



Mid-Atlantic Fishery Management Council

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MEMORANDUM

Date: August 2, 2012
To: Ecosystems and Ocean Planning Committee
From: Kiley Dancy
Subject: August Council Meeting

The Ecosystems and Ocean Planning Committee will meet Tuesday, August 14 from 9:00 - 11:00 a.m. to discuss deep sea coral actions. There are two agenda items:

- 1) Discuss how to proceed with initiation of a deep sea corals amendment.

In April, the Council voted to initiate a plan amendment to protect deep sea corals from fishery impacts. Attached, please find a background document outlining the current status of deep sea coral protections and potential management approaches for the Mid-Atlantic Council. The Committee will need to discuss which plan will be the most appropriate for a corals amendment, as well as the preferred approach for coral protections.

- 2) Review and discuss draft Memorandum of Understanding (attached) between the Mid-Atlantic, New England, and South Atlantic Councils regarding coordination on deep sea corals issues.

Deep Sea Coral Information Document

MAFMC Ecosystems and Ocean Planning Committee

August 14, 2012

Introduction

Deep sea corals are fragile and slow-growing, and as such are highly vulnerable to disturbance by bottom-tending fishing gear. Bottom otter trawls pose a particular threat to deep sea coral communities, causing negative impacts ranging from scarring and damage to complete removal and destruction. Although other gear types have a lower potential for disturbance, mid-water trawls may also impact corals during periodic contact with the bottom, and passive gear types such as pots and longlines may cause localized damage to corals.

The NOAA Strategic Plan for Deep-Sea Coral and Sponge Ecosystems contains conservation and management objectives to be achieved in cooperation with the Councils and other federal partners. Several objectives of this plan are directly relevant to Council activities, including:

1. Protect areas containing known deep-sea coral or sponge communities from impacts of bottom-tending fishing gear.
2. Protect areas that may support deep-sea coral and sponge communities where mobile bottom-tending fishing gear has not been used recently, as a precautionary measure.
3. Develop regional approaches to further reduce interactions between fishing gear and deep-sea corals and sponges.

The Mid-Atlantic Fishery Management Council has voted to initiate management measures to protect deep sea corals from fishery impacts. This document is intended to provide an overview of Council authority to protect deep sea corals, current and ongoing deep sea coral protection efforts, and possible approaches to deep sea coral protections in the Mid-Atlantic.

Deep Sea Coral Biology and Distribution

Several types of deep sea corals are found in the northwest Atlantic, including hard or stony corals, black corals, gorgonians and soft corals, and sea pens. Deep sea corals, also known as cold-water corals, are typically found at depths greater than 50 meters, on the continental shelf and slopes, in offshore canyons, and near seamounts. Cold-water corals do not require sunlight, and most do not possess the symbiotic algae (zooxanthellae) that is typical in shallow water corals. Although large, reef-building corals are rare in the Northeast region, many species form complex three-dimensional structures that enhance local biodiversity by providing important habitat for many species of fish and invertebrates.

Available data describing the distribution of deep sea corals is typically presence-only, with limited and patchy spatial and temporal coverage. The origins of such data are variable; the USGS Cold Water Coral Geographic Database contains records of deep sea corals from scientific literature, government reports, museum collections, and other databases. This database has been updated by NOAA's Deep Sea Coral Research and Technology Program, which was established by the reauthorized MSA in order to identify research on and known locations of deep sea corals, and to provide this information to the Councils.

Additionally, there are ongoing research efforts and recent data from the Northeast Fisheries Science Center and their research partners that will help to identify and prioritize protection areas for deep sea corals.

Magnuson-Stevens Act Authority to Protect Deep Sea Corals

In addition to the National Marine Sanctuaries Act, NOAA has identified the Magnuson-Stevens Act (MSA) as the primary source of authority for protection of deep sea corals. There are several provisions of the reauthorized MSA that could be used to protect deep sea corals:

- ***Essential Fish Habitat Authority***

Section 305(b) of the MSA requires the Councils to describe Essential Fish Habitat (EFH) and to “minimize to the extent practicable adverse effects on such habitat caused by fishing.” Using this authority, the Council could designate deep sea corals as a component of EFH, or otherwise designate EFH in areas where management measures such as fishing restrictions or time/area closures would have the effect of protecting corals.

- ***Discretionary Authority to Designate Deep Sea Coral Zones***

Section 303(b)(2)(b) of the reauthorized MSA gives the Councils discretionary authority to designate zones where fishing may be restricted in order to protect deep sea corals from physical damage caused by fishing gear, or to prevent loss or damage to such gear. Management measures applied to such zones may include restrictions on the location and timing of fishing activity, restrictions limiting fishing to specified vessel types, gear restrictions, and zones closed to fishing.

Deep sea coral zones must be identified using information provided by NOAA’s Deep Sea Coral Research and Technology Program (as established in section 408 of the reauthorized MSA), and may include areas beyond known coral locations, if necessary, to ensure effectiveness. However, these zones must have a “nexus to a fishery managed by the Councils under an FMP,” and must be located within the geographical range of the fishery as described in that FMP. Management measures can be applied to any MSA-regulated fishing activity within the geographical range of the fishery, even to activity or gears that are not used in the fishery managed under the FMP.

- ***Bycatch Authority***

Because corals are included in the MSA definition of “fish,” Section 301(a)(9) of the MSA could be used to justify management measures to minimize bycatch of deep sea corals.

These types of authority could be used together or separately to protect deep sea corals, however, the discretionary authority may allow for the greatest flexibility in designating areas for protection. The distribution of deep sea corals (both documented and inferred) extends well beyond the boundaries of current EFH designations, particularly in deeper areas. Additionally, although structure-forming deep sea corals are known to provide important habitat for many fish species, using discretionary authority would not rely on making this case explicitly. However, it should be noted that while federal agencies are required to consult with NMFS on activities that may adversely affect EFH, such consultations would not

be required under the discretionary authority. Thus, designation of EFH or HAPCs in coral areas may be worthwhile even if coral zones are designated via discretionary provisions.

Current Council Approaches to Deep Sea Coral Protections

New England Fishery Management Council

The New England Council has previously extended protections to some deep sea coral communities by designating Lydonia and Oceanographer Canyons as EFH closures under Amendment 2 to the Monkfish FMP, restricting fishing activity with monkfish gear in these areas. Additionally, some of the other groundfish and habitat closed areas managed by NEFMC protect deep sea corals by eliminating the impacts of gears capable of catching groundfish, although these are generally in shallower waters which likely contain fewer deep sea corals.

In 2008, the NEFMC began incorporating coral protection measures into the ongoing development of their EFH Omnibus Amendment 2. This amendment includes updated designations of EFH and Habitat Areas of Particular Concern (HAPCs), as well as systematic estimates of impacts to EFH. Although EFH authority has been used to designate several HAPCs in canyons and on seamounts with the intention of protecting deep sea corals, most of the coral protection measures in this amendment are being developed using the discretionary authority to designate coral zones.

In developing recommendations for such zones, the NEFMC Habitat Plan Development Team has taken the approach of developing frameworks for both “broad” and “discrete” zones that may have different management measures applied to them:

- **Broad Coral Protection Zones**

The NEFMC is considering designation of broad coral zones which would include large areas of the slope and shelf. These zones would include all areas seaward of a particular depth contour (the 300, 400, and 500 m contours are under consideration), extending to the 200-mile limit of the EEZ. In addition to protecting hardbottom habitat and structure-forming corals, these areas would also include large areas of soft bottom habitat suitable for sea pens. As currently proposed, these zones are outside the bounds of most current fishing effort, and are intended to prevent effort from expanding into deepwater coral areas.

- **Discrete Coral Protection Zones**

Discrete coral zones would encompass smaller, specific areas of known or likely deep sea coral habitat, such as particular canyons and seamounts. Because available coral presence data does not represent a census of all areas of conservation interest, the NEFMC Habitat PDT has recommended several potential discrete coral zones based on an evaluation of both: 1) areas of known coral presence and 2) areas of likely suitable habitat based on bathymetric and geological data.

Broad and discrete coral zones could overlap in some areas, and could have the same or different management measures applied to them. A range of management options restricting or modifying fishing

operations could be implemented in both types of zones. These include restrictions on bottom-tending gears, restrictions on mobile bottom-tending gears, and authorized exemptions to these restrictions.

The New England Council has chosen to prioritize protection of those deep sea corals that require hard substrates, as well as large, structurally complex corals, due to the increased vulnerability of these types to fishing impacts.

As of June 2012, the NEFMC is considering splitting deep sea corals alternatives off of EFH Omnibus Amendment 2 and into a separate omnibus amendment, and is currently seeking public comments on this issue. It has been suggested that doing so would potentially facilitate discussion and coordination of MAFMC and NEFMC coral measures.

South Atlantic Fishery Management Council

The South Atlantic Council has taken a different approach to coral protection, having developed an FMP for Coral and Coral Reefs in 1982. Now known as the Coral, Coral Reef, and Live/Hardbottom Habitat Plan, this plan has since expanded to cover virtually all hardbottom habitats and associated resources.

Deepwater coral HAPCs have been integrated into the Fishery Ecosystem Plan and Comprehensive Ecosystem-Based Amendments 1 and 2 (CE-BA 1 and 2). Effective July 2010, CE-BA 1 established Deepwater Coral HAPCs with fishing restrictions that include prohibitions on all bottom damaging gear including bottom longlines, trawls, dredges, pots, traps, anchors, anchors and chains, or grapple and chains. This amendment also includes provisions for special access areas within the Coral HAPCs for the golden crab and royal red shrimp fisheries.

Mid-Atlantic Fishery Management Council

In the mid-Atlantic region, Amendment 1 to the Tilefish FMP currently protects some deep sea corals via mobile bottom tending gear restrictions in four canyons: Lydonia, Oceanographer, Veatch, and Norfolk. Because these are gear-based restrictions, they affect fisheries managed by both the New England and the Mid-Atlantic Councils. These restricted areas, based on tilefish HAPCs, are toward the heads of the canyons and are intended to protect clay outcrop habitats between 100 and 300 meters depth. Lydonia and Oceanographer Canyons were also closed to the squid, mackerel, and butterfish fishery in 2008 via Amendment 9 to that FMP.

In April of 2012, the Mid-Atlantic Council voted to develop deep sea coral protection measures via a plan amendment, as well as to develop a Memorandum of Understanding with the New England Fishery Management Council and the South Atlantic Fishery Management Council to coordinate deep sea coral protections.

Management Options for Deep Sea Coral Protections in the Mid-Atlantic

The NEFMC had previously approved a range of coral protection alternatives which included broad coral zones extending as far south as the VA/NC border south of Norfolk Canyon. After the Mid-Atlantic Council voted to develop deep sea coral protection measures of their own, the NEFMC Habitat Plan Development Team updated their range of potential coral zones based on the assumption that the Mid-Atlantic Council will develop measures for areas south of Alvin Canyon.

Given that the New England Council has already completed a large amount of technical work analyzing coral presence and suitable habitat for the entire northeast region, the Mid-Atlantic Council will already have a technical basis for identifying deep sea coral areas regardless of the approach used. The Mid-Atlantic Council could take a similar approach to that of New England, and could use or adapt their recommendations for broad and/or discrete coral zones within the MAFMC jurisdiction. Alternatively, the Mid-Atlantic Council could adopt a different strategy, using some combination of the MSA authorities as described above. Either approach could include some of the following management measures, all of which are currently being considered by the New England Council:

- EFH designation, or EFH/HAPC designation, within deep sea coral areas
- Fishing restrictions in designated coral zones
 - Restrict/prohibit use of bottom-tending gears
 - Restrict/prohibit use of mobile bottom-tending gears
 - Restrict/prohibit all fishing gear use (irrespective of type)
- Access options in designated coral zones
 - Exempted fisheries
 - Access options for special access fisheries, exploratory fishing, and/or research
 - Could include:
 - Permit requirements
 - Additional reporting requirements
 - Spatial restrictions
 - Effort restrictions
 - Observer coverage requirements
 - Move-along provision if corals are caught
 - Other restrictions/requirements
- Framework provisions for deep sea coral zones
 - To change fishing restrictions
 - To change exemption fishery requirements
 - Would not include ability to set or modify coral zone boundaries

The Mid-Atlantic Council will need to address which Fishery Management Plan would be the most appropriate to amend with deep sea coral management measures, given the preferred approach.

Memorandum of Understanding

In addition to initiating a deep sea corals amendment, the MAFMC has voted to develop a Memorandum of Understanding between the three Atlantic coast Councils in order to coordinate broad scale coral management efforts. Developing a Memorandum of Understanding will help to identify areas of consensus and common strategy for coral conservation and minimization of fishery impacts to deep sea corals. The MOU will also clarify geographic areas of responsibility within the northeast shelf/slope region.

**DRAFT Memorandum of Understanding
Regarding the Management of Deep Sea Corals**

Between

New England Fishery Management Council

Mid-Atlantic Fishery Management Council

South Atlantic Fishery Management Council

A. Purpose

The purposes of this Memorandum of Understanding are: 1) to establish a framework for coordination and cooperation toward the mitigation of fishery impacts on deep sea corals; and 2) to clarify each Council's role and geographic areas of authority and responsibility with regard to deep sea coral management.

B. Background

Deep sea corals are typically found at depths greater than 50 meters on the continental shelf and slopes, in offshores canyons, and near seamounts. Many of these species form complex three-dimensional structures that provide important habitat for many species of fish and invertebrates, enhancing local biodiversity. Because these corals are fragile and slow-growing, they are particularly vulnerable to disturbance from certain types of fishing gear.

Deep sea corals are present within the jurisdictional boundaries of the three parties to this agreement: the New England Fishery Management Council (NEFMC), the Mid-Atlantic Fishery Management Council (MAFMC), and the South Atlantic Fishery Management Council (SAFMC) (collectively, the Councils). Each of these Councils has previously taken or is currently taking actions to protect deep sea corals from the impacts of fishing gear. Because such management actions may affect fisheries operating in more than one Council jurisdiction, the Councils recognize the need for communication and broad-scale coordination regarding measures to protect deep sea coral resources.

C. Authority and strategies for deep sea coral protections

The Magnuson-Stevens Fishery Conservation and Management Act (MSA)¹ is the main source of authority under which the Regional Fishery Management Councils may take action to protect deep sea corals from fishery impacts. The SAFMC currently has management and conservation measures in place for deep sea corals; the NEFMC and the MAFMC will each continue development of management measures to protect corals within their regions while preserving current and future fishing opportunities. These measures may differ between the Councils, and may include some combination of the following:

¹ Magnuson-Stevens Fishery Conservation and Management Act (MSA), portions retained plus revisions made by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSRA).

- Designation of coral protection zones based on the discretionary authority described in Section 303(b)(2)(b) of the MSRA. These zones could possibly include:
 - Large precautionary areas based on a freeze-the-footprint approach
 - Enhanced protections in areas known to or expected to contain high concentrations of corals
- Designation of deep sea corals as a component of Essential Fish Habitat or as Habitat Areas of Particular Concern
- Minimizing bycatch of deep sea coral species
- Special access programs to provide for continued fishing in or near coral areas for specific fisheries or gear types
- Exploratory fishing programs to allow for future development of new fisheries in a way that protects corals

D. Council boundaries and geographic areas of responsibility

Each Council will be responsible for the mitigation of fishery impacts to deep sea corals within the boundary of their Council region, as defined in 50 CFR 600.105. The NEFMC-MAFMC boundary begins at the point of intersection of Connecticut, Rhode Island, and New York (41°18'16.249" N. lat. and 71°54'28.477" W. long.). From this point, the boundary line extends in a southeasterly direction, heading 37°22'32.75" east of due south to the point of intersection with the outer boundary of the EEZ. The SAFMC-MAFMC boundary begins at the seaward boundary of Virginia and North Carolina (36°33'01.0" N. lat.), and extends due east to the point of intersection with the outer boundary of the EEZ.

E. Council coordination on deep sea corals issues

1. The Councils will seek continuity between coral-related management measures in all three Council regions, especially where there are fisheries that overlap between regions. This may include:
 - Consideration of similar management alternatives in fishery management plans for adjacent regions.
 - Consideration of fishery overlap and engagement of stakeholders outside of the management region in the development of management measures.
2. The Councils will also share data and information to improve current and future decision making:
 - Encourage data collection to support coral management.
 - Share coral data, fishing effort data, and GIS resources related to development of management measures.
3. The Councils will contribute to coordinated management efforts in the following ways:
 - The NEFMC will share Habitat Plan Development Team work products related to Mid-Atlantic canyon and slope areas with MAFMC staff.
 - MAFMC staff and/or the MAFMC liaison will attend NEFMC Habitat PDT and Oversight Committee meetings relevant to corals.

- The SAFMC will advise the NEFMC and the MAFMC on coral issues based on past experiences and lessons learned.

F. No agency

Each entity signing this MOU is acting as an independent contractor. No party to this MOU is intended to have or is granted by any other part any authority or control over the other party, nor shall any party have the power to bind any other party. Each party will be responsible for bear the costs incurred in performing any activity contemplated hereunder.

G. Funding

Cooperative activities under this MOU shall be subject to the availability of funds and personnel. This MOU shall not be used to obligate or commit funds.

H. Effective date and signature

The terms of this MOU are agreed to and are effective from the date of the last signature below. This MOU may be terminated at any time by any Party for any reason by written notice to the non-terminating Parties.

By:

For and on behalf of NEFMC:

Signature: _____ Date _____

For and on behalf of MAFMC:

Signature: _____ Date _____

For and on behalf of SAFMC:

Signature: _____ Date _____