AGENDA C-3(a)
MARCH/APRIL 2012

MEMORANDUM

TO: Council, SSC, and AP Members

FROM: Chris Oliver
Executive Director

ESTIMATED TIME
2 HOURS

DATE: March 21, 2012

SUBJECT: Habitat Areas of Particular Concern (HAPC) – Areas of Skate Egg Concentration

ACTION REQUIRED:

Initial review of proposed skate egg concentration HAPC sites EA/RIR/IRFA.

BACKGROUND:

Habitat Areas of Particular Concern (HAPC) are geographic sites of special importance within the distribution of Essential Fish Habitat (EFH) for the Council's managed species that may require additional protection from fishing activity and adverse fishing effects. HAPCs must be rare and may be ecologically important, sensitive to human disturbance, or stressed by development activities. The Council has a formalized process within its Fishery Management Plans for selecting HAPCs, and periodically selects habitat priority types and issues a request for proposals (RFP).

In 2010, the Council set a habitat priority type—"skate nurseries"—and issued an RFP in conjunction with completion of its EFH five-year review. Council staff initially screened proposals, and the joint groundfish Plan Teams reviewed the HAPC proposals for rarity and ecological merit. The Council selected a HAPC proposal from the Alaska Fisheries Science Center (AFSC) for further analysis. In February 2012, the Council made an initial review of an analysis of alternatives and options to identify and conserve six areas of skate egg concentration as HAPC in the eastern Bering Sea. The Council refined its alternatives based on the recommendations of the Enforcement Committee and requested further analysis. Additionally, at the request of NMFS, option f was added to address a housekeeping issue for the BSAI Groundfish FMP. The draft initial review was mailed to you on March 15, 2012, and the Executive Summary is attached as **Item C-3(a)(1)**.

At this meeting, the Council will make an initial review of the analysis. The Enforcement Committee is scheduled to discuss the analysis and alternatives, and will summarize its discussion for the Council at this meeting.

1.0 EXECUTIVE SUMMARY

Habitat Areas of Particular Concern (HAPC) are geographic sites that fall within the distribution of essential fish habitat (EFH) for federally managed species. HAPCs are areas of special importance that may require additional protection from adverse fishing effects. EFH provisions provide a means for the North Pacific Fishery Management Council (Council) to identify HAPCs (50 C.F.R. 600.815(a)(8)) within Fishery Management Plans (FMP). Specific to fishery actions, HAPCs are areas within EFH that are rare and are either ecologically important, sensitive to disturbance, or may be stressed.

The Council has a formalized process identified within its FMPs for selecting HAPCs. Under this process, the Council periodically considers whether to set a priority habitat type (or types). If so, the Council initiates a request for proposals (RFP) for HAPC candidate areas that meet the specific priority habitat type. Members of the public, non-governmental organizations, and Federal, State, and other agencies may submit HAPC proposals. Sites proposed under this process are then sent to the Council's plan teams for scientific review to determine ecological merit. Council and agency staff also review proposals for socioeconomic and management and enforcement impacts. This combined information is then presented to the Scientific and Statistical Committee (SSC), the Advisory Panel (AP), the Enforcement and Ecosystem Committees if necessary, and to the Council, which may choose to select HAPC proposals for a full analysis and subsequent implementation. The Council may also modify proposed HAPC sites and management measures during its review, or request additional stakeholder input and technical review.

In April 2010, the Council set a habitat priority type—"skate nurseries"—and issued an RFP in conjunction with the completion of its EFH five-year review process. Council staff initially screened the proposals received to determine consistency with the Council's habitat priority type, compliance with the Council's HAPC criteria, and for general adequacy and completeness. At its fall 2010 meeting, the Joint Groundfish Plan Teams reviewed HAPC proposals for rarity and ecological merit in October 2010, the Council selected a HAPC proposal from the Alaska Fisheries Science Center (AFSC) to forward on for further analysis. In February 2011, the Council received a discussion paper on the AFSC's HAPC proposal and selected alternatives and options for conservation and management through gear prohibitions to forward on for full analysis.

Three alternatives for the identification of skate egg concentration HAPCs and four options (a through d) for gear type prohibitions within those HAPCs are analyzed in this document, and are listed below. Consideration of areas of skate egg concentration is limited to the six candidate sites from the AFSC proposal. Additional sites, when and if discovered, are not considered part of this action. In addition, the Council has the options of recommending research and monitoring of skates be added to its research priority list (Option e) and adopting an FMP housekeeping amendment to standardize federal descriptions of Bering Sea habitat conservation measures (Option f).

1.1 Alternatives and Options

In order to address the issues described in its statement of purpose and need, the Council identified three alternatives and five options for analysis, shown below. In addition, an FMP housekeeping option has been added to the analysis (Option f).

Alternative 1: Status quo; no action.
No measures would be taken to identify, or to identify and conserve, areas of skate egg concentration as HAPCs.

Alternative 2: Identify skate egg concentration HAPC(s).
The Council may select to identify – individually, severally, or all six of – the areas of skate egg

concentration as HAPCs.[1] The intent of Alternative 2 is to "discourage fishing in these areas" of skate egg concentration with gear that makes contact with the sea floor.

Table 1. The six areas of skate egg concentration proposed for identification as a HAPC under Alternative 2.

Site name[a]	Predominant skate species	Depth of max. egg density (m)	Maximum egg density (eggs/km^2)	Area of HAPC nm^2	Boundaries of HAPC (°N latitude or °W longitude)			
					North	South	West	East
1. Bering 1	Alaska	145	800,406	18.4	54°53′	54°49′	165°46′	165°38′
2. Bering 2	Aleutian	380	62,992	17.5	54°38′	54°33′	165°45′	165°34′
3. Bristol	Bering	156	6,188	13.7	55°21′	55°17′	167°40′	167°34′
4. Pribilof	Alaska	205	16,473	1.2	56°11′	56°10′	168°28′	168°26′
5. Zhemchug	Alaska	217	610,064	3.2	56°57′	56°54′	173°23′	173°21′
6. Pervenets	Alaska, Bering, Aleutian	316	334,163	27.7	59°28′	59°22′	177°43′	177°34′
Total area of the eastern Bering Sea proposed as HAPCs under Alternative 2 = 81.7 nm^2								

[a] Counterintuitively, the Bering 2 site is south of the Bering 1 site. Sites 3 through 6 run south to north.

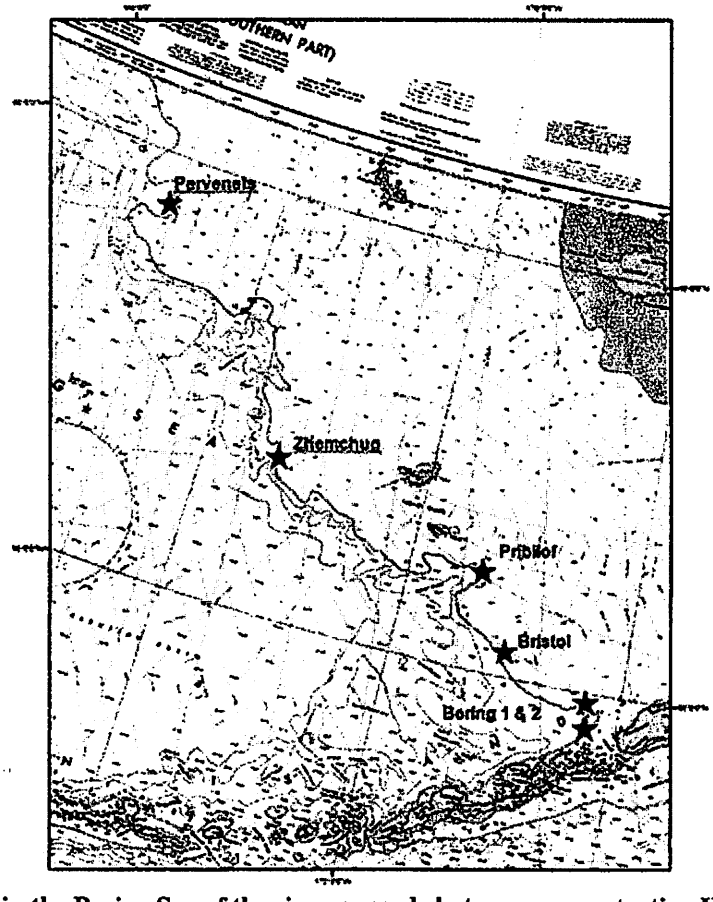

Figure 1. The locations in the Bering Sea of the six proposed skate egg concentration HAPCs (not to scale).

[1] 50 C.F.R. 600.815(a)(8). Essential Fish Habitat (EFH) provisions provide a means by which the Council may identify HAPCs within FMPs.

At each of the six areas of skate egg concentration, the spatial extent of bottom trawls containing more than 1,000 egg cases per kilometer squared (km^2) have been established. Boundary lines are then snapped outward to the nearest minute of latitude or longitude.

Alternative 3: Identify and conserve skate egg concentration HAPC(s).
The Council may select to identify – individually, severally, or all six of – the areas of skate egg concentration as HAPCs – AND – the Council may select different conservation and management options for any area identified as a skate egg concentration HAPC:

Option a: Prohibit within skate egg concentration HAPC(s) the use of "mobile bottom contact"[2] fishing gear: nonpelagic (i.e., bottom) trawl, dredge, and dinglebar gear.

Option b: Prohibit within skate egg concentration HAPC(s) the use of "mobile bottom contact" and pelagic trawl fishing gear: nonpelagic and pelagic trawl, dredge, and dinglebar gear.[3]

Option c: Prohibit within skate egg concentration HAPC(s) the use of "bottom contact"[4] fishing gear: nonpelagic trawl, dredge, dinglebar, pot, and hook and line (i.e., longline) gear.

Option d: Prohibit within skate egg HAPC(s) the use of all fishing gear: nonpelagic and pelagic trawl, dredge, dinglebar, pot, and hook and line gear.

To achieve effective enforcement of these areas, Alternative 3 establishes a minimum size threshold for the core concentration areas to be protected of at least 5 nm to a side and are then, where appropriate, enlarged with a buffer of 1 nm beyond the original boundary under Alternative 2. Boundaries are then snapped outward to the nearest minute of latitude and longitude.

Table 2. The six areas of skate egg concentration proposed for identification as a HAPC under Alternative 3.

Site name[a]	Predominant skate species	Depth of max. egg density (m)	Maximum egg density (eggs/km^2)	Area of HAPC (nm^2)	Boundaries of HAPC (°N latitude or °W longitude)			
					North	South	West	East
1. Bering 1	Alaska	145	800,406	41.8	54°54′	54°48′	165°48′	165°36′
2. Bering 2	Aleutian	380	62,992	40.9	54°39′	53°32′	165°47′	165°37′
3. Bristol	Bering	156	6,188	34.4	55°22′	55°16′	167°42′	167°32′
4. Pribilof	Alaska	205	16,473	28	56°13′	56°08′	168°32′	168°22′
5. Zhemchug	Alaska	217	610,064	27.4	56°58′	56°53′	173°27′	173°17′
6. Pervenets	Alaska, Bering, Aleutian	316	334,163	53.3	59°29′	59°21′	177°45′	177°36′
Total area in the eastern Bering Sea proposed as HAPCs under Alternative 3 = 225.8 nm^2								

[a] Counterintuitively, the Bering 2 site is south of the Bering 1 site. Sites 3 through 6 run south to north.

[2] 50 C.F.R. 679.2.
[3] See 50 C.F.R. 679.2 for the particular and intricate components defining "pelagic trawl" fishing gear.
[4] 50 C.F.R. 679.2.

Additional Options
The following options are applicable to ALL of the alternatives, in any combination of skate egg concentration HAPCs, and with any combination of conservation and management measures the Council selects:

> **Option e: Suggest adding research and monitoring of areas of skate egg concentration to the Council's research priority list.**

The Council may suggest incorporating the research and monitoring of skate species into the Council's annual research priority list, to evaluate skate populations, skate egg concentration areas, and their ecology and habitat.

> **Option f: Adopt formatting standards as stated in the final rule implementing Amendment 89 to the BSAI Groundfish FMP.**

The Council may approve the consolidation of figures and tables that describe areas in Amendment 89 to the BSAI Groundfish FMP, which establishes Bering Sea habitat conservation measures. Color Figures 66-69 in Appendix B describe the Bering Sea Habitat Conservation Area, the Northern Bering Sea Research Area and Saint Lawrence Island Habitat Conservation Area (HCA), and the Nunivak Island, Etolin Strait, and Kuskokwim Bay Habitat Conservation Area, respectively.

1.2 Summary of Environmental Impacts

The analysis of direct, indirect, and cumulative effects for the proposed action indicate no significant impacts on the human environment from the three alternatives and any of the possible options for conservation and management. Environmental effects of this proposed action are considered insignificant under all alternatives. These sites are small and discrete areas that have had either little fishing effort in them in the past or some limited trawling for groundfish, including for pollock, in some areas, in some years. No changes in catch effort are anticipated. As such, any effects on habitat, target species, non-target resources, protected species, or the ecosystem would be considered insignificant. The effects on skates are unknown but are expected to provide some positive benefit.

Alternative 1, the status quo or no action alternative, involves no measures to identify or conserve areas of skate egg concentration as HAPCs. 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 Council may, however, choose Option e under Alternative 1, which would add areas of skate egg concentration to the Council's annual research priority list. The Council could also choose Option f under Alternative 1, a housekeeping amendment to the Bering Sea Aleutian Island (BSAI) Fishery Management Plan (FMP)

Alternative 2 provides some degree of protection for vulnerable benthic skate egg habitat by identifying areas of skate egg concentration as HAPCs. The identification of these sites as an HAPC highlights the importance of this essential fish habitat for conservation and consultation on activities such as: drilling, dredging, laying cables, and dumping, as well as fishing activities. The impacts of Alternative 2 would be similar in magnitude to Alternative 1 because under Alternative 2 fishing activities are not restricted. However, fishing activities in these areas could be more closely monitored through the Economic Stock Assessment and Fishery Evaluation (SAFE) and the essential fish habitat (EFH) five-year review.

Alternative 3 provides for both the identification of skate egg concentration HAPCs and for the conservation of these areas through prohibitions on gear types within HAPCs. The impacts of Alternative 3 depend on the option for conservation and management (a through d) selected for each HAPC. The Council may select, in combination with any skate egg concentration designated as a HAPC, to limit

fishing activities that make contact with the sea floor in these areas by prohibiting the use of "mobile bottom contact," pelagic, "bottom contact," or all fishing gear. Options that prohibit trawling in these areas would provide the most protection from potential direct impacts (bury or crush) and indirect impacts (dislodgement, movement, bycatch mortality) on egg cases. Other gear types likely have less potential to impact skate egg cases, so a prohibition on these gears may offer only marginal benefits. The potential effects of the options on skate populations remains unknown but are likely beneficial.

1.3 Summary of Economic Impacts

Economic impacts are expected to be insignificant under all alternatives, as these are small areas overall and have low levels of fishing effort, particularly the four more northern sites. The most costly option (Alternative 3, Option e) would close these six areas to all fishing gears, encompassing a total area of 225.8 nm^2. Limited impacts to longline fisheries may occur if closures are implemented. Effort data indicates that several of these areas are fished at low levels to target Pacific cod. No impacts would be expected for pot gear targeting Pacific cod, or scallop fisheries using dredge gear, as none of these areas have been used in recent years as shown through analysis of catch data in the HAPCs. The effect of Alternative 3 on crab fisheries (pot gear) remains unknown at this time as quantitative information is not available, but the effects are likely insignificant due to the small area proposed and the depths of the areas relative to crab harvest.

Trawl fisheries would also be impacted, but these impacts would also be considered relatively minimal relative to the total annual groundfish catch by affected fleets. Initial analysis suggests that on average, a closure to pelagic and bottom trawling of these sites would result in a maximum foregone catch of **$1,599,570** per year on average. Of this total, pelagic trawling for pollock in the areas would generate a forgone catch of **$1,102,109** per year, and bottom trawling of **$497,461**, which is the total ex-vessel price divided by the nine years (2003-2011) of catch data examined. For comparison, BSAI trawl fisheries ex-value was averaged at **$515,840,000** over 2006-2010 (from the 2011 Economic SAFE, for all trawl species). The average of $1,102,109 per year of estimated forgone pelagic catch equates to approximately **0.21%** of an average (2006-2010) annual gross value of the BSAI trawl groundfish ($515,840,000). The average of $497,461 per year of estimated forgone bottom catch equates to approximately **0.09%** of an average (2006 to 2010) annual gross value of the BSAI trawl groundfish ($515,840,000).

It would be expected that the fleet could make up this foregone catch in other areas, adjacent or elsewhere. However, moving the fleet elsewhere to make up foregone catch may require vessels to fish outside of their preferred zone and could cause some increased operation costs (e.g., lower CPUEs, higher PSC rates, longer trip times, etc.)

FISHING VESSEL OWNERS' ASSOCIATION
INCORPORATED
4005 20TH AVE. W., ROOM 232
SEATTLE, WASHINGTON 98199-1290
PHONE (206) 284-4720 • FAX (206) 283-3341

SINCE 1914

AGENDA C-3(a)
SUPPLEMENTAL
MARCH/APRIL 2012

February 28, 2012

Ms. Sarah Melton
North Pacific Fishery Management Council
605 West 4th, Suite 306
Anchorage, AK 99501-2252

RE: ***HAPC for Skate Egg Casings***

Dear Ms. Melton:

I want to thank you for the review of gear restrictions that may be adopted by the North Pacific Fishery Management Council (NPFMC) in order to protect HAPC skate egg casings. I would like to provide you with some comments from some of our longline fishermen that fish in the Bering Sea where these areas are being considered.

The members of the Fishing Vessel Owners' Association (FVOA) that I have talked to concerning these HAPC areas, all participate in halibut and sablefish quota share fishing in the Bering Sea. Proposed HAPC areas Bering 1, Bering 2 and the Bristol areas do not seem to be areas that our halibut and sablefish operations fish near. The Pribilof, Zhemchug, and Pervenets areas would affect the halibut fishermen but not sablefish operations. Our vessels' participation is limited to about 4 months a year in the Bering Sea. Due to winter and spring ice conditions and the migration of halibut in these areas during the late spring and summer, our fishing efforts are usually over by late September.

The interactions of our gear with skate egg casings seem to be random and inconsistent. The few casings that are brought to the surface are often times empty and those that are attached to the groundline and are cleared from the gear seem to be biologically viable.

The North Pacific Fishery Management Council and the Pacific Fishery Management Council have developed a number of papers concerning gear impacts on marine habitat, that skate egg casings might be found in. The following are excerpts from some of the reports prepared by the two Councils dealing with Essential Fish Habitat and Habitat of Particular Concern. The conclusion of the two Councils relative to habitat impact, demonstrates a justification in treating longline and pot gear different from other more

impacting harvesting methods. The following are excerpts from the two Councils regarding Essential Fish Habitat and HAPC.

> "In terms of the major gear types dredges are most impacting, followed by bottom trawls, and these are much more impacting than nets, which are more impacting than pots and hook and line (including longlines)." Appendix C, Part 1 (Impacts Model), Pacific Coast Groundfish EFH FEIS – Pacific Council

The Pacific Council has provided a summary of Habitat Type Sensitivity & Recovery Relative to Fishing Gear. The tables produced by the Pacific Council clearly show that hook and line gear is 4 to 10 times less impacting on various habitat and therefore do not pose a great risk to skate egg casings.

Table 3-1: Summary of Habitat Type Sensitivity and Recovery Relative to Fishing Gear

Habitat Category	Habitat Type	Fishing Gear Type	Sensitivity to Impact (1)	Recovery from Impact (years)
Nearshore Biogenic	Estuarine Macrophyte	Dredge Gear	2.8 - 3.0	2.6 - 5.5
		Bottom Trawl	1.0 - 2.0	1.5 - 4.5
		Nets	0.5 - 1.0	0.5 - 2.0
		Pots and Traps	0 - 0.5	0 - 0.5
		Hook and Line	0 - 0.5	0 - 0.5
	Estuarine Shellfish	Dredge Gear	2.0 - 3.0	2.5 - 5.5
		Bottom Trawl	1.0 - 2.0	1.5 - 4.5
		Nets	0.5 - 1.0	0.5 - 2.0
		Pots and Traps	0 - 0.5	0 - 0.5
		Hook and Line	0 - 0.5	0 - 0.5
Nearshore Unconsolidated Bottom	Soft Bottom	Dredge Gear	1.0 - 1.6	0.2 - 0.6
		Bottom Trawl	0.5 - 1.0	0.1 - 0.3
		Nets	0.0 - 0.5	0.0 - 0.5
		Pots and Traps	0.0 - 0.5	0.0 - 0.5
		Hook and Line	0.0 - 0.5	0.0 - 0.5
Nearshore Hard Bottom	Hard Bottom	Dredge Gear	1.5 - 2.5	1.5 - 2.5
		Bottom Trawl	1.0 - 2.0	1.0 - 2.0
		Nets	0.5 - 1.0	0.5 - 1.0
		Pots and Traps	0 - 0.5	0 - 0.5
		Hook and Line	0 - 0.5	0 - 0.5
Offshore Biogenic	Macrophyte	Dredge Gear	1.4 - 3.0	2.0 - 6.0
		Bottom Trawl	1.0 - 3.0	1.5 - 4.5
		Nets	0.5 - 2.5	0.5 - 2.5
		Pots and Traps	0.3 - 1.3	0.3 - 1.3
		Hook and Line	0.3 - 1.3	0.3 - 1.3
	Shelf Shellfish	Dredge Gear	1.4 - 3.0	2.0 - 6.0
		Bottom Trawl	1.4 - 2.2	1.0 - 3.0
		Nets	0.9 - 1.8	0.5 - 1.5
		Pots and Traps	0.4 - 1.2	0.0 - 0.2
		Hook and Line	0.2 - 1.0	0.2 - 1.0
	Shelf Sponge	Dredge Gear	2.0 - 3.0	2.0 - 3.0
		Bottom Trawl	2.0 - 2.4	1.0 - 1.6
		Nets	0.9 - 1.8	0.5 - 1.5
		Pots and Traps	0.4 - 1.2	0.4 - 1.2
		Hook and Line	0.2 - 1.0	0.2 - 1.0
Offshore Biogenic	Slope Sponge	Dredge Gear	2.5 - 3.0	3.5 - 10.5
		Bottom Trawl	2.5 - 3.0	3.5 - 10.5
		Nets	1.0 - 2.0	2.0 - 8.0
		Pots and Traps	0.5 - 1.0	0.0 - 3.0
		Hook and Line	0.5 - 1.0	0.0 - 3.0

1 * See Appendix 10 to the Risk Assessment for a full description of the methodology for derivation of sensitivity and recovery values.

Habitat Category	Habitat Type	Fishing Gear Type	Sensitivity to Impact	Recovery from Impact (years)
Offshore Biogenic	Shelf Coral	Dredge Gear	2.0 - 3.0	2.0 - 3.0
		Bottom Trawl	2.0 - 3.0	1.0 - 1.6
		Nets	0.5 - 2.5	0.5 - 1.5
		Pots and Traps	0.3 - 1.3	0.4 - 1.2
		Hook and Line	0.3 - 1.3	0.2 - 1.0
	Slope Coral	Dredge Gear	2.5 - 3.0	3.5 - 10.5
		Bottom Trawl	2.0 - 3.0	3.5 - 10.5
		Nets	1.0 - 2.0	2.0 - 8.0
		Pots and Traps	0.5 - 1.0	0.0 - 3.0
		Hook and Line	0.5 - 1.0	0.0 - 3.0
	Ridge	Dredge Gear	2.0 - 3.0	2.0 - 3.0
		Bottom Trawl	2.0 - 3.0	2.0 - 3.0
		Nets	0.5 - 2.5	0.5 - 2.5
		Pots and Traps	0.3 - 1.3	0.3 - 1.3
		Hook and Line	0.3 - 1.3	0.3 - 1.3
	Basin	Dredge Gear	2.0 - 3.0	3.5 - 10.5
		Bottom Trawl	2.0 - 3.0	3.5 - 10.5
		Nets	0.5 - 2.5	2.0 - 8.0
		Pots and Traps	0.3 - 1.3	0.0 - 3.0
		Hook and Line	0.3 - 1.3	0.0 - 3.0
	Continental Rise	Dredge Gear	2.0 - 3.0	3.5 - 10.5
		Bottom Trawl	2.0 - 3.0	3.5 - 10.5
		Nets	0.5 - 2.5	2.0 - 8.0
		Pots and Traps	0.3 - 1.3	0.0 - 3.0
		Hook and Line	0.3 - 1.3	0.0 - 3.0
Offshore Unconsolidated Bottom	Shelf Soft Bottom	Dredge Gear	0.9 - 1.1	0.3 - 0.7
		Bottom Trawl	0.5 - 1.0	0.2 - 0.6
		Nets	0.5 - 1.0	0.1 - 0.5
		Pots and Traps	0.0 - 0.5	0.0 - 0.5
		Hook and Line	0.0 - 0.2	0.0 - 0.2
Offshore Unconsolidated Bottom	Shelf canyons, gullies, and ice-formed features	Dredge Gear	0.9 - 1.1	0.3 - 0.7
		Bottom Trawl	0.5 - 1.0	0.2 - 0.6
		Nets	0.2 - 0.8	0.1 - 0.5
		Pots and Traps	0.0 - 0.5	0.0 - 0.5
		Hook and Line	0.0 - 0.2	0.0 - 0.2
	Ridge	Dredge Gear	0.9 - 1.1	0.9 - 1.1
		Bottom Trawl	0.5 - 1.0	0.5 - 1.0
		Nets	0.8 - 1.6	0.8 - 1.6
		Pots and Traps	0.0 - 0.6	0.0 - 0.6
		Hook and Line	0.0 - 0.6	0.0 - 0.6

Habitat Category	Habitat Type	Fishing Gear Type	Sensitivity to Impact	Recovery from Impact (years)
Offshore Unconsolidated Bottom	Slope canyons, gullies, and ice-formed features	Dredge Gear	1.0 - 2.0	1.0 - 2.0
		Bottom Trawl	0.5 - 1.5	1.0 - 2.0
		Nets	0.3 - 1.0	0.5 - 1.0
		Pots and Traps	0.2 - 0.6	0.2 - 0.6
		Hook and Line	0.1 - 0.3	0.2 - 0.6
	Continental Rise canyons, gullies, and landslide	Dredge Gear	1.0 - 2.0	1.0 - 2.0
		Bottom Trawl	0.5 - 1.5	0.5 - 1.5
		Nets	0.3 - 1.0	0.3 - 1.0
		Pots and Traps	0.2 - 0.6	0.2 - 0.6
		Hook and Line	0.1 - 0.3	0.1 - 0.3
Offshore Hard Bottom	Canyon and ice-formed features	Dredge Gear	1.3 - 2.1	1.0 - 3.0
		Bottom Trawl	2.0 - 3.0	1.0 - 2.0
		Nets	0.8 - 1.6	0.5 - 1.5
		Pots and Traps	0.0 - 0.6	0.0 - 0.5
		Hook and Line	0.0 - 0.6	0.0 - 0.5
	Exposure	Dredge Gear	1.3 - 2.1	1.0 - 3.0
		Bottom Trawl	2.0 - 3.0	1.0 - 2.0
		Nets	0.8 - 1.6	0.5 - 1.5
		Pots and Traps	0.0 - 0.6	0.0 - 0.1
		Hook and Line	0.0 - 0.6	0.0 - 0.5
	Slope canyons, gullies, landslides, and exposures	Dredge Gear	2.5 - 3.0	2.5 - 3.0
		Bottom Trawl	2.5 - 3.0	2.5 - 3.0
		Nets	1.0 - 2.0	1.0 - 2.0
		Pots and Traps	0.5 - 1.0	0.5 - 1.0
		Hook and Line	0.5 - 1.0	0.5 - 1.0
	Basin	Dredge Gear	1.0 - 2.0	2.5 - 3.0
		Bottom Trawl	0.5 - 1.5	2.5 - 3.0
		Nets	0.3 - 1.0	1.0 - 2.0
		Pots and Traps	0.2 - 0.6	0.5 - 1.0
		Hook and Line	0.1 - 0.3	0.5 - 1.0

"Bottom trawling off the Pacific Coast causes long-term, adverse impacts to fish habitat. There is general scientific consensus that bottom trawling has wide ranging effects on habitats and ecosystems. These include:

- **Changes in physical habitat of ecosystems**
- **Changes in biologic structure of ecosystem**
- **Reductions in benthic habitat complexity**
- **Changes in availability of organic matter for microbial food webs**
- **Changes in species composition**
- **Reductions in biodiversity"**

National Research Council, "Effects of Trawling & Dredging on Seafloor Habitat" at 29, Pacific Coast Groundfish EFH FEIS, Page 6.

"In conclusion, it is clear that trawling can impact both the seabed and the benthic community. The extent of these impacts depends on the weight of the gear, the towing speed, the nature of the bottom sediments, and the strengths of tides and currents. Bottom trawl doors leave scars on the seabed that can last for minutes, hours, or years. Trawls can damage benthic organisms, thereby causing changes in community. ..." BSAI Amendment 24 Appendix F, "Impacts on Trawling on Seabed and Benthic Community," Grant Thompson, NOAA/NMFS

Both Councils have established numerous no-trawling areas, which still allow longline and pot gear. The above-cited references clearly suggest that any administrative action establishing or otherwise affecting Habitat of Particular Concern and areas of similar sorts should distinguish among the types of fishing gear with regard to their impact on the habitat. We request that any such action take into consideration, and as a matter of policy, not punish, but reward, fishing gear that demonstrates minimum impact on marine habitat.

Sincerely,

Robert D. Alverson
Manager

RDA:cmb

OCEANA | Protecting The World's Oceans.

175 South Franklin Street, Suite 418 +1.907.586.4050
Juneau, AK 99801 USA www.oceana.org

March 20, 2012

Mr. Eric Olson, Chair
North Pacific Fishery Management Council
605 W. Fourth Avenue, Suite 306
Anchorage, AK 99501-2252

Dr. James Balsiger, Regional Administrator
NOAA Fisheries, Alaska Region
709 West Ninth Street
Juneau, AK 99802-1668

RE: C-3a Skate Nurseries

Dear Mr. Olson, Dr. Balsiger, and Council members:

We continue to be supportive of the Council's efforts to protect Essential Fish Habitat consistent with National Standard 8 of the Magnuson Stevens Fishery Conservation and Management Act. The six skate nursery sites analyzed in the Initial Review Draft EA/RIR/IRFA are clearly Essential Fish Habitat. We support the release of the Initial Review Draft EA and urge the Council to choose ***Alternative 3, Option B: Identify and conserve skate nurseries by prohibiting pelagic trawl, bottom trawl, dinglebar, and dredge gear,*** as the preliminary preferred alternative.

The six skate nursery sites compose a tiny fraction of the area of the Bering Sea. Yet the sites are disproportionately important to skate species for spawning, breeding, and growth to maturity. These small areas are estimated to contain 10% to 20% of the egg cases for the entire BSAI Alaska skate population, and a potentially larger percentage for the Aleutian and Bering skates due to their lower population size[1]. The Draft EA hypothesizes that there are likely not many more additional skate nursery sites.

Due to the limited areal extent of the skate nurseries, it is imperative to consider precautionary management of the essential habitat upon which these skate species rely. Alternative 3, Option B prohibits the gear types that have that have the potential to adversely impact this Essential Fish Habitat and this justly includes "pelagic" trawl gear as it is fished in the Bering Sea.

Estimates of the amount of time a pelagic trawl contacts the seafloor in practice were provided by fishing organizations and used by NMFS in the EFH fishing effects model. Pelagic trawls were estimated to contact the seafloor across some substrates for 44% of the duration of a tow.[2] The BSAI trawl performance standard which defines 'pelagic' trawling is a measure of the number of crabs onboard a vessel at any time. The existing BSAI trawl performance standard is an inadequate control for operation in sensitive EFH and HAPC areas due to the nature of uncertainty in the measure itself:

[1] NPFMC and NMFS. March 2012. Habitat Areas of Particular Concern (HAPC) Areas of Skate Egg Concentration Initial Review Draft Environmental Assessment (EA) /Regulatory Impact Review (RIR) /Initial Regulatory Flexibility Analysis (IRFA)
[2] NMFS. 2005. Final EFH EIS: Appendix B. April 2005

"Because typical pelagic trawls have large mesh webbing in the lower section of the net and are affixed to chain footropes, bycatch enumerated by onboard observers might substantially underestimate the number of demersal fish and invertebrates that are affected because they fall through the large mesh panels instead of being captured by this gear." [3]

Because of this uncertainty, a pelagic trawl footrope could be in contact with the seafloor but not documented by onboard observers if no crabs were retained in the net.

There are 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 basin[4]. 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. This action before the Council is an excellent opportunity to establish some small control areas of the shelf break domain by protecting the proposed skate nurseries.

We support the release of the Initial Review Draft EA and urge the Council to choose ***Alternative 3, Option B: Identify and conserve skate nurseries by prohibiting pelagic trawl, bottom trawl, dinglebar, and dredge gear,*** as the preliminary preferred alternative.

Sincerely,

Jon Warrenchuk
Oceana
Juneau, Alaska

[3] National Research Council. 2002. Effects of Trawling and Dredging on Seafloor Habitat

[4] 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.

PUBLIC TESTIMONY SIGN-UP SHEET

Agenda Item: C-3(a) HAPC Skate Sites

	NAME *(PLEASE PRINT)*	TESTIFYING ON BEHALF OF:
1	Kenny Down	Freezer Longline Coalition
2	Merrick Burden	Marine Conservation Alliance
3	Stephanie Madsen	APA
4	Jackie Dragon	Greenpeace
5	JOHN GAUVIN	AKSC
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

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.

Council Motion
C3(a) Initial Review of HAPC Skate Egg Concentration Sites
March 31, 2012

The Council requests the EA/RIR come back for an additional initial review with the following additions and changes:

1. Add an option under Alternative 2 to have NMFS and industry cooperatively monitor skate egg concentration HAPCs for changes in egg density and other potential effects of fishing.
2. Remove options c and d from Alternative 3.
3. Analysis should evaluate the use of updated VMS technology, such as increased polling rates and geofencing, to monitor activity in and around skate egg concentration sites for feasibility in reducing the extent of boundary closures under Alternative 3 to more closely approximate area boundaries under Alternative 2.
4. Gear description and potential fishery impacts to skate egg concentration sites should be redrafted to reflect current science and technology and to differentiate between survey trawl gear and current commercial trawl gear.
5. Include a description of the methodology used in determining target catch rates in skate egg concentration sites.
6. Include other existing fishery closures that may overlap with identified skate egg concentration sites.
7. Incorporate SSC comments, except for the recommendation to expand the analysis to include discussion of potential disruptions to the spawning activities of skates.

ALASKA BERING SEA CRABBERS

Mark Gleason, Executive Director
5470 Shilshole Ave NW Suite #505
Seattle, WA 98107
(831) 419-6993
markhgleason@gmail.com
http://alaskaberingseacrabbers.org/

Support DP Motion

Date: March 27, 2012

To: Eric A. Olson, Chairman
Chris Oliver, Executive Director
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, Alaska 99501-2252

From: Alaska Bering Sea Crabbers

Re: Agenda item C-3(a), *Initial Review of HAPC Skate Sites*

The Alaska Bering Sea Crabbers ("ABSC") is a 501(c)(6) non-profit, seafood industry trade association representing nearly 70% of the vessels fishing for king, opilio, and tanner crab in the Bering Sea/Aleutian Islands ("BSAI"). As such, we appreciate the opportunity to comment on agenda item C-3(a), *Initial Review of HAPC Skate Sites.* Based on our reading of the *Habitat Areas of Particular Concern (HAPC)/Areas of Skate Egg Concentration Initial Review Draft EA/RIR/IRFA,* developed to inform the Council at its March 2012 meeting, at the absolute minimum ABSC feels that crab pot gear in the Bering Sea should be excluded from any preliminary preferred alternative chosen by the Council.

Before discussing the various alternatives being considered under this action, there are a number of "process" related questions that beg for answers. The first of these has to do with the Purpose & Needs Statement. The P&N Statement (p. 25) mentions that "*Candidate HAPCs must be responsive to the Council priority, must be rare (defined as uncommon habitat that occurs in discrete areas within only one or two Alaska regions)...*" Having said that, according to the *EA/RIR/IRFA* (p. 18) the 8 sites identified on the Eastern Bering Shelf account for only half of the estimated total sites. So the question that must be answered is with an estimated 16 sites across the Bering Shelf, how "uncommon" are the 6 sites proposed for action? And secondly, the discussion of HAPC designation under section 3.4.2.1 is also useful when considering the potential action. The *EA/RIR/IRFA* (p. 29) mentions "*the intent of establishing HAPCs is to highlight areas within EFH of particular ecological importance that are rare and subject to human-induced perturbations. HAPC identification does not, however, connote conservation. The specific intent of HAPC identification is to increase agency and public awareness of fish habitats and features ecologically important or sensitive to disturbance.*" Putting aside the question of rarity once

again, if the purpose of HAPC designation is simply raise awareness and highlight specific ecologically important areas, why is the Council even considering excluding fisheries from the proposed areas? If the Council decides to take any action whatsoever, according to the aforementioned passage it would seem as if Alternative #2 would be the only appropriate alternative to consider.

Moving beyond questions of process, ABSC feels the *EA/RIR/IRFA* makes absolutely no justification for including pot gear in any proposed gear-type prohibitions. Although the updated analysis does not delve deep into pot gear impacts to potential skate HAPC sites, the few references it does make reflect little potential impact from pot gear:

- In discussing the benefits of excluding bottom trawl gear from the proposed sites and comparing the benefits of excluding other gear types, the Executive Summary (p. 4) asserts *"other gear types likely have less potential to impact skate egg cases, so a prohibition on these gears may offer only marginal benefits."*
- Table 15 (p.32) shows no fisheries interactions between crab pot gear and skates at any of the 6 proposed sites.
- Section 3.7.1.5 (p. 51) makes the point that *"pots are considered to be less damaging than mobile gear, because they are stationary in nature, and thus, come into direct contact with a much smaller area of the sea floor. Pots affect habitat when they settle to the bottom and when they are hauled back to the surface."* And (p. 52) *"physical damage from pots is highly dependent on habitat type. Sand and soft sediments are less likely to be affected, whereas reef-building corals, sponges, and gorgonians are more likely to be damaged because of their three-dimensional structure above the sea floor."* Given the photos in Figure 39 (Appendix B, p. 38) and Figure 51 (Appendix B, p. 46) showing skate egg cases on soft, silty bottom, one may correctly assume that crab pot gear would have little, if any impact on skate egg case depositional habitat, given the obvious lack of reef-building corals, sponges, or gorgonians in these photos.
- Section 3.7.2.2 (p. 57) makes no mention of crab pot gear having any impact on skate egg cases. This entire section is devoted to a discussion of the impacts to skate egg cases when bottom trawl gear is towed over an area containing cases.
- Table 20 (p.59) specifically states *"pot gear likely has almost no impact on these skate egg sites."*

The true question that needs to be answered in all of this is what is the motivation for this action in the first place. There is clearly no conservation emergency being addressed by this action. The following passages from the *EA/RIR/IRFA* make this abundantly clear:

- (p. 56)- *"The Alaska skate makes up the vast majority of the skate complex biomass in the BSAI (greater than 90%). An age-structured model exists for Alaska skates, allowing Tier 3 harvest recommendations and the determination of its population status relative to B35% (a proxy for Bmsy). In 2010 female spawning biomass for the Alaska skate was 55,755t, relative to a B35% of 36,846t. Alaska skate spawning biomass is thus substantially greater than the estimated limit of sustainability."*

- (p. 56)- *"...total skate biomass has remained at approximately the same level (with some fluctuation) since a dramatic increase in the mid-1980's."*
- (p. 56)- *"In the case of Alaska skates, survey biomass estimates, though variable, have been basically trendless since species identification began in 1999. Model estimates of spawning biomass have also been basically trendless over the 1992-2011 period covered by the most recent biomass estimation model, while total biomass has tended to increase fairly steadily at an average rate of about 0.7% per year over the same time period."*

So if there is no conservation emergency and skate populations in the BSAI have remained relatively stable given the significant fishing activity that has occurred on a consistent basis since the mid 1980's, the question remains as to why this issue is even coming before the Council at this time. In conclusion, if the Council feels that it must take action on this issue, than Alternative #2 is the only alternative worthy of consideration. I will once again refer to the *EA/RIR/IRFA* (p. 29): *"the intent of establishing HAPCs is to highlight areas within EFH of particular ecological importance that are rare and subject to human-induced perturbations. HAPC identification does not, however, connote conservation. The specific intent of HAPC identification is to increase agency and public awareness of fish habitats and features ecologically important or sensitive to disturbance."* As such, any variation on alternative #3 is not appropriate at this time. Thank you for consideration of our comments.

Sincerely,

Mark Gleason, Executive Director
Alaska Bering Sea Crabbers