

MEMORANDUM

TO: Council, SSC, and AP Members

FROM: Chris Oliver  
Executive Director

*CO*  
*for*

ESTIMATED TIME  
2 HOURS

DATE: January 24, 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.

In 2010, the Council set a habitat priority type—"skate nurseries"—and issued call for proposals in conjunction with completion of the 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 for further analysis. In February 2011, the Council reviewed a discussion paper on identifying and conserving six skate egg concentration HAPC sites in the eastern Bering Sea and adopted a suite of alternatives and options for full analysis. The draft analysis was mailed to you on January 20, and the Executive Summary is attached as Item C-4(b)(1).

At this meeting, the Council will make an initial review of the analysis. The Ecosystem and Enforcement Committees are scheduled to discuss the analysis and will provide recommendations to 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 a 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 for ecological merit, and 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 three alternatives and five options for conservation and management to forward on for full analysis.

Three alternatives for the identification of skate egg concentration HAPCs and five options (a through e) for conservation and management of those HAPCs are analyzed in this EA/RIR/IRFA, and are as follows 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.

### 1.1 Alternatives and Options

#### 1.1.1 Alternative 1: Status quo; no action.

No measures would be taken to identify, or to identify and conserve, skate egg concentration HAPCs.

#### 1.1.2 Alternative 2: Identify skate egg concentration HAPC(s).

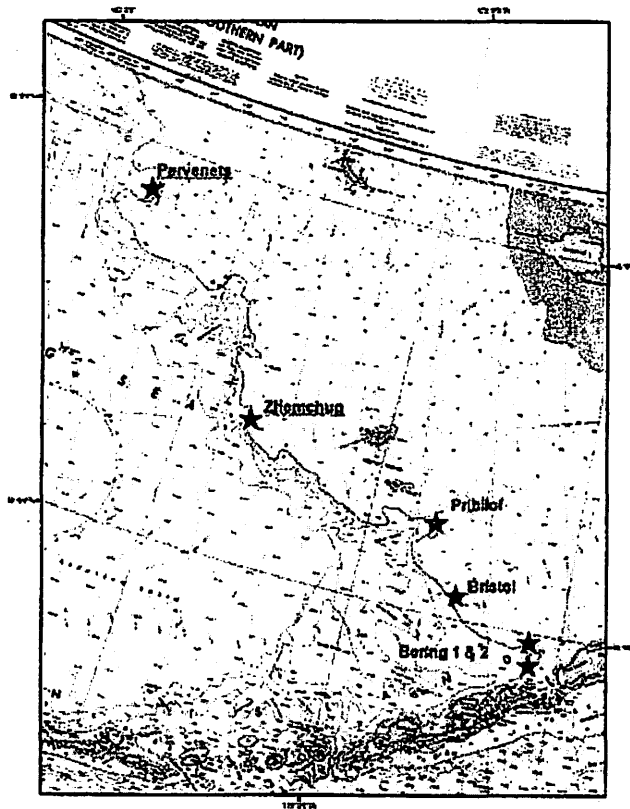
The Council may select individually, severally, or all of the six areas identified as potential skate egg concentration HAPCs.<sup>1</sup>

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<sup>1</sup> 50 C.F.R. 600.815(a)(8).

**Table 1. The six proposed skate egg concentration HAPCs.**

Site name	Predominant skate species	Boundaries of HAPC (°N latitude or °W longitude)				Area of HAPC	
		North	South	West	East	nm <sup>2</sup>	km <sup>2</sup>
1. Bering 1	Alaska	54°53'	54°49'	165°46'	165°38'	18.4	63
2. Bering 2	Aleutian	54°38'	54°33'	165°45'	165°34'	17.5	60
3. Bristol	Bering	55°21'	55°17'	167°40'	167°34'	13.7	47
4. Pribilof	Alaska	56°11'	56°10'	168°28'	168°26'	1.2	4
5. Zhemchug	Alaska	56°57'	56°54'	173°23'	173°21'	3.2	11
6. Pervenets	Alaska, Bering, and Aleutian	59°28'	59°22'	177°43'	177°34'	27.7	95



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

**1.1.3 Alternative 3: Identify and conserve skate egg concentration HAPC(s).**

The Council may select individually, severally, or all of the six areas identified as potential skate egg concentration HAPCs – AND – the Council may select different conservation and management options for any identified skate egg concentration HAPC.

The conservation and management options below may be selected in combination with any skate egg concentration HAPC:

**Option a: Prohibit within skate egg concentration HAPCs the use of “mobile bottom contact”<sup>2</sup> fishing gear: nonpelagic trawl, dredge, and dinglebar gear.**

**Option b: Prohibit within skate egg concentration HAPCs the use of “mobile bottom contact” and pelagic trawl fishing gear: nonpelagic and pelagic trawl, dredge, and dinglebar gear.<sup>3</sup>**

**Option c: Prohibit within skate egg concentration HAPCs the use of “bottom contact”<sup>4</sup> fishing gear: nonpelagic trawl, dredge, dinglebar, pot, and hook and line 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.**

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

**Option e: Add research and monitoring of any area of skate egg concentration to the Council's annual research priority list.**

The Council may identify the research and monitoring of areas of skate egg case concentration as a research priority and incorporate it into the Council's annual research priority list for continuing research, to evaluate skates, skate egg concentration areas, and their ecology and habitat.

## **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. Environmental effects of this proposed action are considered insignificant under all Alternatives. These sites are small and discrete areas, that have had little fishing effort in them in the past, noting that there has been 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 marine mammals, sea birds, and the ecosystem would be considered insignificant. The effects on skates are unknown but would be 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.

Alternative 2 provides some degree of protection for vulnerable benthic skate egg habitat by identifying areas of skate egg concentration as HPACs. Identification of HAPC areas 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 likely are similar in magnitude to Alternative 1 because under Alternative 2, fishing activities are not restricted.

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<sup>2</sup> 50 C.F.R. 679.2.

<sup>3</sup> See 50 C.F.R. 679.2 for the particular and intricate components of “pelagic trawl” fishing gear.

<sup>4</sup> 50 C.F.R. 679.2.

Alternative 3 provides for both the identification of skate egg concentration HAPCs and for the conservation of these areas through prohibitions of gear types that make contact with the sea floor. 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 with low levels of fishing effort. The most costly option (Alternative 3, Option e) would close these six areas to all fishing gears, encompassing a total area of 81.7 nm<sup>2</sup>. Limited impacts to logline 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. 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 are considered insignificant. Analysis suggests that on average, a closure to pelagic and bottom trawling of these sites would result in a maximum foregone catch of \$1,087,071 per year on average. Of this total, pelagic trawling for pollock in the areas would generate a foregone catch of \$791,897 per year, and bottom trawling \$295,174 per year (the total ex-vessel price divided by the nine years (2003-2011) of catch data examined). However, it would be expected that the fleet could make up this foregone catch in other areas, adjacent or elsewhere. Nevertheless, moving the fleet elsewhere to make up foregone catch could cause some increased operation costs and may require vessels to fish outside of their preferred zone.

**HAPC**

Bowers Ridge/Ulm Plateau HCZ

<u>Area nm<sup>2</sup></u>	<u>Gear Restrictions</u>
5,286	No mobile bottom contact gear

<u>HAPC (proposed)</u>	<u>Area nm<sup>2</sup></u>
Skate Nurseries	81.7

Alaska Seamount HPA

5,330 No bottom contact gear

Bering 1 18.4

Dickins 147

Bering 2 17.5

Denson 287

Bristol 13.7

Brown 167

Pribilof 1.2

Welker 162

Zhemchug 3.2

Dall 950

Pervenets 27.7

Quinn 201

Giacomini 164

Kodiak 158

Odessey 210

Patton 94

Chirikof &amp; Marchan 2,248

Sirius 167

Derickson 218

Unimak 129

Bowers 29

GOA Coral HPA

14 No bottom contact gear

Cape Ommaney 0.85

Fairweather A 0.77

Fairweather B 3.20

Fairweather C 7.88

Fairweather D 0.86

HAPC Total

10,630

**Other EFH Areas**

GOA Slope HPA

1,892 No nonpelagic trawl gear

Aleutian Islands HCA

279,114 No nonpelagic trawl gear

Aleutian Islands Corals HPA

112 No bottom contact gear

Arctic

148,393 No commercial fishing

St Matthew HCA

4,110 No nonpelagic trawl gear

St Lawrence HCA

7,033 No nonpelagic trawl gear

Nunivak/Kuskokwim HCA

9,718 No nonpelagic trawl gear

Bering Sea HCA

47,121 No nonpelagic trawl gear

NBSRA

65,559 No nonpelagic trawl gear

EFH Other Subtotal

563,052

Total

573,682