Update to NPFMC Ecosystem Committee on CCC Subcommittee on Area-based Management

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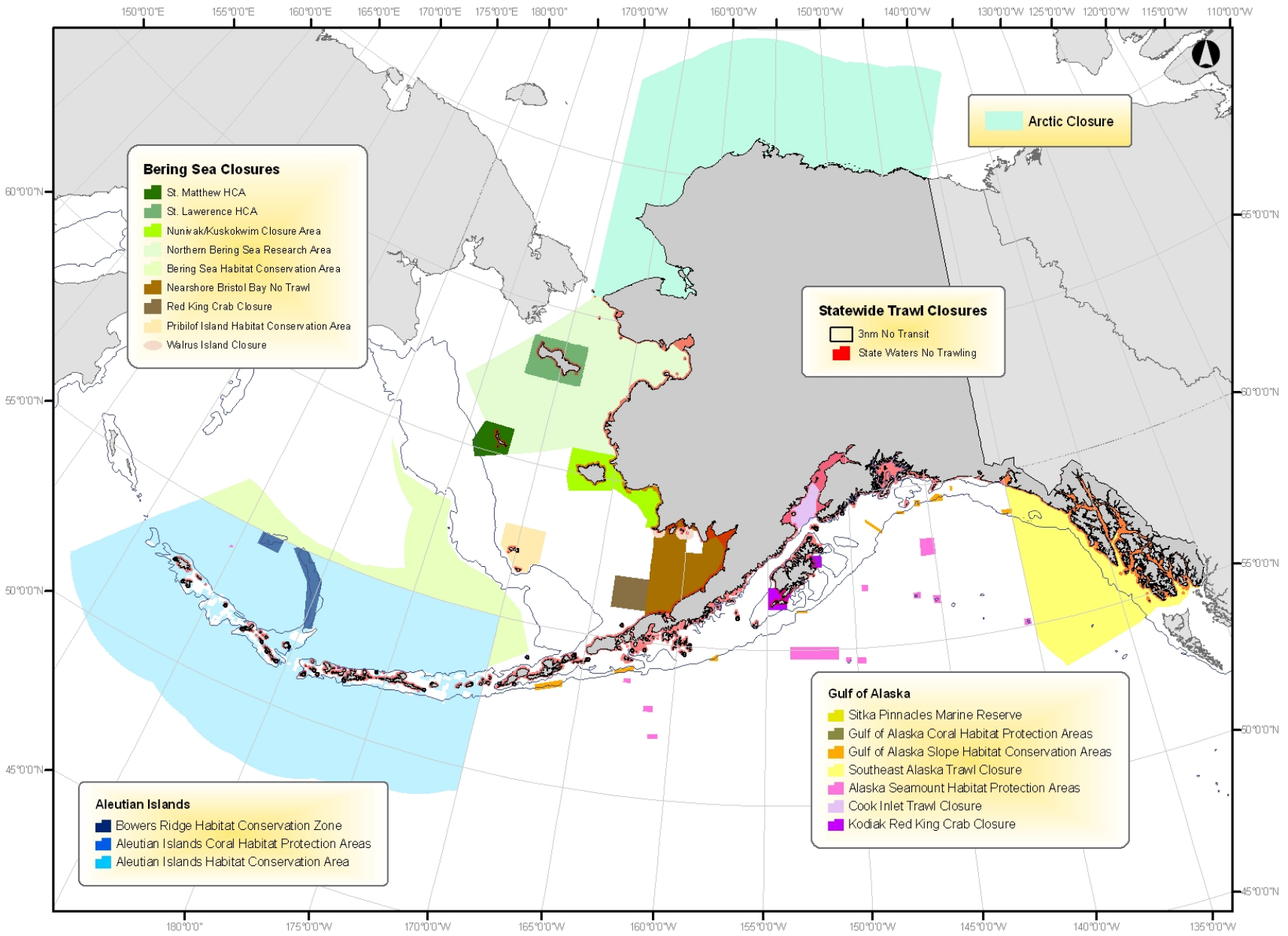

CCC Subcommittee Members

Members:

- Eric Reid, (NEFMC) Chair
- Deirdre Boelke (NEFMC)
- Jessica Coakley (MAFMC)
- Mark Fitchett (WPFMC)
- John Froeschke (GMFMC)
- Kerry Griffin (PFMC)
- Roger Pugliese (SAFMC)
- Miguel Rolon (CFMC)
- Dave Witherell (NPFMC)

With assistance from NOAA Fisheries:

- Heather Sagar
- Tim Haverland
- Michelle Lennox

Terms of Reference (5/2021)

Products and Services (condensed):

1. Assist the CCC with reacting to the 30 by 30 initiative (E.O. 14008 and America the Beautiful Report).

2. Prepare report on Area-based Measures in U.S. EEZ.

   - An evaluation of all existing EEZ fishery area closures relative to the 30 by 30 initiative.
   - A discussion of the pros and cons of area-based management.
   - Objectives and expected benefits of area-based management tool for the diversity of ecosystems under Councils' jurisdictions.

3. Prepare a journal article on area-based measures for marine fisheries in the U.S. (Time permitting)

What is a Conservation Area?

DRAFT WORKING DEFINITION: For the purposes of the CCC Subcommittee report, a conservation area is an established, geographically defined area, with planned management or regulation of activities that provides for the maintenance of biological productivity and biodiversity, ecosystem function and services (including providing recreational opportunities and healthy, sustainable seafood to a diverse range of consumers).

Regional Data Spreadsheets

Each area is described:
Name, Size (nm^2), Year implemented, CFR, Objective, Prohibitions, Application of America the Beautiful principles

Each area is classified by type (objective) and management focus:

1. Ecosystem Conservation
   Focus: Habitat, biodiversity, vulnerable species, special ecosystems
2. Year-round Fisheries Management
   Focus: Mortality reduction, Stock rebuilding, Allocation, Catch Limits, Bycatch concerns
3. Seasonal Fisheries Management Areas and Other
   Focus: PSP closures, seasonal spawning closures, seasonal bycatch reduction measures

Abbreviated Regional Data Tables - Example

Mid Atlantic Region Conservation Areas. **Preliminary Data** Updated October 4, 2021. Size is for individual area, does not account for any overlaps, nor does it remove areas that may extend into or overlap with the New England Region.

Type*	Focus	Area Names (# subareas)	Size (nm^2)	CFR	Prohibitions/Restrictions	ATB Principles Applied
Ecosystem Protection	vulnerable species (corals)	Frank R. Lautenberg Deep-Sea Coral Protection Areas	33,321	50 CFR 648.372	Bottom-tending commercial fishing gear.	1,2,3,5,7,8
Ecosystem Protection	habitat	Tilefish Gear Restricted Areas (4)	133	50 CFR 648.297	Bottom-tending mobile fishing gear.	1,2,3,5,7,8
Year-round Fishery Mgmt.	habitat	Mackerel, Squid, and Butterfish Bottom Trawling Restricted Areas (2)	124	50 CFR 648.23	No permitted mackerel, squid, or butterfish vessel may fish with bottom trawl gear.	1,2,3,5,7,8
Year-round Fishery Mgmt.	habitat	Delaware (4) and New Jersey Special Management Zone Areas for Recreational Fishermen (13)**	23	50 CFR 648.148	No person may fish in the Delaware Special Management Zones except by handline, rod and reel, or spear fishing (including the taking of fish by hand)	1,2,3,5,7,8

VERY Preliminary Results – Number of Conservation Areas
DRAFT as of October 2021

Table 1. Number of Council established conservation areas, by objective* and region, in the U.S. EEZ. Note: All data are preliminary.

Region	Ecosystem Protection	Year-round Fishery Management	Seasonal Fishery Closures or Other	Total # (all areas)
New England	13	4	22	39
Mid Atlantic	5	19	6	30
South Atlantic	163	19	17	199
Caribbean	7	0	0	7
Gulf of Mexico	21	4	10	35
Pacific	76	TBD	20+	96
North Pacific	210	21	6	237
Western Pacific	7	12	1	20
Total	**495**	**79+**	**82+**	**663+**

*Ecosystem Protection Areas are designed to protect habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories.

VERY Preliminary Results – Area Coverage by Objective
DRAFT as of October 2021

Table 2. Regional coverage of conservation areas (nm^2), by objective* and region, in the U.S. EEZ. Note: All data are preliminary.

Region	Total area (nm^2) of U.S. EEZ	Ecosystem Protection	Year-round Fishery Management	Seasonal Fishery Closures or Other	Total % (all areas combined; no overlap)
New England	59,990	TBD	TBD	TBD	43,218 (36%)**
Mid Atlantic	60,125	33,321	23	TBD	TBD
South Atlantic	143,806	20,582	71,682	19,158	TBD
Caribbean	59,982	48	0	0	TBD
Gulf of Mexico	182,738	3,149	57,936	TBD	TBD
Pacific	318,746	282,063	TBD	TBD	TBD
North Pacific	1,025,770	667,445	984,294	52,399	TBD
Western Pacific	1,692,082	947,004	218,352	99,931	1,032,825(61%)
Total	**3,543,239**	**TBD**	**TBD**	**TBD**	**TBD**

*Ecosystem Protection Areas are designed to protect habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories.

** Some conservation areas implemented by the NEFMC are located in the MA portion of the EEZ; therefore, the current percentage value is based on the NE and MA EEZ areas combined. [we may want to present this differently moving forward]

VERY Preliminary Results – Area Closed Year-Round
DRAFT as of October 2021

Table 3. Total area coverage (nm^2) where fishing gear* is prohibited year round, by region, in the U.S. EEZ. Note: All data are preliminary.

		Year-round, Total area (nm^2)			% of Region (no overlap)		
Region	**Total area (nm^2) of U.S. EEZ**	**All bottom tendings gears**	**Bottom trawl or dredge**	**Other gears**	**All bottom tendings gears**	**Bottom trawl or dredge**	**Other gears**
New England	59,990	23,434	N/A	10,031	39.1	N/A	16.7
Mid Atlantic	60,125	33,344	TBD	TBD	55.5	TBD	TBD
South Atlantic	143,806	20,582	TBD	29,899	14.3	TBD	20.79
Caribbean	59,982	48	59,982	N/A	0.1	100.0	N/A
Gulf of Mexico	182,738	1,191	1,488	28,571	0.7	0.8	15.6
Pacific	318,746	1,668	282,063	TBD	0.5	88.5	TBD
North Pacific	1,025,770	153,832	757,047	784,294	15.0	73.8	76.4
Western Pacific	1,692,082	1,692,082	1,692,082	932,894	100.0	100.0	55.1
Total	**3,543,239**	**1,926,181**	**TBD**	**TBD**	**54.4**	**TBD**	**TBD**

*Bottom tending gear means a gear configuration that contacts the seafloor, and includes all mobile bottom tending gear (such as bottom trawls and dredges) and fixed gears (such as pots/traps, or longlines) that sit on bottom. Bottom trawling means trawl gear designed to contact the seafloor (i.e., not pelagic trawls). Dredge gear includes dredge configurations (e.g., scallop and clam toothed or hydraulic gear) that contact the seafloor. Other gears may include those gears not listed above that may impact components of the ecosystem (e.g., pelagic longlines, pelagic gillnets, rod and reel, spears, etc)

Evaluation of Conservation Areas

The CCC ABM Subcommittee developed specific criteria for determining whether an area qualifies as a conservation area per Executive Order 14008 through 4 steps. These relatively straight forward steps incorporate common characteristics and criteria for identification of “other effective area-based conservation measures” (OECMs) as defined by the International Union for Conservation of Nature (IUCN). The criteria also include steps specific to the eight principles of the ATB Report as well as the draft working definition of a conservation area . If an area meets all 4 steps, then it satisfies the requirements of a conservation area

Step 1 Conservation Area Definition	**Does the area meet the working definition for a conservation area?** The criteria are broad and other agency criteria could be substituted [in brackets]. *A conservation area [as defined by the CCC ABM Subcommittee] is an: 1) established, geographically defined area, with 2) planned management or regulation of environmentally adverse fishing activities, that 3) provides for the maintenance of biological productivity and biodiversity, ecosystem function and services (including providing recreational opportunities and healthy, sustainable seafood to a diverse range of consumers).*	If yes, move to Step 2.
Step 2 Governance	**Who makes the management decisions for the area, what is the governance type? Are there clear boundaries? Who is the lead agency? Are multiple entities involved in management of the area? Are there effective means to control activities?** There are various governance types.[1] (Most of the governance types are federal or shared [developed by the Council and implemented by the federal government]. What are the specific boundaries, who is the lead agency and is there adequate enforcement?	If the area has clear boundaries and is managed by a governance body, move to Step 3.
Step 3 Objective / Category	**What is the primary objective of the area?** Conservation areas are developed for numerous reasons. These could include: 1) ecosystem conservation; 2) year-round protection [fishery management]; and 3) seasonal protection [fishery management] or other. Sub-categories for each objective could be identified to further categorize conservation areas.[2]	If the primary objective of the area meets one of the predefined categories, move to Step 4.
Step 4 ATB Principles	**Does the area meet some, ideally most, of the America the Beautiful (ATB) Principles?** Which ones does it meet? (See Table 4 below)	If the area meets some of the ATB Principles (at least 3), the area meets the required criteria of an ATB conservation area.

Table 1 - ATB Conservation Area Worksheet - Aleutian Islands Habitat Conservation Area

General Information	
Area name	Aleutian Islands Habitat Conservation Area
Implementation Action (Year)	2006
Regulations (with link of geographic area defined, if available)	50 CFR 679.22(a)(14)
Size	278,673 nm^2
Number of areas (if applicable)	1
Step 1 – Conservation Area Definition	
Criteria for Step 1	**Detailed explanation**
1a. Established, geographically defined area?	Yes, as detailed in the regulations
1b. Planned management or regulation?	Yes. The area was implemented as Amendment 78 to the Bering Sea and Aleutian Islands Groundfish Fishery Management Plan (FMP)
1c. Provides for the maintenance of biological productivity and biodiversity, ecosystem function and services?	Yes. The area establishes nearly full protection for coral and sponge ecosystems along the Aleutian Islands and deep water basin/trench areas.
Step 2 – Defining Governance	
Criteria for Step 2	**Detailed explanation**
2a. What is the governance type (federal government, shared or collaborative governance, private governance, or indigenous and local communities)?	The area is implemented through Federal Government regulations.
2b. Are the boundaries clear and well understood?	This is an irregularly shaped area; boundaries are described in regulations and maps
2c. Who is the lead Agency?	NOAA Fisheries
2d. Are there multiple entities involved in management of the area? If so, which ones?	No
2e. Is enforcement of the area adequate?	Yes. The USCG and NOAA enforce the area, and report on enforcement activities at each council meeting
Step 3 – Category/Objective	
Criteria for Step 3	**Detailed explanation**
3a. For fishery conservation areas, three categories are recommended; which one best describes the candidate area best? 1) ecosystem conservation; 2) year-round fishery management; or 3) seasonal fishery management / other.	Ecosystem conservation
3b. Which sub-category best describes the candidate area? For ecosystem conservation there are 4 sub-categories (habitat, vulnerable species, vulnerable ecosystem, biodiversity). For year-round/ seasonal fishery management or other areas there are 4 sub-categories (bycatch, spawning, allocation, other).	Habitat
Step 4 – America the Beautiful Principles	
Criteria for Step 4	**Detailed explanation**
4a. Does the area meet at least 3 of the America the Beautiful principles? Which ones?	Yes. Principles 1,2,5,7,8
1. Pursue a Collaborative and Inclusive Approach to Conservation	*This area fully meets this principle*. The area established using collaboration and consensus-building, where people have worked together to conserve the health and productivity of marine resources
2. Conserve America's Lands and Waters for the Benefit of All People	*This area fully meets this principle*. The area provides conservation of a relatively undisturbed natural place that yields meaningful benefits to all Americans.
3. Support Locally Led and Locally Designed Conservation Efforts	Although the area was not developed using locally led or locally designed conservation efforts, it does reflect regional priorities in the North Pacific and seeks to achieve balanced stewardship across the region.
4. Honor Tribal Sovereignty and Support the Priorities of Tribal Nations	Although the area was not established specifically to honor Tribal sovereignty, treaty and subsistence rights, and religious practices, it does advance the priorities of Alaska Natives (specifically Unangax peoples from the Tribal communities of Atka and Akutan on the Aleutian Islands) regarding the conservation of natural, cultural, and historical resources and enhances subsistence and economic opportunities in the region.
5. Pursue Conservation and Restoration Approaches that Create Jobs and Support Healthy Communities	*This area fully meets this principle*. Establishment of this area creates jobs, support productive fisheries and vibrant working waterfronts for the local communities of Atka and Akutan, and for

	fishing communities located outside of the area (e.g., Unalaska). Thus, the area enhances the economy, address environmental justice, and improves the quality of life for those involved in the fisheries that remain open.
6. Honor Private Property Rights and Support the Voluntary Stewardship Efforts of Private Landowners and Fishers	While not the focus of the development of this area, voluntary conservation efforts of fishermen were taken into account in designing the area, as all areas that had not received much fishing effort were included in the conservation area.
7. Use Science as a Guide	*This area fully meets this principle*. The area established based on the best available science and informed by the recommendations of scientists at the Alaska Fisheries Science Center and the Scientific and Statistical Committee. All information used to evaluate the area was transparent and accessible to the public through the EIS. Indigenous and Traditional Ecological Knowledge would have been considered if available.
8. Build on Existing Tools and Strategies with an Emphasis on Flexibility and Adaptive Approaches	*This area fully meets this principle.* The area developed using the regional fishery management council stakeholder-driven processes. Because the area is developed by the Council and implemented through the NOAA Fisheries regulatory process, the area flexible, innovative in its approach, and can be readily adaptive to adjust to a changing climate, shifting pressures, and new science.

*Table 2 – Effectiveness checklist for ATB conservation areas - **Aleutian Islands Habitat Conservation Area***

ATB Area Name	Aleutian Islands Habitat Conservation Area
ATB Area ID	NP1
Number of areas (if applicable)	=

Elements of Effectiveness	**Description of Effectiveness Elements**	**Yes/ No/ Uncertain**	**Rationale**	**If "no" for effectiveness, specific action that could be taken to improve conservation benefits**
1. What supports conservation?	Are there limitations or prohibitions on fishing activities or gear use in this area that support conservation objectives? Describe how these measures apply.	YES	Bottom trawling is prohibited in this area. The use of this gear in the area was fully evaluated through an Environmental Impact Statement, and a prohibition on this gear type was determined to have the greatest positive effects on biodiversity in the AI, as this area supports relatively high densities of deep-sea corals, sponges, other epifauna, and associated ecosystem components. The prohibition would also prevent impacts to the undisturbed sediments and ecosystems of the deeper basin areas. There is a very limited amount of fishing with pot gear for golden king crab and a limited amount of longlining for Pacific cod, halibut, and sablefish (and potentially a very limited amount of pelagic trawling for pollock) in the area. At these low harvest levels, the fisheries	

			that remain open would not be expected have any significant impact on biodiversity.	
2. Other activities	Are other activities with potentially negative impacts on conservation prohibited within the area (e.g., mining, dumping, anchoring, oil and gas extraction, offshore energy activity, etc.)? If some are allowed within the area, are they limited? Are any activities anticipated to occur in the area in the near future (i.e., next 5 years) that are important to flag?	NO	The only other activity with potentially negative impacts on conservation that occurs in the area is cargo shipping. As one of the shortest routes between North American and Asian ports, the North Pacific Great Circle Route crosses through the Aleutian Islands.	
3. Enforceability	Is the overall enforcement of the area effective? What are the enforcement approaches and specific [fishery] monitoring tools used for enforcement, who is responsible for enforcement, are there enforcement partnerships?	YES	The area is enforced by the USCG and NOAA. All vessels fishing for cod or pollock have VMS, and all vessels have observer coverage that collect location data to detect violations.	
4. Climate Change Resiliency	Can the conservation area adapt; is it resilient to climate change? Is the governance process nimble enough to adapt to uncertainty in an era of climate change? Can the area be modified relatively easily to incorporate new science?	YES	The area can be readily adaptive to climate change and new science through the relatively nimble Council process. The Council slightly adjusted the boundaries of this area once (Amendment 88) to incorporate new information. The regulations to adjust the boundaries became effective in 2008.	
5. Stakeholder participation / Collaboration	Is there general support for the conservation area by regulated participants, other stakeholders, tribal or local communities, and regulators? Was the area developed in a collaborative way, is there overall support that the conservation area is effective and meeting objectives?	YES	This area was developed with input from regulated participants and had the full support from fishing and environmental organizations. There is strong buy-in that the conservation area is effective at protecting vulnerable habitats and ecosystems.	
6. Research/biological monitoring/restoration	Are there any biological monitoring programs in place now or when the area was adopted? Are any research programs planned to evaluate the conservation area in the short-term or long-term? Are there specific restoration efforts taking place or planned for the area?	YES	NOAA Fisheries regularly surveys the area to understand changes in habitat and fish composition and productivity. The AI region is fully evaluated annually through the AI Ecosystem Status Report - https://apps-afsc.fisheries.noaa.gov/Plan_Team/2021/Alecosys.pdf	
7. Public access	Are there opportunities for the public to access the conservation area for recreational opportunities? Are there specific programs in place to promote equitable access to the outdoors?	NO	The Aleutian Islands is expansive and very remote, and extremely costly for the public to get to. And once there (assuming one flies into Adak), there are no boat rental facilities to access the area.	
8. Other elements of effectiveness	Are there other details about this conservation area that make it more, or less effective in terms of meeting conservation objectives? Are there aspects about the management program in this area that are important to note that are not captured in the topics above?	MORE	This conservation area lies along the remote and expansive Archipelago, and receives only very minor fishing effort from vessels using pots or longlines. The Aleutian Islands are also part of the Alaska Maritime National Wildlife Refuge.	

Next Steps for the ABM Subcommittee

- Continue to refine regional spreadsheets and summary tables
- Finish area evaluations
- Complete regional maps and conservation area calculations (additional GIS staff resources needed)
- Finalize draft written report for May CCC meeting
- Continue to coordinate with NOAA Fisheries on Atlas database
- Support the CCC on the development of any position statements on this issue
- If time permits, draft journal article on use of area-based management in US fisheries management and conservation