and annually inspect scales.

If the scales program model was used for the modified sweeps program, certain issues need to be considered. Vessels very rarely have their nets onboard when SF inspects scales (A. Kinsolving personal communication, December 2006). If they do have the nets onboard, the hydraulics are usually being maintained; and the bag cannot be taken off for inspection. Annual inspections may not be needed. A similar program for sweep approval could be as follows:

1. Regulations would specify performance standards. Standards for previously approved designs could be available on the AK Region web page.
2. The vessel owner/operator or net maker would submit a design for approval to SF.
3. NMFS approves design and sends the vessel a letter with the approved specifications.
4. The approval is only valid as long as the net meets these specifications. Any changes to the net either through deliberate modification or wear will invalidate the approval.
5. If there is evidence from an observer or enforcement that the net doesn't meet the specifications, the vessel owner/operator cannot fish with it. This would be an incentive to maintain the sweep within the standards and to maintain spare parts for repairs. After an offload, the vessel operator will generally want to get back out fishing as soon as possible and will not want to wait on new bobbins, etc for repairs.

If a tag is used, no detailed sweep inspection would be needed. If an inspection determines that the modified sweep does not meet the standards, enforcement should be able to remove the tag. After receiving documentation that the sweep meets the standards, NMFS would send the approval tag to the boat with instructions on how to attach it to the gear. Removal of the tag would destroy it. If a tag is used, NMFS needs to investigate what type would meet our needs.

Seabird Avoidance Gear Program (Vessel Owner/Operator Example)

Section 679.24 states who must use seabird avoidance gear and what standards have to be met. The vessel owner or operator must make the gear available to an authorized inspector or observer. There is no preapproval before use of the gear, only that the vessel owner/operator is responsible to make sure they use gear that meets the standards specified in the regulations. OLE currently receives affidavits from the NPGOP if a vessel is not using the avoidance gear, but observers do not try to compare gear to standards in regulations. OLE also performs dockside enforcement to determine whether the vessel has the gear on board.

This type of program would be less labor intensive for SF than the scales program model. Implementation would primarily be dependent on the observations of NPGOP and OLE to ensure the modified gear is being used. The observer may be available to see the trawl deployment or haulback to determine if the sweep is modified or not. This should be possible sometime during an entire trip. Most vessels have a reasonably safe location from which the observer can watch a retrieval. They would only need to assess the approximate size and spacing or maybe check for just the presence of the modified gear.

Models Summary and Conclusions:

The VMS model would not work well for the trawl sweep gear modification program because it depends on a national directive and is designed for a different type of equipment than fishing gear. For the non-pelagic trawl gear modifications, a national directive is not likely to be as effective as training and approval of manufacturers and publishing Alaska specific standards. The modified gear would be designed to meet Alaska habitat conservation needs, and developing a national directive would add more difficulty to implementing the program. The modified gear does not provide enforcement data and does not need a detailed standards program like VMS.

The scales program is more labor intensive for checking and approval because of the nature of the equipment and how it is used. The information gathered from scales and VMS equipment is used in enforcement, so it is important to ensure that the devices are operating accurately and effectively. No information is provided by a modified trawl sweep so it is not necessary to have as complicated an approval and inspection program as used for VMS and scales.

The seabird avoidance gear may provide the most likely management model for requiring modified trawl sweeps because both programs are related to fishing gear, and fewer resources are needed for management. The seabird avoidance program has been successful at reducing seabird bycatch. With education, and, in some cases free gear, compliance with the gear standards has not been a problem. It is possible that the compliance program for trawl gear modification would be easier to implement than the compliance program for seabird avoidance gear. Seabird avoidance gear requires decision making (e.g. determining wind speed) and separate deployment of the avoidance gear when fishing gear is deployed, issues that are not related to trawl gear modification. Because the gear modification requirements would be less complicated than the seabird avoidance gear requirements, compliance may be easier for the fishers and easier to determine by the enforcement personal or NPGOP.

If we use the seabird avoidance gear model, no prior approval would be necessary. Compliance could be checked during the fishing year through NPGOP observations or United States Coast Guard, and dockside OLE inspections. A system of prior approval could reduce the burden or intensity of inspections during the fishing year. In order to save inspection time during the fishing year, the industry representatives at the December 2006 NMFS gear modification workshop were interested in a pre-approval process. Considering the difficulty in viewing the entire sweep on board the vessel, it may be more practical to use a pre-approval process. It is expected that once the sweep is modified, it will likely stay in compliance Any approval method would need to include ensuring the device is built and used in a manner intended to meet the standards.

Before making a decision on a model program, additional research should be done to determine if approval and compliance programs for gear used in other NMFS regions may apply to the sweep modifications in Alaska. Potential similar programs may include turtle excluders, gear requirements to protect Atlantic right whales, or bycatch reduction devices in the SWR.

Potential Methods of Compliance

- Approve sweep before the beginning of a fishing year. This method would be similar to the VMS and scales program where the vessel owner/operator would have to demonstrate that the sweep meets the standards. Approval would be through paperwork and/or inspections.
- Inspect sweeps during the fishing year. Inspections could be planned (like scales) or ad hoc (like seabird avoidance gear). This activity would encourage continued use of modified sweeps during the fishing year. The frequency of inspections would depend on the resources available. Scheduled inspections would be the most resource intensive option for NMFS.

Implementation questions include:

1. Would repeat inspections be needed and at what frequency? What would be the nature of an inspection? Would it depend on prior approval?
2. Who does the inspection? SF could do this during scale checks. OLE could use dockside inspections. The USCG may or may not be able to do this during a boarding. The NPGOP may be able to observe the deployment or retrieval of the equipment. The table below shows that at least 23 vessels fishing for flatfish have 100 percent observer coverage. The remaining 9 vessels have 30 percent observer coverage. Twenty-two of the catcher/processors would be required to use scales. Most of the vessels in the flatfish fishery in the Bering Sea have a scale inspection, and all have some amount of observer coverage during the fishing season. No vessels less than 60 feet in length overall (LOA) fished in the flatfish fishery in 2006 and therefore, all vessels have some form of inspection or observation during the fishing year. NMFS could consider having the deployment procedure for an observer to include the check on the modified gear. This would allow for several checks of the gear during the season to support enforcement. The details of the observer's documentation of problem gear could be developed by OLE and the NPGOP.

Number of Vessels and Lengths in the 2006 Flatfish Fishery in the Bering Sea (Source: NMFS Inseason data, Mary Furuness, 1-19-07)

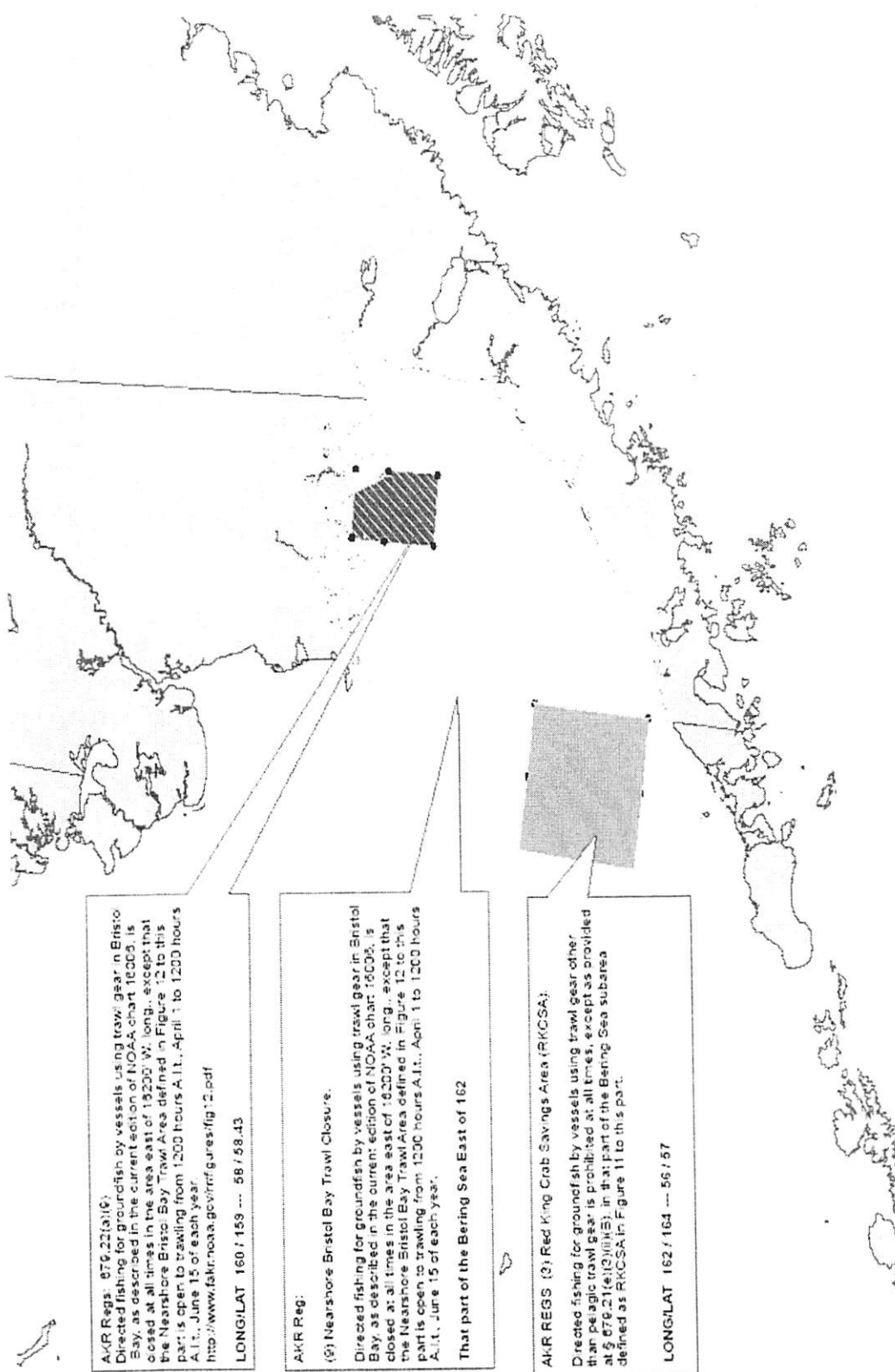
Vessel Type	Length	Number
Catcher Processor	> 60 feet and <125 feet LOA	6
Catcher Vessels	> 60 feet and <125 feet LOA	3
Catcher Processors	≥125 feet LOA	22
Catcher Vessels	≥125 feet LOA	1

3. What happens if the vessel is fishing and it is discovered that the sweep doesn't meet the standard for a variety of reasons? Is one missing disc as bad as several? If disc spacing is not consistently 30 feet or less, is that a problem? Could the sweep be marked every thirty feet for easy visual determination? OLE, NPGOP, and NOAA General Counsel will need to work with the fishing industry to develop workable standards to effectively and reasonably enforce the gear modification requirements, taking into account wear and tear of the sweeps. Field criteria could be developed to establish when a violation may occur.

Violations:

If an approval program is used, violation occurs if the vessel operator or owner directly fishes for flatfish with sweeps that are not approved or if no approval letter is onboard the vessel. Any modification of sweeps needs to be approved.

If no approval program is used and only inspections or observations are used for compliance, a violation would occur if it is determined through inspection or observation that the vessel owner or operator has directly fished for flatfish without a modified sweep that meets the standards. In most cases, compliance would be determined by the presence or absence of the modified sweep attached to the trawl gear on the vessel.



AKR Regs: 070.22(a)(6)
 Directed fishing for groundfish by vessels using trawl gear in Bristol Bay, as described in the current edition of NOAA chart 16003, is closed at all times in the area east of 152°00' W. long., except that the Nearshore Bristol Bay Trawl Area defined in Figure 12 to this part is open to trawling from 1200 hours A.L.T., April 1 to 1200 hours A.L.T., June 15 of each year.
<http://www.fakr.noaa.gov/nfr/gues/fig12.pdf>
LONG/LAT 160 / 159 --- 58 / 58.43

AKR Reg:
 (6) Nearshore Bristol Bay Trawl Closure.
 Directed fishing for groundfish by vessels using trawl gear in Bristol Bay, as described in the current edition of NOAA chart 16003, is closed at all times in the area east of 152°00' W. long., except that the Nearshore Bristol Bay Trawl Area defined in Figure 12 to this part is open to trawling from 1200 hours A.L.T., April 1 to 1200 hours A.L.T., June 15 of each year.
That part of the Bering Sea East of 162

AKR REGS (3) Red King Crab Savings Area (RKCSA):
 Directed fishing for groundfish by vessels using trawl gear other than pelagic trawl gear is prohibited at all times, except as provided in § 070.21(e)(2)(iii)(B), in that part of the Bering Sea subarea defined as RKCSA in Figure 11 to this part.
LONG/LAT 162 / 164 --- 56 / 57

State of Alaska Non-Pelagic Trawl Restrictions in the Bering Sea.

G:\FMGROUPEFH BS\Trawl Sweep Standards Program 1-22-07.doc

Mnbrown: 1/22/07

Jscheurer: 1/22/07

Khansen: 1/24/07

Jkurland: 1/24/07

Crose: 1/24/07



RECOMMENDED

JAN 19 2007

N.P.F.M.C.

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January 19, 2007

Ms. Stephanie Madsen, Chair
North Pacific Fishery Management Council
605 West 4th Street, Suite 306
Anchorage, AK 99501-2252

Mr. Doug Mecum, Regional Administrator
NOAA Fisheries, Alaska Region
709 W. 9th Street
Juneau, AK 99802-1668

Dear Ms. Madsen and Mr. Mecum,

The World Wildlife Fund (WWF) appreciates the opportunity to comment on the subject of Bering Sea Habitat Conservation. WWF is a global conservation organization with over 1.2 million members in the US alone. WWF seeks science-based, non-partisan, collaborative, and creative solutions to conservation issues. We submit this letter in continued support of the Bering Sea Essential Fish Habitat (EFH) Conservation Alternative submitted to the North Pacific Fishery Management Council (Council) by Oceana. WWF continues to strongly recommend that the Council address a more expansive range of alternatives that includes the unique habitat contained in the Bering Sea canyons as represented by Oceana's conservation alternative.

WWF remains concerned that the current proposed analysis fails to adequately address the Zhemchug, Pribilof, and Pervenent Canyons and their importance to pelagic species such as squid, juvenile pollock, and deep-sea smelt. Existing information demonstrates that the Bering Sea canyons contain distinct benthic habitats such as high relief structures like pinnacles, boulders, and steep walls as well as biogenic habitats including corals, sponges, and sea whips. These specific habitats are known, among other things, to provide important refugia for juvenile fish. Additionally, the unique hydrographic features of the canyons form one of the principal bases for productivity in the Bering Sea ecosystem through nutrient upwelling and deposition.

Clearly, the canyons play a very important role in the health of the Bering Sea ecosystem. Oceana's conservation alternative represents substantive progress toward recognizing the critical ecological importance of the Bering Sea canyons.

Treatment of the Bering Sea canyons using the time and area closures suggested in Oceana's alternative would provide the type of spatial management essential to properly address ecosystem-based management. Moreover, conservation of the Bering Sea canyon areas represents a practicable and precautionary management measure to reduce the potential adverse effects of fishing on EFH and would more fully represent a reasonable range of reasonable alternatives for addressing Bering Sea EFH.

WWF would also like to further emphasize the importance of pelagic habitat, particularly as it relates to ecosystem management concepts and EFH. It is clearly understood that the presence of prey concentrated in pelagic habitat is in itself a characteristic of habitat suitability and can be "essential." Prey species are often concentrated by hydrographic features that define areas of pelagic habitat, such as the upwelling areas that occur in the

Bering Sea canyon areas. Bering Sea squid represent an example of an important trophic species that aggregates in shelf edge pelagic habitat and canyons and, by their presence, define such habitat for other species. Squid are much like the copepod "primary constituent elements" considered in establishing Northern right whale critical habitat under the Endangered Species Act. While squid are not the substrate, per se, they are an important and inseparable component of the water column habitat.

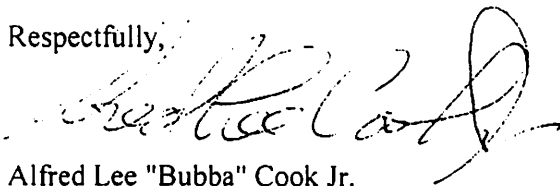
Concentration of squid bycatch in space and time presents a risk due to the unique life cycle of squid and raises concerns regarding forage availability of not only other managed fish species, but also of marine mammals such as the northern fur seal and Steller sea lion. The issue of forage availability is particularly sensitive near the Pribilof Islands. WWF again commends the proactive measures taken to voluntarily reduce squid bycatch this year and encourages further support of this program, which was a positive example of how adaptive fisheries management can respond to the need for effective spatial protection of key trophic species.

Most importantly, consideration of the Zhemchug, Pribilof, and Pervenent canyons, and other features suggested by Oceana, would be consistent with Center for Independent Expert's (CIE) scientific advice from 2004 that strongly recommended a precautionary approach with respect to EFH.

WWF requests that the National Marine Fisheries Service (NMFS) and the Council expand the range of alternatives in the Bering Sea Habitat Conservation analysis to address: 1) the reasonable alternative recommended by the Scientific and Statistical Committee to include the Bering Sea canyons for consideration; and (2) pelagic habitat associated with the Bering Sea canyons and other important hydrographic features.

Thank you for your time and consideration of these comments.

Respectfully,



Alfred Lee "Bubba" Cook Jr.
Kamchatka/Bering Sea Ecoregion Senior Fisheries Program Officer
World Wildlife Fund

January 30, 2007

Ms. Stephanie Madsen, Chair
North Pacific Fishery Management Council
605 W. Fourth Avenue, Suite 306
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Mr. Doug Mecum, Regional Administrator
NOAA Fisheries, Alaska Region
709 West Ninth Street
Juneau, AK 99802-1668

Re: Agenda Item D4(a) Expanding the bottom trawl grounds in the Aleutian Island Habitat Conservation Area

Dear Madame Chair and Mr. Mecum:

The Aleutian Islands contain some of the most unique, biodiverse, and structurally complex living seafloor habitat in the world. As you know, these characteristics led to landmark decisions to protect large areas of Aleutian habitat from destructive commercial bottom trawling. The resultant Aleutian Island Habitat Conservation Area (AIHCA), which has been in place since 2005, represents a significant step forward in Ecosystem Based Fisheries Management of the Aleutian Islands region. In late 2006, a proposal was brought forth by the bottom trawl industry to adjust the boundaries of the AIHCA by expanding the trawl grounds in the Agattu area and closing lightly trawled habitat around Buldir Island. The Environmental Assessment/Regulatory Impact Review (NMFS, 2007) of this issue is discussed below.

Expanding the trawl closure around Buldir Island is consistent with the Council and NMFS intent to protect corals, sponges and hard bottom habitats by closing areas that have been minimally trawled and is supported by available data. By analyzing VMS data, the EA/RIR (NMFS, 2007) found minimal trawl activity in the area around Buldir Island, which confirms the trawl industry's claim that the area is not a historical trawl ground. Many coldwater coral species have been documented in the proposed bottom trawl closure offshore of Buldir Island, including species of *Callogorgia*, *Primnoa*, *Stylaster*, and other gorgonian corals. Additionally, south of Buldir Island in an area open to bottom trawling, trawl surveys have documented diverse corals, including *Paragorgia*, *Stylaster*, *Amphilaphis* species. Thus, this area may also warrant inclusion in the proposed bottom trawl closure. Moreover, with 21 species of breeding seabirds (nearly 3.5 million birds!), Buldir Island is the most diverse seabird colony in the northern hemisphere. All things considered, the Buldir Island area is an important ecological area and it rightly should be closed to bottom trawling.

Some additional candidate areas for bottom trawl closure could include some of the untrawled areas identified by fishermen to contain corals and complex bottom habitat. Trawl fishermen did identify some candidate sites for coral protection during the HAPC process that are not covered by any of the current bottom trawl closures (Figure 1). These areas including a 67 km² area west of Tanaga Island and portions of a 180 km² area south of Kanaga Island. The Tanaga area included *Primnoa*, *Thouarella*, *Amphilaphis*, and scleractinian corals and the Kanaga area included *Primnoa*, *Plumarella*, *Muriciedes* and *Alcyonacea* corals documented from NOAA trawl surveys. Protecting these untrawled areas with corals and complex bottom habitat is consistent with the Council's past actions and intent and should also be considered in this EA/RIR.

In contrast, the EA/RIR reveals that expanding trawl grounds in the Agattu area is inconsistent with the Council's and Fisheries Service's past actions and intent. Analysis of VMS data in the EA/RIR found that the Agattu area did not have a large amount of trawl activity until 2005, after finalization of the boundaries of the AIHCA (NMFS, 2007). This means that the so-called "historical fishing grounds" in the Agattu area were not established until after the Council had made the decision to close said grounds to trawling. The bottom trawl industry has claimed that prior to 2001 the area was trawled for Pacific cod, but only anecdotal evidence is available to substantiate this. Without complete reliance on anecdotal

information, the available data does not support opening the Agattu area to trawling. Additionally, since few surveys and no habitat mapping have occurred in the Agattu area, the effects of opening this area to trawling cannot be fully assessed. The Council should not open the Agattu area to bottom trawling.

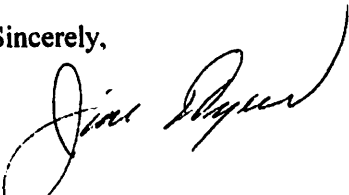
Perhaps the EA/RIR best illustrates how the current lack of a comprehensive research and monitoring plan for the Aleutian Islands hampers adaptive management in the region. While we continue to be supportive of the Essential Fish Habitat (EFH) conservation actions taken by NMFS and the NPFMC thus far, the concomitant research and monitoring components have not been fully realized and appear to have fallen from NMFS priorities. A critical element of the NPFMC and NMFS final decision on Essential Fish Habitat conservation was the inclusion of research and monitoring provisions to protect seafloor habitat in the Aleutian Islands. As you recall, the Record of Decision for the Final Environmental Impact Statement for Essential Fish Habitat Identification and Conservation in Alaska included the "*intent to develop a comprehensive research and monitoring plan in the AI*". Unfortunately, it appears that the Fisheries Service has not duly acted upon this intent and the lack of such a plan continues to put the unique and sensitive habitat in the Aleutian Islands at risk. Without a plan in place, there will be no data with which to evaluate the effectiveness of habitat protection measures, and the ability to engage in adaptive management of the region will be hampered.

While we anticipate that the upcoming Fishery Ecosystem Plan for the Aleutian Islands will include research and monitoring strategies, there is an immediate need to institute and follow through on earlier habitat research and monitoring commitments. Some examples include:

- Habitat surveys and video transects in unexplored areas, particularly in the western Aleutians;
- Studies designed to assess habitat recovery in closed areas;
- Annual bycatch reports, by fishery, of spatial trends of coral and sponge bycatch which includes analyses of particularly large hauls;
- Training for fishery observers to identify coral and sponge species while sampling bycatch (it is our understanding that groundfish fisheries observers still assign coral bycatch either to the broad categories "corals and bryozoans" or "red tree coral". Now that an Alaskan coral identification guide has been published¹, coral bycatch should be recorded to the lowest possible taxon);
- Training for fishery observers on protocols for sample collection of corals and sponges²;
- Enforcement of habitat protection boundaries by monitoring VMS information.

In conclusion, we recommend that the Council proceed by closing the area around Buldir Island to bottom trawling, an action which is entirely consistent with the Council and NMFS intent and is supported by available data. The Council should not open the Agattu area to trawling, as the action is not supported by available data and is inconsistent with the Council and NFMS intent. Should the Council decide to open areas to trawling, it is important that there is no net loss of habitat protection, and additional areas should be closed so the total area of habitat protected is maintained. Finally, NMFS must follow through with the development of a comprehensive research and monitoring plan for the Aleutian Islands. We will continue to work with you on these issues.

Sincerely,



Jim Ayers,

¹ Wing, B.L., and D.R. Barnard. 2004. A field guide to Alaskan corals. NOAA Tech. Memo. NMFS-AFSC-146, 67 p.

² Etnoyer, P., S.D. Cairns, J.A. Sanchez, J.K. Reed, J.V. Lopez, W.W. Schroeder, S.D. Brooke, L. Watling, A. Baco-taylor, G.C. Williams, A. Lindner, S.C. France, and A.W. Bruckner. 2006. Deep-Sea Coral Collection Protocols. NOAA Technical Memorandum NMFS-OPR-28, Silver Spring, MD. 53 pp.

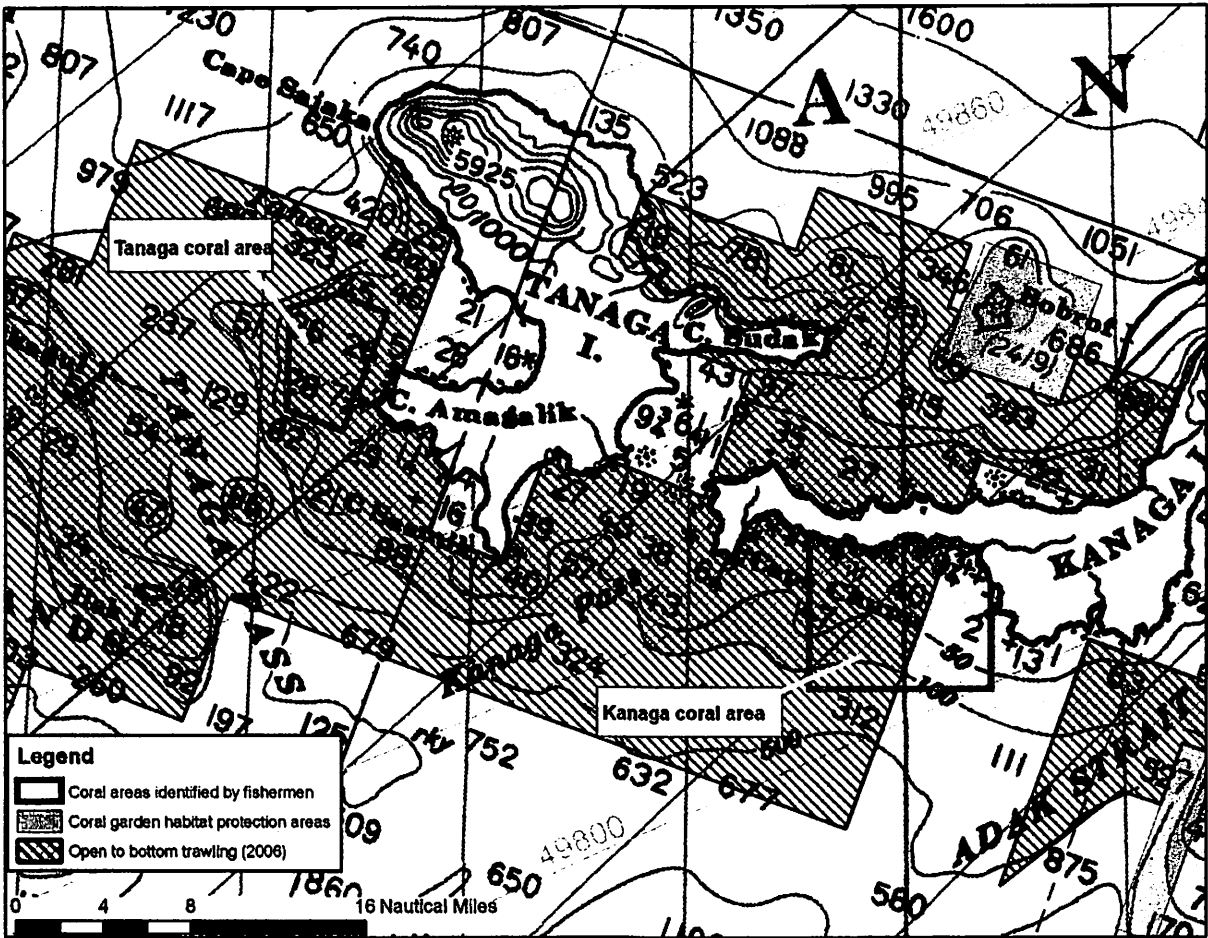


Figure 1: Tanaga and Kanaga coral areas identified by fishermen as being untrawlable and likely to contain stands of high-relief hard corals. All of the Tanaga area and most of the Kanaga area are currently located within the area open to bottom trawling in the Aleutian Islands Habitat Conservation Area.

D-4b

January 30, 2007

Ms. Stephanie Madsen, Chair
 North Pacific Fishery Management Council
 605 W. Fourth Avenue, Suite 306
 Anchorage, AK 99501-2252

Mr. Doug Mecum, Regional Administrator
 NOAA Fisheries, Alaska Region
 709 West Ninth Street
 Juneau, AK 99802-1668

RE: Agenda Item D-4, Essential Fish Habitat, Bering Sea

Dear Madame Chair and Mr. Mecum:

During this February 2007 North Pacific Fishery Management Council meeting, you are scheduled to receive a preliminary review of analyses of alternatives to protect habitat in the Bering Sea. We continue to be supportive of the Council's efforts to protect Essential Fish Habitat thus far, and we commend the Council's commitment as expressed during its unanimous motion two years ago to develop a trailing amended EA and undergo an expanded analysis of habitat conservation for the Bering Sea. However, as we have emphasized during previous meetings, this draft EA does not yet encompass a reasonable range of alternatives, and this opinion has been shared by the Science and Statistical Committee, NOAA general counsel and other members of the public.

The National Research Council has described five distinct habitat types in the Bering Sea: the coastal domain (0-50 meters depth), middle domain (50-100 meters depth), outer domain (100-200 meters depth), shelf break domain, and basin¹. Of these broad habitat types in the Bering Sea, only portions of the coastal and middle shelf domain are represented in any of the Council's current habitat protection areas. It follows that a comprehensive analysis of Bering Sea habitat would consider alternatives which address each of the broad habitat types which comprise the Bering Sea ecosystem. The draft EA does not necessarily accomplish this. We urge the Council to note their intent to address these two specific deficiencies.

Notably absent, for example, are alternatives which would protect outer domain and shelf break habitats. In October 2006, Oceana submitted, and public comment supported, consideration of an alternative that would protect such habitat types, by including protection of skate nurseries, and Pribilof, Zhemchug, and Pervenets canyons. Without inclusion of such an alternative, you, NOAA Fisheries, and the public will be denied the opportunity to comment on and consider a reasonable range of alternatives to protect habitat in the Bering Sea. Additionally, alternatives should be included which address the concerns of coastal communities affected by trawlers' activities.

A reasonable range of alternatives should be included in a comprehensive Bering Sea habitat analysis to assist the Council and NOAA in your efforts to comply with Magnuson-Stevens Act and National Environmental Policy Act mandates. We will continue to work with you on this issue.

Sincerely,



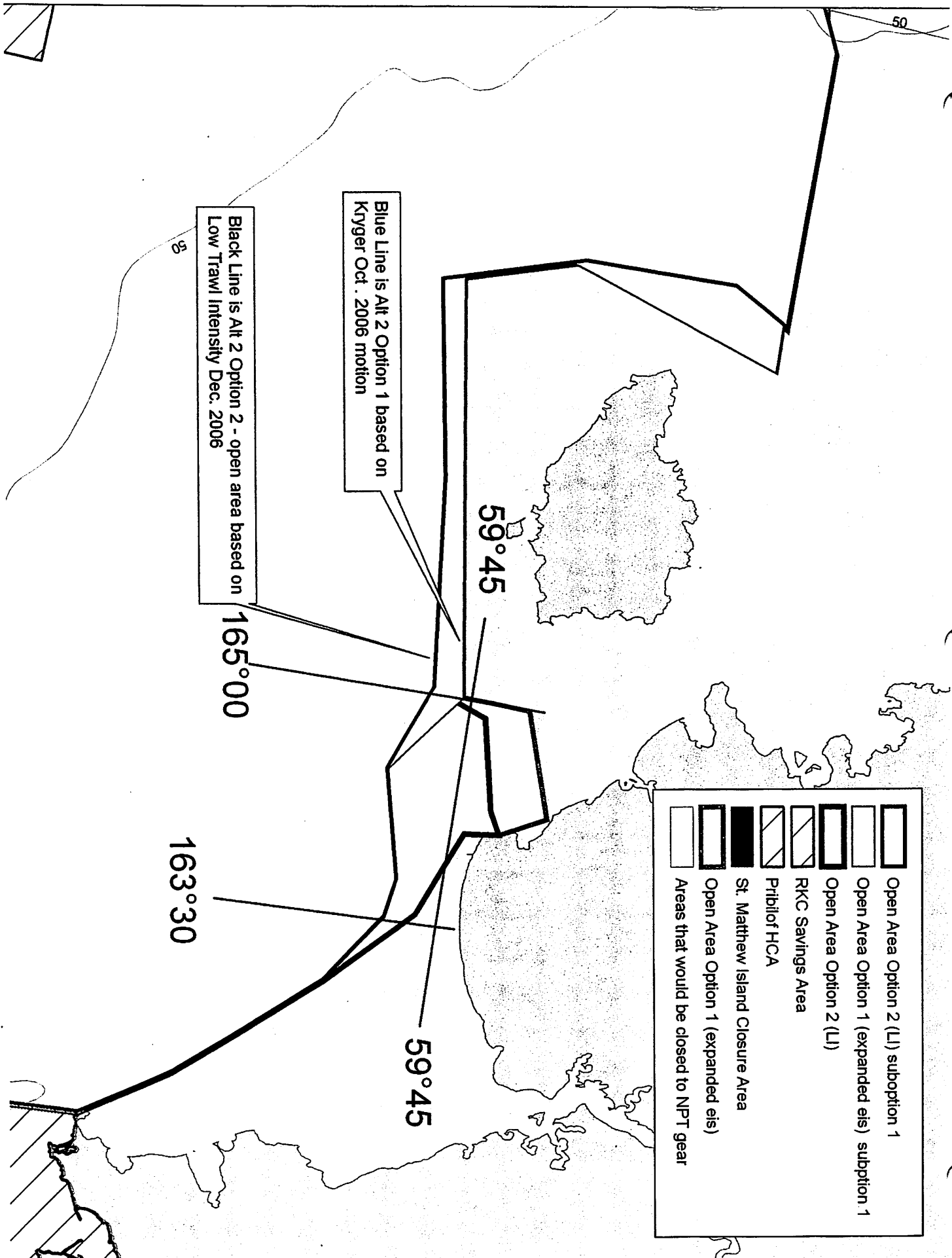
Jim Ayers
 Vice President, Oceana

¹ National Research Council. 1996. The Bering Sea Ecosystem: Report of the Committee on the Bering Sea Ecosystem. National Academy Press. Washington D.C. 324 pp.

Powerpoint slides from flatfish industry presentation

Prepared for the January 22, 2007 meeting
between representatives of the Bering Sea
flatfish fishery and AVCP

John Gauvin
D 4(b)



Description of the Bering Sea Flatfish CP fleet

- 22 active vessels ranging from 108-200 plus feet
- All are required to carry NMFS-trained observers (<125 ft 30% coverage; >125 100% coverage); most vessels fishing in Etolin Strait are 100% boats
- Mixed flatfish and cod fishery overall but yellowfin sole target only in Etolin Strait area
- Most vessels stage fishing operations out of Dutch Harbor

Raw data on Etolin flatfish catches (sampled hauls 1999, 2002-2005)

John, this was in my obs database, by year, for the area 59 30 -> 59 45, 163 30 -> 165 00

Year	Groundfish	Halibut catch	Approx halibut mortality	Herring catch	Chinook	Other salmon
1999	241.0	2.4	1.7	0.1	0	19
2002	467.3	3.3	2.3	0.0	0	0
2003	1,910.2	34.7	24.3	2.6	0	0
2004	4,165.8	32.0	22.4	2.3	0	5
2005	125.7	1.3	0.9	0.2	0	0

6,910.1 73.8 51.6 5.2 0.0 25.0

Data were obtained from Sea State tows in area being discussed with representatives of Etolin Strait

Salmon bycatch

- **Yellowfin Sole fishery catch 2002-2005**

- Total mt of groundfish: 323,995
- Total Salmon: 1409 Salmon (all chum)
- Average Rate: 1 salmon = 300 MT of groundfish

Yellowfin sole fishery catch in Etolin Strait 2002-2005

- Total Groundfish: 6,669 mt of groundfish (sampled hauls)
- Total Salmon: 5 Salmon, all chums
- Average Rate: 1 salmon = 1,334 MT of groundfish

Halibut bycatch

- **Yellowfin fishery halibut bycatch 2002-2005**

- Total Groundfish: 323,995 mt of groundfish
- Total Hmort: 2,756 mt

Average Rate: 1 mt of Hmort = 117.5 mt of groundfish

- **Yellowfin fishery halibut bycatch in Etolin Strait 2002-2005**

- Total Groundfish: 6,669 mt of groundfish (sampled hauls)
- Total Hmort: 49mt

Average Rate: 1 mt of Hmort = 137.6 mt of groundfish



Herring bycatch

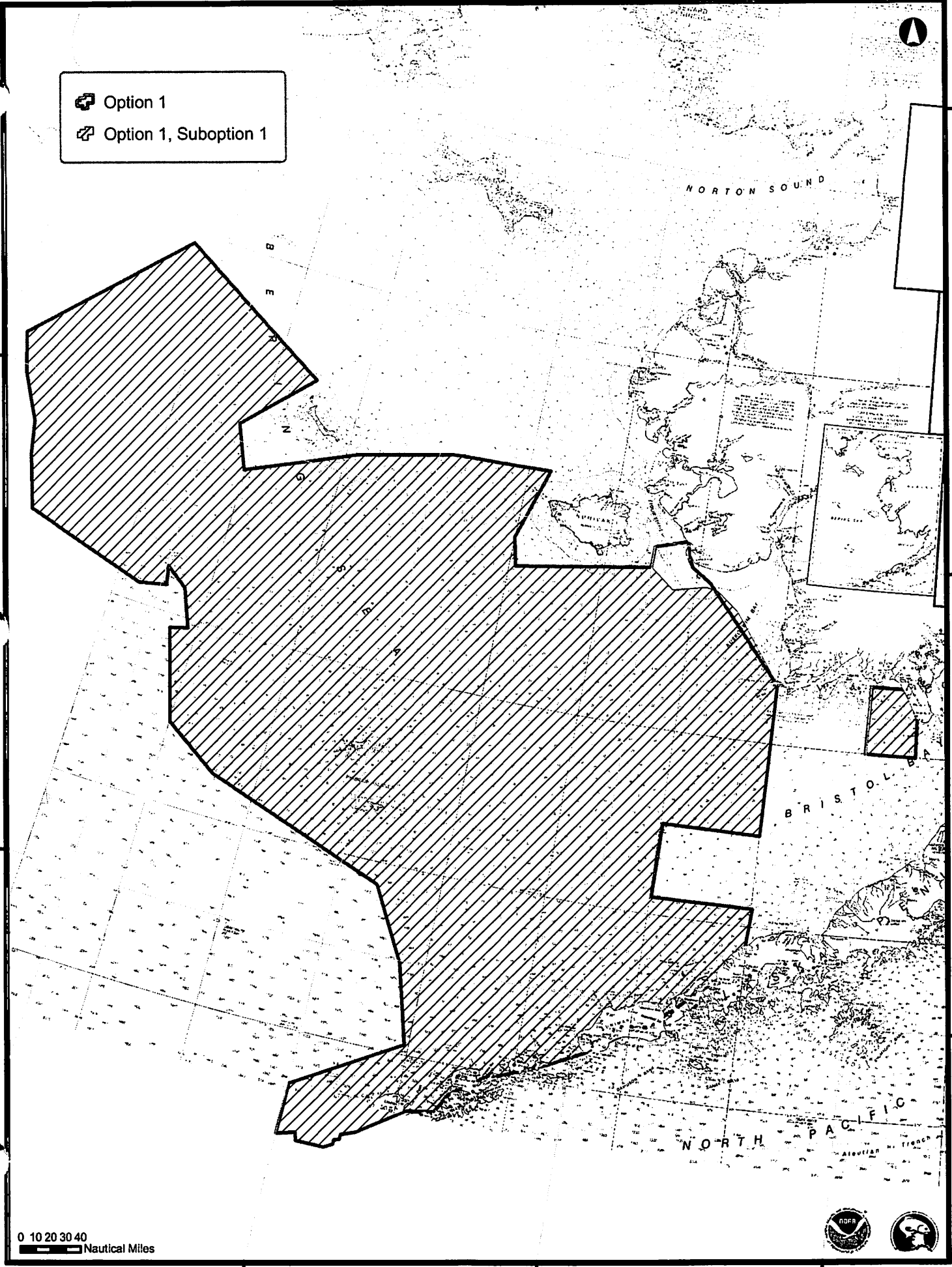
- **Yellowfin sole fishery catch 2002-2005**

- Total Groundfish: 323,995 mt groundfish
- Total Herring 204 mt
- Average Rate: 1 mt of herring = 1,550.2 mt of groundfish

Yellowfin sole fishery catch in Etolin Straight 2002-2005

- Total Groundfish: 6,669 mt of groundfish (sampled hauls)
- Total Herring: 5.1 mt
- Average Rate: 1mt of herring = 1,307 MT of groundfish

 Option 1
 Option 1, Suboption 1





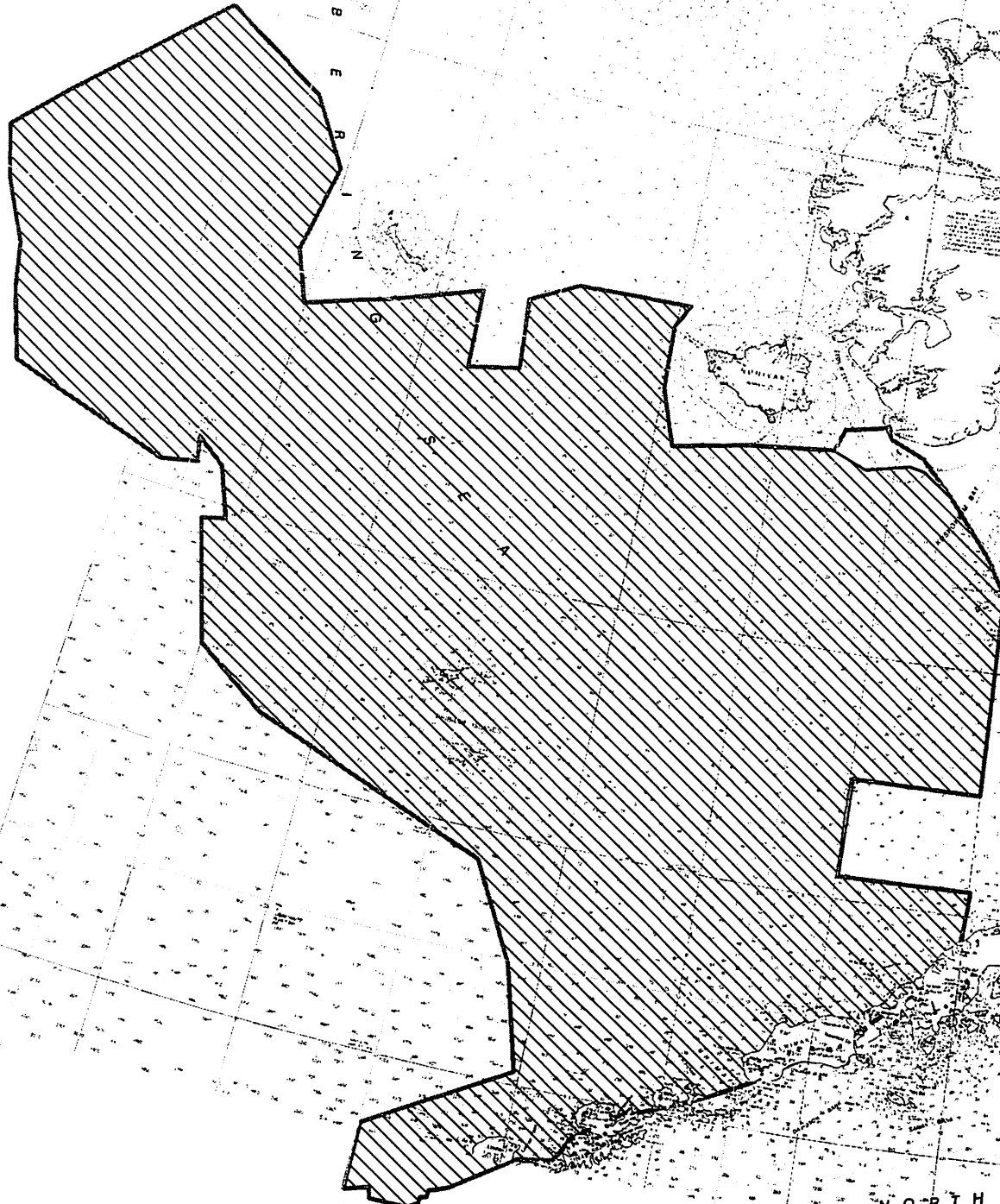
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170°00'W

165°00'W

160°00'W

-  Option 2
-  Option 2, Suboption 1





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Nautical Miles

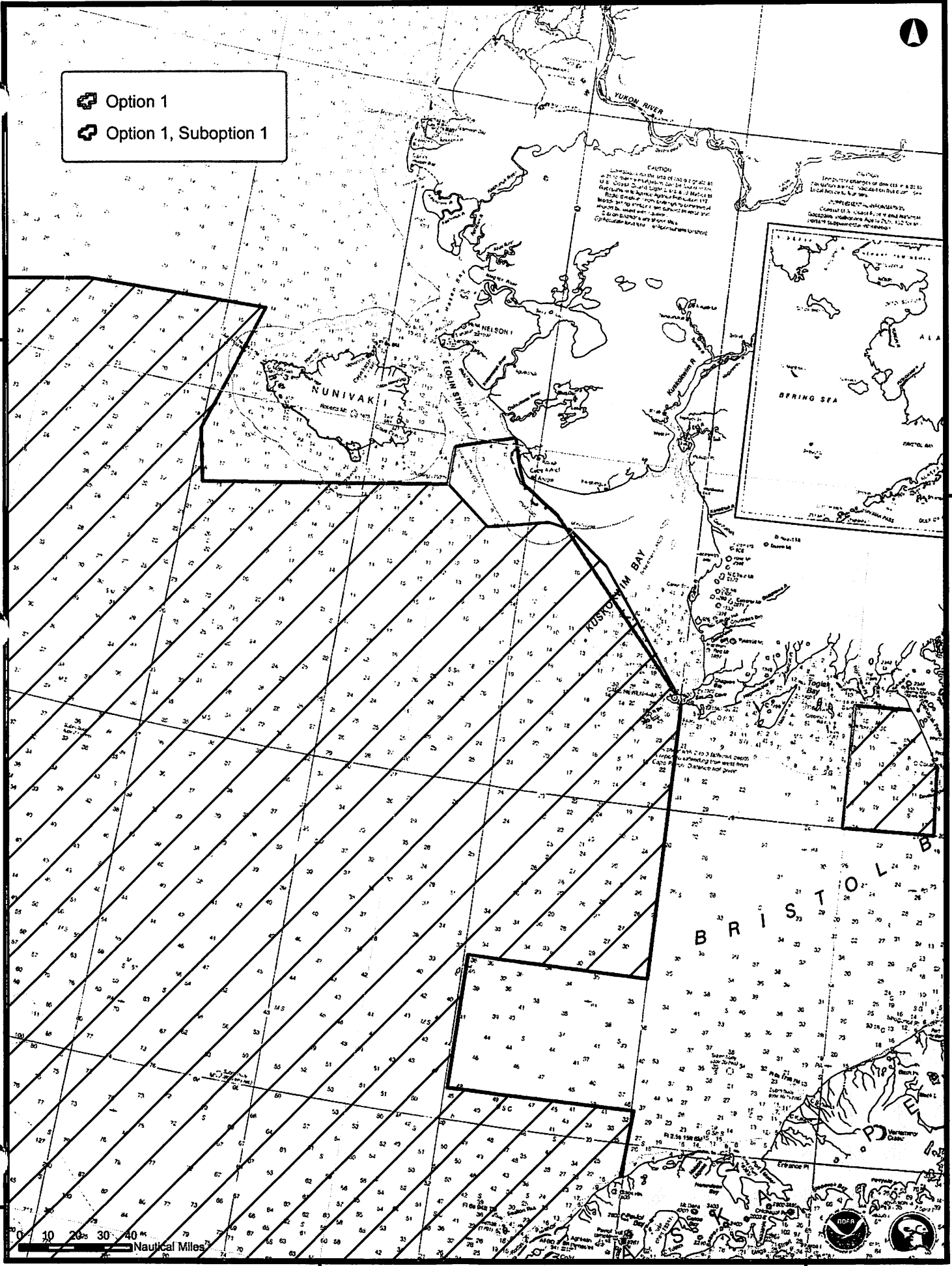
170°00'W

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-  Option 1
-  Option 1, Suboption 1





CAUTION
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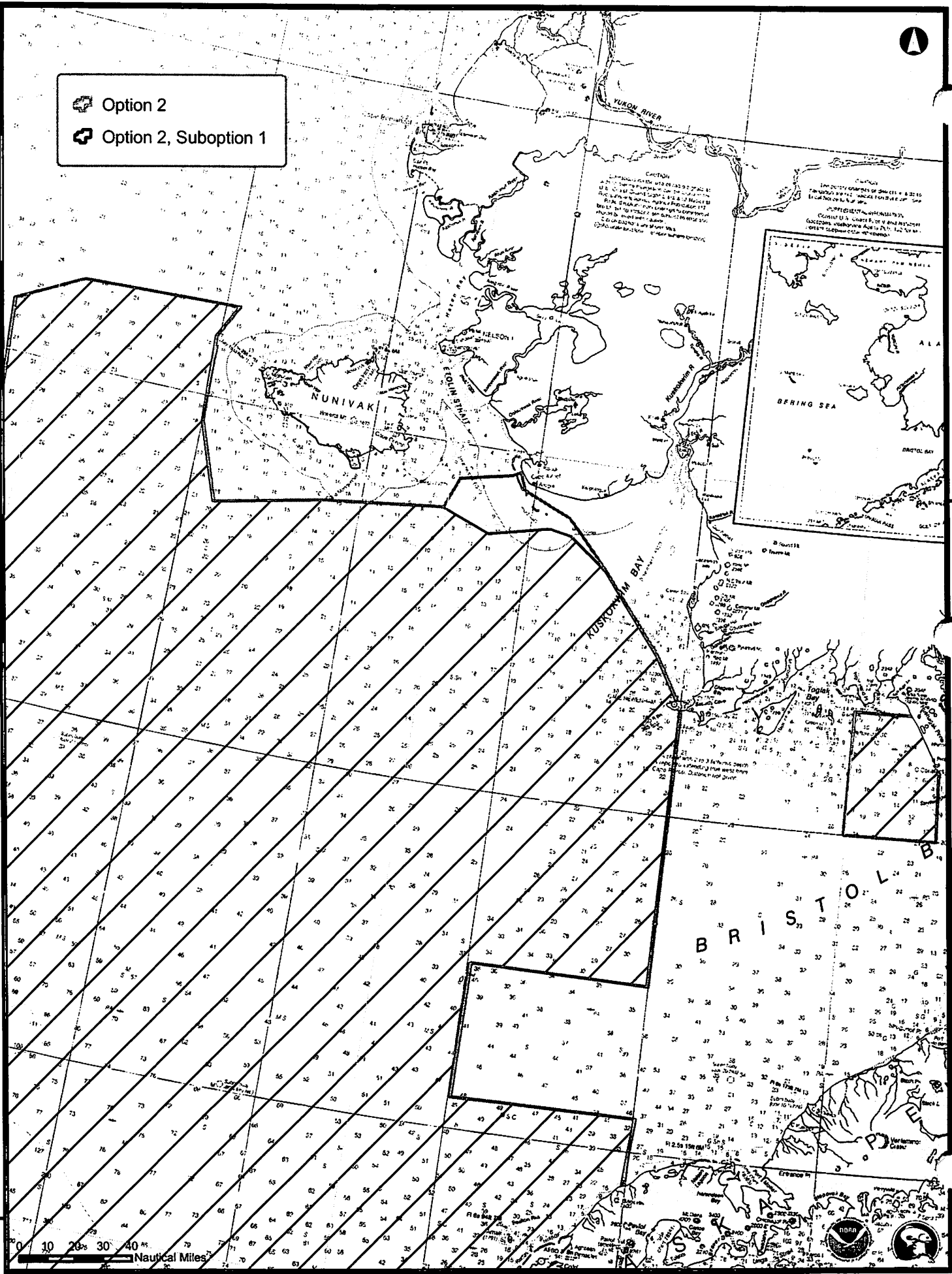


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-  Option 2
-  Option 2, Suboption 1



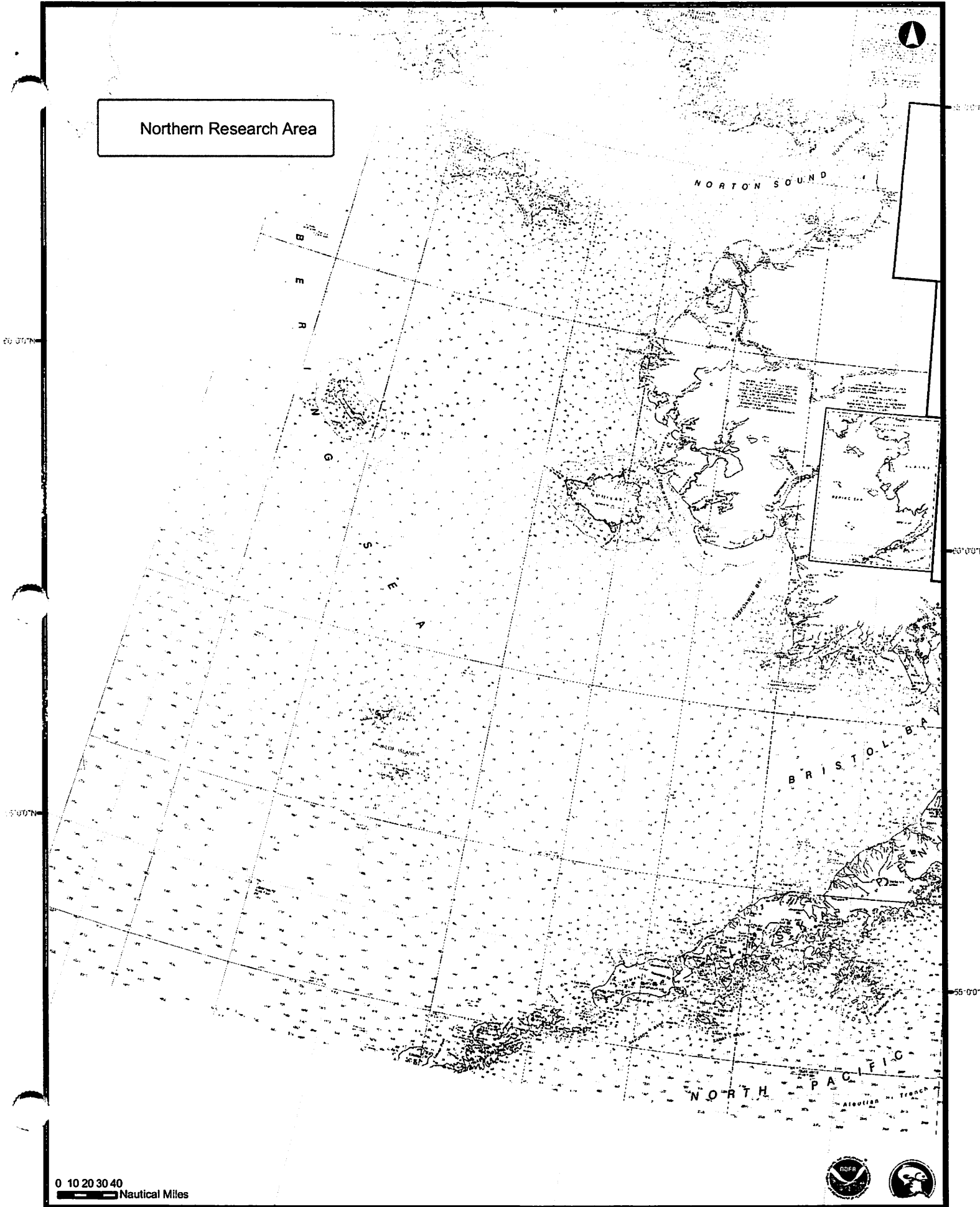
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165° 00' W

160° 00' W

Northern Research Area



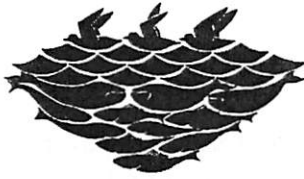
0 10 20 30 40
Nautical Miles

170°00'W

165°00'W

160°00'W





Alaska Marine Conservation Council

Box 101145, Anchorage Alaska 99510
(907) 277-5357 • (fax) 277-5975
amcc@akmarine.org • www.akmarine.org

February 2007

Stephanie Madsen, Chair
North Pacific Fishery Management Council
605 W. 4th Ave.
Anchorage, AK 99510

RE: Agenda Item D-4 Bering Sea Habitat Conservation

Dear Ms. Madsen and Members of the Council,

We appreciate that the Council is addressing Bering Sea habitat conservation. Below are our recommendations for the Environmental Assessment alternatives and options.

1. Scope of alternatives and options

As we have stated at previous Council meetings, AMCC remains concerned that the scope of alternatives does not address known important habitats in the Bering Sea. Slope habitats in the canyons, for example, contain vulnerable biogenic features for which options for reasonable protections from bottom trawl gear could have been developed for the analysis.

2. Open Area Approach

AMCC is strongly in favor of establishing a northern boundary for the bottom trawl footprint. We note that the remaining options represent the most liberal boundary including virtually all locations towed from 1990 to 2005. The areas protected are around St. Matthew Island and the Council has encouraged a discussion between the flatfish industry and tribes along the Kuskokwim Delta coast and Nunivak Island to resolve concerns regarding bottom trawling in the areas important to those communities.

We urge the Council to support the request by the Association of Village Council Presidents (AVCP) to leave a place holder in the Environmental Assessment for options that may result from those discussions.

3. Climate Change & the Northern Bering Sea Research Area

It is our strong recommendation that large scale fisheries not expand into the northern Bering Sea without a plan for protecting the ecological values, sensitive places and culturally important assets of the region. Certainly there should not be fisheries in a region that is not surveyed (stock assessment surveys are focused in the current fishing grounds and there is very little understanding of the status of fish populations in the north).

The purpose of a northern boundary for bottom trawling is to contain the footprint. However, warming ocean temperatures and loss of sea ice is changing the Bering Sea ecosystem in dramatic ways. We don't know exactly what that will mean for different fish populations but the Council should count on the system being highly stressed and subject to new levels of uncertainty and variability.

The Council is facing an important decision to "look before leaping" in the northern Bering Sea. It will be a huge missed opportunity if fisheries are allowed to expand without a plan for how to manage them in the northern Bering Sea fishery frontier. It is critical to do the planning now in a deliberate way and avoid many problems in the future if and when fish populations redistribute themselves in northern waters. This Bering Sea habitat conservation initiative is a step to allow development of a full plan for the northern area.

Clearly the nation and the world are becoming acutely aware of climate change. Even within the last few weeks new international scientific consensus reports show extreme and increasing urgency in the global response to a potential ecological and humanitarian crisis. While the true solutions are international in scope and lie in minimizing greenhouse gas emissions, there are other important ways the Council can respond. With Alaska being very much on the frontline of climate change, it is our collective duty to do whatever we can to promote ecosystem resilience in progressive and innovative ways. What approach is taken for the northern Bering Sea is a pressing issue and this habitat conservation effort being undertaken by the Council is one opportunity to get off on the right foot with regard to marine resources in a changing environment.

Sincerely,



Dorothy Childers
Program Director

ASSOCIATION OF VILLAGE COUNCIL PRESIDENTS
P.O. Box 219, Bethel, Alaska 99559
(907) 543-3521

January 30, 2007

Stephanie Madsen, Chair
North Pacific Fisheries Management Council
605 West 4th, Suite 306
Anchorage, Alaska 99501-2252

Re: EFH for the Eastern Bering Sea

Dear Chair Madsen,

I write as President of the Association of Village Council Presidents (AVCP) to express the organization's concerns and requests related to options currently under analysis for essential fish habitat (EFH) in the Bering Sea. AVCP is a consortium of 56 federally recognized tribes located in the Yukon-Kuskokwim Delta region of western Alaska. The NPFMC has asked its staff to analyze several options for EFH that would, among other actions, set boundaries on the areas in the Bering Sea that are open to trawling. Several AVCP villages are located on the coast of the Bering Sea and depend upon these same waters and habitat for resources essential to their subsistence way of life.

On January 22, 2007, AVCP staff and several village tribal representatives met with NPFMC staff, several representatives of the trawling industry, Dorothy Childers of the Alaska Marine Conservation Council and NPFMC member Eric Olson. The purpose of the meeting was to exchange information about the Council's actions and proposals, the trawl fishery in the area of concern, and the concerns of subsistence users.

From AVCP's perspective, the meeting was very useful and productive. AVCP believes that it would be valuable for this group to continue to meet. The goal of further meetings, in AVCP's view, would be to continue to share information and to seek agreement on EFH actions that will protect subsistence resources and habitat without unduly restricting the trawl fishery.

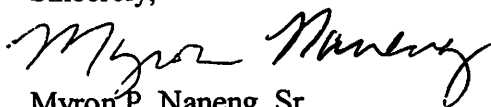
AVCP is committed to working with its villages and tribal governments to ensure that they are fully educated and informed on the Council's EFH proposals and process. During the January 22nd meeting, the tribal members in attendance expressed serious concerns about the options currently undergoing preliminary analysis by NPFMC staff. In particular, it is clear to AVCP tribes that the boundaries proposed in options 1 and 2 will not provide sufficient protection for subsistence uses. AVCP cannot support these options. The sub-options under options 1 and 2 provide a somewhat larger buffer for protected habitat around the villages, but serious concerns also remain about these proposed boundaries.

The Council is scheduled to review the preliminary analysis of the options it identified for EFH during its February meeting in Portland. There is not enough time for AVCP to fully develop a position and alternative options for the Council's consideration before the Portland meeting. Nor is there time before the Portland meeting to allow the

trawl industry and the tribes to fully explore a mutually acceptable position on this issue. In addition to the time constraints, the impacted AVCP villages and tribal governments simply cannot afford to send tribal representatives to Portland to attend this meeting. AVCP therefore requests the Council's continued support for the interaction that is occurring between the tribes and the industry. AVCP asks the Council to retain a placeholder for options that are the result of discussions between trawlers and tribes, or an option developed by AVCP's tribes if no agreement can be reached. AVCP further requests that all NPFMC discussions or actions on EFH for the Bering Sea take place during meetings held in Anchorage so that the tribes can better participate in the process. Finally, AVCP asks, for the time being, that the sub-options for options 1 and 2 remain a part of the analysis for EFH.

Thank you for your consideration of AVCP's position and request.

Sincerely,

A handwritten signature in black ink, appearing to read "Myron P. Naneng, Sr.", written in a cursive style.

Myron P. Naneng, Sr.
President, AVCP

Stephanie Madsen

January 30, 2007

-page 2-

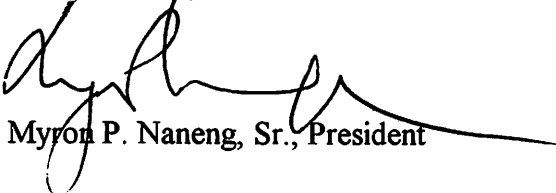
that is occurring between the tribes and the industry. AVCP asks the Council to retain a placeholder for options that are the result of discussions between trawlers and tribes, or an option developed by AVCP's tribes if no agreement can be reached. AVCP further requests that all NPFMC discussions or actions on EFH for the Bering Sea take place during meetings held in Anchorage so that the tribes can better participate in the process. Finally, AVCP asks, for the time being, that the sub-options for options 1 and 2 remain a part of the analysis for EFH.

Thank you for your consideration of AVCP's position and request.

Sincerely,

ASSOCIATION OF VILLAGE COUNCILS

Raymond Watson, Chairman

A handwritten signature in black ink, appearing to read 'Myron P. Naneng, Sr.', with a long horizontal flourish extending to the right.

Myron P. Naneng, Sr., President