



Mid-Atlantic Fishery Management Council
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MEMORANDUM

DATE: June 1, 2016

TO: Ecosystem and Ocean Planning (EOP) Committee

FROM: Jessica Coakley, Staff and George Lapointe, Contractor

SUBJECT: Draft Policy on Fishing Impacts that Impact Habitat and Other Committee Updates

The following materials are enclosed for the Committee to consider:

- 1) Summary of the May 11 EOP Advisory Panel (AP) Meeting
- 2) Draft Policy – Fishing Impacts on Habitat
- 3) Questions for EOP Committee Discussion
- 4) Proposal for Council Policy - Prepared by EOP AP member Joseph Gordon, and supported by EOP members Brad Sewell, Fred Akers, and Pam Lyons-Gromen
- 5) Essential Fish Habitat Review Action Plan
- 6) Update on Regional Habitat Activities from GARFO (attachments in online materials only)

MAFMC EOP AP meeting notes
11 May 2016

Attendees:

Fred Akers, Great Egg Harbor Watershed Association
Bonnie Brady, Long Island Commercial Fishermen's Association
Jessica Coakley, MAFMC staff
Greg DiDomenico, Garden State Seafood Association
Warren Elliott, MAFMC member, Chair of EOP Committee
Joseph Gordon, Pew Charitable Trust
Monty Hawkins, Charter captain
Jeff Kaelin, MAFMC member, EOP Committee member
David Kaplan, VIMS
Lauren Latchford, NMFS Habitat Div.
Meghan Lapp, Seafreeze Ltd
George Lapointe, MAFMC contractor
Terra Lederhouse, NMFS Habitat Div.
Peter Moore, MARACOOS
Purcie Bennet-Nickerson, Pew Charitable Trust
Brad Sewell, Natural Resources Defense Council
David Stevenson, NMFS GARFO
David Wallace, David Wallace and Associates
Judith Weis, Rutgers Univ.

Meeting Notes:

1) Introductions

George Lapointe introduced himself as facilitator of the Fishing Impact on Habitat Policy development process. AP members and other attendees introduced themselves.

George Lapointe discussed how the EOP AP and Committee got to where we are today; to advance development of a Council policy on the impact of fishing gear on habitat. AP members were reminded that policies are not management actions, rather they set forth guidelines and principles from which action oriented measures can be developed by Council Committees and the Council. Others added that the policy needed to support future management actions to be useful. Other AP members also added that the policy can be used as a link to funding and research priorities.

He asked if there were any additions to the draft agenda. Some AP members tabled a proposed draft policy for the AP's consideration (Attached – Prepared by Joseph Gordon). There was not consensus on using this document as a substitute for the draft policy document.

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2) Discussion topics regarding draft fishing impacts policy

The first discussion topic was the separation of historically fished areas from other areas, called Frontier Fishing areas and historically fished areas in the draft policy document. Also discussed were how different areas and degree of use could be mapped and defined.

Historically fished versus unlisted areas – questions of how you would map this and define this. Nearshore, offshore, and I fished (I.e., corals areas)

Some AP members thought that calling areas fished versus unfished has too much fishing focus, and not enough habitat focus. Others thought that having the labels may not have value for the draft policy and suggested making the definition less of a centerpiece of the document. They thought that there are areas that should be a priority for protection and, accordingly, the policy should be more oriented to the habitats.

There was discussion about a balance between detail and talking about guiding principles, and that the policy should consider areas that are unfished be treated differently than areas that are fished. Other AP members replied that this is the intention of the draft document with “frontier fishing areas” and areas that have historically been fished.

Some AP members expressed concerns about the implications of the policy that the Council should keep in mind. This includes:

- The sea is greening (eutrophying) and abundance of fish is changing. In this direction, we could lock up offshore fishing because of the policy.
- Shifting environment over time. A lightly fished area may not be important in the future, or may be more important to current fisheries as fish move to adapt to changing ocean conditions.
- The fishing impact policy may impose more restrictions on fishermen, in addition to restrictions imposed by the forage fish amendment.
- The cumulative impact of various habitat and ecosystem actions, e.g. forage fish amendment, coral protection, on ability of fishermen to fish in a changing environment.

Some AP members felt that we need to understand what the spatial implications of this type of policy might be. Others noted that the purpose of the draft policy and the AP is not to draw maps and define areas. Rather, the draft policy should craft high-level recommendations that other Council committees can use to formulate specific fishery management measures. Others thought that there was some value to having principles that can be applied across all the plans and guide general management approaches. For example, having a different approach to lightly fished area allows for a more proactive approach because there are not jobs on the line.

The AP discussed the various essential fish habitat (EFH) efforts that would take place in the next few years, in part to establish an EFH baseline. The Council is conducting a 5-year review of EFH, as required by law. The Council will conduct an EFH review that will begin with a scientific

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review process which may take a couple of years. This should result in improved mapping of fish habitat and fishing activities.

One AP member thought that the proposed policy is like an architectural drawing of a building that has burned down because bottom habitat has been lost and therefore the landscape has changed substantially from what it was historically. The information on what habitats have been lost could be used to conduct habitat restoration, a concept that shouldn't be overlooked in the Council's habitat efforts.

Some AP members suggested that the Council do the EFH work first before working on the Fishing Impact on Habitat Policy. For example, we don't know where fluke habitat is, so where does fishing interact with fluke nursery habitat. Is trawling occurring in SAV beds? The AP discussed that the Fishing Impacts on Habitat Policy will not close areas to protect fluke habitat but perhaps the policy should consider the vulnerability of habitats because this is an important issue.

Some AP members think that the impact of decreasing vessels and effort in the fishing fleet is a mitigating factor on fishing impacts on habitat; reducing effort may be a way of mitigating fishing impacts on habitat. There has already been an enormous reduction in fishing participants and communities have been negatively impacted. One AP member said that past trawling heavily impacted the bottom, removing all growth in fished areas, but that this type of impact hasn't been seen in a number of years. The objective of the draft policy cannot be putting people out of business. An open minded discussion is needed in how to protect habitat and the fishermen and communities that rely on them.

AP members mentioned that the NEFMC did an evaluation of the habitat vulnerability first (using SASI model) and then looked at the sensitivity of those habitats to specific gear types. Think policy should acknowledge that MSA requires you to minimize impacts on habitat. Finding balance between protecting areas that are heavily fished versus lightly fished. The NEFMC Habitat Committee spent much time with their advisors on impacts of fishing on habitat. This included are there areas other than spawning aggregations, and whether fishing should not be allowed in complex habitats. There is a difficult balance of effort versus the amount of coverage by a given gear. AP members noted that the habitat in the Mid-Atlantic is less complex than in New England which makes the job of habitat protection easier because "you don't have to protect every rock."

Some AP members thought that the draft policy should concentrate on lightly fished areas because there is more "more bang for your buck" from the lightly fished areas. There is a reason that some areas are heavily fished, i.e. the most productive areas are probably the most highly fished.

Another AP member stated that there seems to be consensus on discussion on the inclusion of more habitat protection in the policy, beyond what has been done so far with coral protection and non-fishing impacts. The fishing and non-fishing breakdown is more about where to target

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how to improve the situation. They added that there's been a suggestion that impacts must be proven before acting but there are legal requirements and potential biological implications which suggest actions to minimize impacts and improve the situation vis a vis habitat impacts from fishing activity.

The AP discussed what is happening with respect to EFH. Staff indicated that the EFH review and designations are all required by law. The Council's EFH actions will be for the science folks to put together available information and then look to provide this information the Council with their policy. Think there are a set of things that the Council can articulate in advance.

GARFO staff went over the EFH strategic plan highlights which are to maintain sustainable fisheries, ecosystems, and habitat in the mid-Atlantic. The strategic plan at <http://www.greateratlantic.fisheries.noaa.gov/habitat/garfohcdstrategicplan.pdf> contains the following sections:

- 1.0 Introduction
- 2.0 Strategic Planning Process
- 3.0 Implementation
- 4.0 Habitat Conservation Division Mission and Goals
- 5.0 Strategic Plan – Habitat Conservation Division Administration
- 6.0 Strategic Plan – Northern Subregions
 - 6.2 Southern New England
 - 6.3 Long Island Sound
 - 6.4 New York Bight
 - 6.4 Upper Chesapeake Bay (double numbering in strategic plan)
 - 6.5 Lower Chesapeake Bay
 - 6.6 Offshore, Outer Continental Shelf

Note – each of these sub-region sections contains the following sections:

- a. Priority Habitats and Associated Species
- b. Potential Threats to Habitat
- c. Habitat Goal for Sub-region

Links to the strategic plan to describe the foundation for what ends up in the policy. The first step is to identify what habitats need a higher level of protection.

Some AP members felt that the mapping of habitat is an important component of habitat protection in the Mid-Atlantic, i.e. without better habitat mapping, managing to minimize impacts of fishing gear on habitat will be limited.

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Specific suggestions on draft document (attached)

1) Include preamble or language regarding EFH and MSA language pertinent to habitat protection

Some AP members thought that the draft policy document should include language referring to Essential Fish Habitat (EFH) and sections of the Magnuson-Stevens Act (MSA) relevant to habitat protection. Some AP members thought that the preamble should include what is required by laws and guidelines.

There was not opposition to this idea but some reservations were expressed about how broad this come become and that specific language in an introduction or preamble would been to be carefully crafted.

2) Want the non-fishing and fishing impact policies to be different

Because the non-fishing impact policy is externally oriented, giving Council policies to other organization and efforts, and the fishing impact policy is internally oriented, giving direction to the Council and Committees as they work on fishery management issues.

3) Policy adaptation for changing conditions

Some AP members felt that it is important for the policy to be able to adapt to changing conditions in the Mid-Atlantic region, including habitat changes and changes in fish abundance and distribution.

4) Separation of frontier from historically fished areas.

Replace 5 (Frontier Fishing Areas) and 6 (Historically Fished Areas) with “any areas”.

Some AP members thought that the distinction between no or light fishing and heavier fishing in an area is an important distinction to retain. Others thought that the distinction was a proxy for good (little or no fishing) and bad (heavier fishing) which raises the issues of what management actions are needed to address the different types of impacts. Others thought that the dichotomy between fished and unfished is too stark, creating boxes or lines where they might not be needed.

There was consensus to look for other terms than “frontier” and “historically fished”. One member suggested “impacted” and “un-impacted” habitat designations.

Some AP members said that the labels might make sense but delineating the different areas would be impossible because of lack of mapping based on whatever criteria, fished vs. non-fished, historically fished vs not historically fished, was included in the policy.

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Other AP members thought the distinction should be what areas need higher levels of protection from fishing impacts.

5) Include state waters or apply only to federal waters

There was consensus to recommend inclusion of state waters in the draft policy because (1) it is an important part of the habitat for many Council managed fisheries, and (2) it would promote a dialogue on important nearshore habitat issues with state managers and other Councils.

Advocate for state waters and other areas to be included in the policy - would advocate for the Council to include that so it can have dialogue with state managers, and other Councils.

6) Inclusion of specific habitat types of concern

The AP discussed whether to include specific habitat types, such as methane seeps, hard bottom, or clay bank areas, in the policy.

The consensus was to refer to unique habitat types as examples but not necessarily to drive down the policy to individual, unique habitat types.

7) Seasonal Habitat Protection

The AP discussed whether to include seasonal habitat protection in the draft policy. Some AP members favored discussion of seasonal aspects of habitat use and opportunities to mitigate impacts. There was discussion about the need to separate seasonal measures to protect habitat versus seasonal measures to protect fish. If policies are included addressing seasonal habitat protection measures, the policy should be kept at a high level and leave the specifics to Council species / fisheries committees.

Some AP members thought that an analysis of seasonal protections including seasonal and time/area closures should be included in the draft to help inform fishery management decisions to reduce impacts on habitat (Joe Gordon Language). It was noted that this type of analysis is often not prioritized.

Some AP members thought that if seasonal protections are included in the policy, they should be segregated into single event, versus short term and long term impacts.

8) Include forage fish as habitat impacted by fishing?

Some AP members thought that forage fish should be included as habitat to be considered for "impacts of fishing activities" under the draft policy. They said this was because forage fish is considered a habitat component in MSA.

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Other AP members said that the draft fishing impacts on habitat policy did not need to include forage fish as habitat because the Council is addressing forage fish in a separate process, similar to what was done by the Council with coral protection measures.

9) Include ghost fishing gear?

The AP discussed the merit of including lost or ghost gear in the fishing impacts on habitat policy. Some AP members thought that ghost gear is an issue in some areas. They thought that this included two components. First, encouraging policies that prevent gear loss or incentivize gear retention. The second component is encouraging policies for making gear biodegradable and for biodegradable escape panels or vents (where appropriate).

Some AP members thought that marine debris is a major issue and that fishing gear is a minor component of the marine debris discussion.

There was discussion that ghost fishing gear is an issue mortality causing habitat, suggesting that the overall topic be retained. This could be through incentives to best practices with respect to ghost gear or using the policy as a way of the Council supporting initiatives and funding to remove ghost gear and other debris.

10) Include gear modifications?

AP members expressed a variety of views on whether to include gear modifications as an option for mitigating fishery impacts on habitat. Some AP members argues for excluding gear modification because the process for modifying gear correctly is slow, expensive, and very technical which requires expertise that most AP and Council members do not have. They added that many “top down” driven gear modifications are not effective or practical for the fishery to use all the time.

Other AP members thought that gear modification to protect habitat could be a tool that should be retained as an option in the Fishing Impacts policy. They added that inclusion of gear modification in the policy could be used to support gear research and to incentivize gear and methods that minimizes habitat impacts. They also thought that gear modification as an option for Committees and PDTs to discuss would provide a mitigation option for consideration, e.g. choosing a gear modification option over area closures.

There was general agreement that we all want gear to have the lowest impact on habitat as possible.

11) Background document on different gear types

Staff noted that there was much discussion about how the background document should be modified to accurately describe different types fishing gear, both generally and specific to the Mid-Atlantic region. Because the document isn't needed to draft the Fishing Impacts policy

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document, it was suggested that the AP recommend setting the document aside given that the draft policy is general in nature and specific gear descriptions are more suited to action by specific FMP Committees, PDTs and APs as they consider how to incorporate the policy in future actions.

There is general agreement that the background document is not necessarily needed to consider the policy discussion and would be a distraction.

12) Other Issues discussed by AP members

- a. The Fishing Impact Policy should
 - i. Support future actions to be useful.
 - ii. Not be too prescriptive. We can't freeze or accurately predict the future
- b. Habitat improvement or restoration

Some AP members felt that habitat improvement or restoration were important concepts for the Council to incorporate in future actions. They thought that much damage has been done to habitat and that restoration could be an important tool to make habitat better rather than just reducing current and future impacts

- c. Outreach and education about EFH

Some AP members think that the Council consider doing more education and outreach about EFH because many people do not understand the connection between healthy habitat and healthy fisheries. They added that there was extensive outreach done on the deep sea corals and people collectively supported the effort because they understood it. They thought that it would be beneficial to connect people to habitat.

- d. Background documents on fishing impacts on habitat

Some AP members expressed concern about the background information and scientific studies used to document fishing impacts on habitat. They said that many of the studies were old, occurred in areas not representative of conditions in the Mid-Atlantic, and had sample sizes that were too small to draw conclusions from.

Other AP members thought that the background information and scientific studies were robust enough to draw conclusions from and from which to develop the Fishing Impacts on Habitat Policy.

Council Fish Habitat Policies – Preamble

Fish require healthy surroundings to survive and reproduce. A fish’s habitat is a combination of physical factors, such as water temperature and bottom type, chemical factors such as oxygen levels and dissolved minerals, and biological and ecological characteristics such as prey and forage. Many species of fish have different habitat requirements for each life stage (i.e., egg, larvae, juvenile, adult). Habitat plays an essential role in the reproduction, growth, and sustainability of commercial and recreational fisheries and is essential to the biodiversity of marine and coastal ecosystems.

Human activities have significantly altered coastal and marine habitat over time. A variety of factors have contributed to the degradation or destruction of fish habitat, including coastal development, land-based pollution, fishing gear impacts, invasive species, dams and other blockages that restrict the movement of migratory fish species, and changes in the volume and delivery of freshwater to estuaries. In addition, climate change and growing demands for new energy sources have the potential to cause wide-ranging impacts on fish habitat. Given the continued population growth and development in coastal areas, these pressures on coastal and marine habitats are expected to increase in the future. Also, it is important to note that once habitat is damaged or lost, it is difficult and costly to recover.

The Mid-Atlantic Fishery Management Council is responsible for the management of marine fisheries in the Exclusive Economic Zone. The Council develops management plans and management measures for fourteen species of fish and shellfish. Most of the Council’s managed resources have strong nearshore and coastal linkages to habitat, and in many cases the nearshore and offshore environment for these managed resources is a continuum.

Fish stocks cannot be managed sustainably in the absence of a healthy marine ecosystem, and healthy fish habitat, which starts inland with freshwater stream and river inputs, and continues offshore to the outer continental shelf of the US Atlantic. Anthropogenic activities and projects within the Greater Atlantic region (i.e. Northeast region, including the Mid-Atlantic and New England waters) have the potential to impact the productivity of the Council’s managed fishery resources¹, other federally-managed fish resources², state-managed fish resources³, and the forage on which these fish rely. In addition, many of these activities have the potential to impact species protected under the Endangered Species Act and Marine Mammal Protection Act⁴, such as marine mammals and sea turtles.

¹ Mid-Atlantic Council managed stocks: Atlantic mackerel, black sea bass, Atlantic bluefish, butterfish, shortfin squid (*Illex*), longfin squid (*Loligo*), ocean quahogs, scup, spiny dogfish, summer flounder, Atlantic surfclams, golden tilefish, and monkfish.

² Other Federally-managed fish stocks: American lobster, Atlantic herring, Atlantic salmon, Atlantic sea scallop, Atlantic sturgeon, shortnose sturgeon, red crab, river herrings, skates, whiting and other hakes, cod, haddock, yellowtail flounder, pollock, plaice, witch flounder, white hake, windowpane flounder, Atlantic halibut, winter flounder, redfish, Atlantic wolffish, and ocean pout (<http://www.nefmc.org>), highly migratory species such as tunas, sharks, swordfishes, and billfishes (<http://www.nmfs.noaa.gov/sfa/hms/>), as well as other southern Atlantic fish species (<http://www.safmc.net>).

³ For lists of state managed fish stocks, see <http://www.asmf.org>.

⁴ For lists of protected resources, see: <http://www.nmfs.noaa.gov/pr/species/index.htm>.

Draft – Fishing Impacts on Habitat Policy 25 May 2016 – Draft

The Council has the ability to address impacts of fishing gear and practices on fish habitat through management of fisheries under its jurisdiction, and through cooperative management for fishing activities and practices under the jurisdiction of other management organizations. The National Marine Fisheries Service (NMFS) and the Council have the ability to regulate fishing activities that reduce habitat quantity and function through the fishery management plan development, amendment, and regulatory process. However, the application of this authority to protect habitat from fishing activities is a difficult and complex task which requires quantification of habitat impacts by fishing gear, identification of habitats needing protection, and development of practical, targeted management actions that will achieve the desired habitat protection objective while simultaneously minimizing negative impacts on the region's fisheries.

The Council's implementation of Ecosystem Approaches to Fisheries Management (EAFM) is comprised of a number of components which are intended to be complementary and not redundant to each other. This includes the following components:

- Policies on Non-Fishing Activities and Projects that Impact Fish Habitat
- Deep Sea Corals Amendment to the Mackerel, Squid, and Butterfish Fishery Management Plan (FMP)
- Unmanaged Forage Fish amendment
- Other actions?
- Policy on fishing gear and activities that impact fish habitat

This policy applies to managing the impact of fishing on sensitive benthic habitat areas.

The following principles guided the development of these policies:

1. Take an ecosystem approach, which includes consideration of benthic communities and habitat, and their linkages within the ecosystem, is fundamental to the sustainable use of our marine resources.
2. To ensure healthy and productive marine ecosystems, it is imperative that the impacts of fishing in sensitive benthic habitats be considered in fisheries management decision making.
3. Sustainable use that safeguards ecological processes is a priority of fisheries management decision making.
4. Not all benthic areas require equal levels of protection, as not all areas are equally ecologically or biologically significant or vulnerable to particular fishing gear or practices.

Draft – Fishing Impacts on Habitat Policy 25 May 2016 – Draft

To support these overarching principles, the Council’s policy direction on fishing impacts on habitat is focused in three areas:

- 1) Actions that apply to all areas of the marine ecosystem
- 2) Actions that apply to areas of the marine ecosystem where there is a history of significant fishing; this includes ongoing fishing activity
- 3) Actions that apply to areas of the marine ecosystem where there is little or no history of fishing. In the Mid-Atlantic this includes deep areas of Outer Continental Shelf

There is a higher level of scientific uncertainty about benthic habitat and its associated communities in areas of little or no fishing areas as contrasted with areas of significant fishing.

Policies that apply to all areas of the marine ecosystem

1. The Council will consider measures which avoid or reduce the potential for lost gear, or “ghost gear”, should be considered in fishery management plans, where practicable.
2. The Council will consider fishing gear modifications or substitutions which reduce the impacts on benthic habitats should be considered in fishery management plans, where practicable. It is understood that gear modifications are complex, costly, and require much testing. This policy should be used to promote and incentivize gear research identified as having the potential to minimize the impacts of fishing gear on marine ecosystem habitat.
3. The Council will consider measures that apply to all areas of a species habitat use.
4. The Council will consider measures that apply seasonally or temporarily to minimize the impacts of fishing gear or practices on habitat for a particular species or fishery

Policies that apply to areas of the marine ecosystem where there is a history of significant fishing; this includes ongoing fishing activity

1. The Council will identify benthic areas and high productivity areas that may be more at risk than others within areas of significant fishing activity, and prioritize the work and fisheries management actions that may be required to mitigate or avoid harm. This will include consideration of the cumulative impacts of all fisheries and fisheries gears on Mid-Atlantic fish benthic habitat through fishing gear impact analyses.
2. Evaluate the effectiveness of existing fisheries management measure for minimizing fish habitat impacts, and determine whether changes are required.

Draft – Fishing Impacts on Habitat Policy 25 May 2016 – Draft

3. Implement management measures across fishery management plans that may reduce impacts on benthic habitat. For example, efficiencies in the fisheries such as trip limits, or other existing measures impact the time gear may spend on the seabed.

Policies that apply to areas of the marine ecosystem where there is little or no history of fishing. In the Mid-Atlantic this includes deep areas of Outer Continental Shelf

1. In areas of little or no history of fishing, the Council will evaluate the expansion of existing or new fisheries or new fishing gears for potential impacts to benthic habitats, and determine the sensitivity of these areas to the proposed fishing activity.

Questions for EOP Committee members about Fishing Impacts on Habitat Policy development

1) Term to differentiate fished vs. less fished areas?

The terms used to describe areas based on the relative amount of fishing that has taken place, or is taking place, are important but the policy development process has not brought forth terms that are clear and get agreement from AP members.

Among the terms discussed are:

- a) Historically fished areas – frontier fishing areas
- b) Fished areas – unfished areas
- c) Areas with significant fishing – areas with little or no fishing
- d) Other designations

2) Include state waters in the policy?

The AP recommended that state waters be included in the policy because of the importance of estuarine and nearshore habitats for Council managed species. The AP did acknowledge the difficulties that could arise by addressing fishery impacts on habitat in state waters.

Given that the policy includes principles for habitat protection as compared with specific actions on individual fisheries, the policy objective for including state waters would be that habitat protection should consider all areas important to a particular fishery.

3) Include temporary habitat protections in the policy?

The AP discussed including temporary habitat protections in the policy to address habitats that are important seasonally such as spawning or juvenile habitats.

4) Include habitat restoration in the policy?

Some AP members felt that habitat restoration should be included as a component of the fishing impacts policy, using examples of oyster reefs and “harder” bottom areas such as exposed peat banks that have been impacted by fishing but could be restored to provide significant fishery and ecological benefits.

Fishing Impacts to Essential Fish Habitat
Proposal for Council Policy

Prepared by EOP AP member Joseph Gordon and supported by EOP members Brad Sewell, Fred Akers, and Pam Lyons-Gromen

Preamble

Marine habitats provide fish with shelter, food, and places to grow and reproduce. Habitat includes more than just structures; it describes a combination of physical factors, such as water temperature and bottom type, chemical factors such as oxygen levels and dissolved minerals, and biological and ecological characteristics such as forage and trophic interactions. Many species of fish have different habitat requirements for each life stage (i.e., egg, larvae, juvenile, adult). Habitat plays an essential role in the sustainability of commercial and recreational fish populations and is essential to the biodiversity of marine and coastal ecosystems.

The relationship between the integrity of habitat and the health of wild animal populations is indisputable. Habitat loss through degradation is prominent among factors leading to the impacts to species' populations and consequently is a key focus of the Magnuson-Stevens Fishery Conservation and Management Act (MSA).¹ Over time, fishing activities and fishing gear have impacted our ocean ecosystems, sensitive benthic habitat, spawning areas, juvenile fish habitat, species age structures, biodiversity, species interactions, and predator prey interactions. As a result, ecosystem function and fisheries productivity have been impaired. These fishing impacts are compounded by a variety of other anthropogenic impacts that have contributed to the degradation or destruction of fish habitat, including coastal development, offshore energy development, land-based pollution, invasive species, dams and other blockages that restrict the movement of migratory fish species, and changes in the volume and delivery of freshwater to estuaries. In addition, climate change is causing wide-ranging impacts on the suitability fish habitat for certain species through increases in water temperature and acidity. Once habitat is damaged it can be difficult and costly to recover.

The MSA recognizes the loss or degradation of marine and estuarine habitat as a significant and long-term threat to ocean ecosystems and sustainable U.S. fisheries. The MSA defines Essential Fish Habitat (EFH) in broad terms that are fundamentally grounded in ecological science and oriented toward species needs, requiring that the Council's EFH management efforts focus on "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity."² The term "substrate" is further defined in the MSA's implementing regulations to include "sediment, hard bottom, structures underlying the waters, and associated biological communities."³

The MSA requires NOAA Fisheries and regional councils to develop and implement fishery management plans that, to the extent practicable, minimize adverse effects caused by fishing to Essential Fish Habitat in the marine environment.⁴ This includes places where young fish can

¹ 16 U.S.C. §§ 1801-1884 (2007).

² 16 U.S.C. § 1802 (10).

³ 50 CFR § 600.10.

⁴ 16 U.S.C. § 1853(a)(7): Every fishery management plan must "describe and identify essential fish habitat for the fishery . . . and minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat."

find refuge, food, and other conditions promoting growth to maturity and successful spawning, and the places where spawning fish aggregate. All of these key aspects of the behavioral ecology of fish must be considered when developing EFH policy.

The Mid-Atlantic Fishery Management Council is responsible for the management of marine fisheries in the U.S. Exclusive Economic Zone (EEZ) off the coasts of New York, New Jersey, Delaware, Maryland, Virginia and North Carolina. The Council develops management plans and management measures for fourteen species of fish and shellfish. Most of the Council's managed resources have strong nearshore and coastal linkages to habitat.

The following principles and policies apply to managing adverse effects on Essential Fish Habitat including Habitat Areas of Particular Concern:

Ecosystem Based Management:

1. Take an ecosystem approach when describing and identifying EFH, which includes consideration of communities, habitat, and their linkages within the ecosystem that are fundamental to the sustainable use of our marine resources.
2. Evaluate and manage for impacts of climate change to EFH when making fishery management decisions. This evaluation should include climate change impacts to spawning habitat, forage species, sensitive benthic habitats, juvenile fish habitat, and alterations in species' range and interactions. Provide stronger protections and buffers for habitats that are sensitive/vulnerable to climate change and disturbance.
3. Comprehensively evaluate individual and cumulative impacts from fishing and other anthropogenic and natural damage to EFH. Specifically consider impacts to sensitive benthic habitat, spawning grounds, forage, and other essential fish habitat elements.
4. Protect and enhance habitat, biological diversity, trophic interactions, and the physical, biological, and chemical elements of the ecosystem that support its overall stability.
5. Understand and manage for the overlap of gears, habitats, species, and fisheries, and consider the impacts of each decision on the others.
6. Protect essential forage needed for feeding and growth of managed species. The MSA clearly identifies feeding and growth as essential elements of EFH. With few exceptions, the relevant food sources are animal populations such as small fish, crustaceans, mollusks and other benthic invertebrates. These populations occupy places in the water column and on the bottom. Habitat that provides food and promotes growth to maturity of these food resources must be conserved as an element of EFH for managed species.
7. Account for and protect from both long-term and short-term adverse effects on habitat related to management decisions.

Describe, Identify, Conservation and Enhance EFH:

8. Ensure healthy and productive marine ecosystem habitats by identifying and describing (mapping) EFH, identifying potential impacts to EFH, and ensure conservation by minimizing adverse impacts to EFH as required by the MSA.

9. Engage in consultations with federal and state government agencies regarding non-fishing anthropogenic actions that may adversely impact EFH. Under the MSA the Council may comment and make recommendations to the Secretary of any Federal or State agency considering any activity that, in the view of the Council, may affect the EFH of a fishery resource under its authority. The Council should engage in federal actions authorizing release of pollutants, construction, dredging, or other anthropogenic actions that may adversely impact EFH to ensure conservation of EFH.
10. Protect shallow and deep coral habitats and sensitive soft-bottom habitats from adverse impacts associated with fishing and fishing gear.
11. Require best practices in anchoring, particularly in sensitive habitats.
12. Evaluate and mitigate single vessel impacts, fishery-wide impacts, and fishery-wide cumulative adverse impacts on EFH.
13. Consider time/area closure alternatives in all management actions like quota setting.
14. Use tools to ensure adequate abundance and availability of forage. Some potential tools to consider are time, area, and age class protections, migration corridor protections, and protection of nurseries of forage for managed species. The availability of adequate prey is necessary to protect the “feeding” and “growth to maturity” aspects of EFH under the MSA.
15. Evaluate fishing impacts on EFH of species managed by the MAFMC that are caused by fisheries not managed by the MAFMC.
16. Implement cautious management in the face of uncertainty. In a shifting climate it is difficult to determine biological, ecological, and economic value of habitat. Creating climate buffers and other precautionary management measures is necessary where unpredictable systemic ecosystem changes can cause unknown adverse impacts to species and habitat.
17. Restore EFH that has already been impacted by fishing and other anthropogenic causes.
18. Develop a habitat protection and restoration plan for managed species with quantitative and measurable goals.
19. A **historically fished area** is a marine ecosystem area where there is a history of fishing; this may include ongoing fishing activity.
 - a. The Council will identify through the Habitat Area of Particular Concern identification process benthic areas and high productivity areas that may be more at risk than others within historically fished areas, and prioritize the work and fisheries management actions that may be required to mitigate or avoid harm. This will include consideration of the cumulative impacts of all fisheries and fisheries gears on Mid-Atlantic fish benthic habitat through fishing gear impact analyses.
 - b. Evaluate the effectiveness of existing fisheries management measures for minimizing fish habitat impacts, and determine whether changes are required.

- c. Implement management measures across fishery management plans that may reduce impacts on benthic habitat.

20. An **unfished area** is an area of the marine ecosystem where there is limited or no history of fishing. In the Mid-Atlantic this includes deep areas of the Outer Continental Shelf. There is a higher level of scientific uncertainty about benthic habitat and its associated communities in unfished areas than within historically fished areas.

- a. Within the Council's "deep sea coral zones", areas where corals have been observed or where they are likely to occur, fishermen will be prohibited from using bottom-tending fishing gear such as trawls, dredges, bottom longlines, and traps. Large swaths of the area in these coral zones are areas that have experienced little or no previous fishing impacts.
- b. The Council will prohibit the expansion of existing or new fisheries or new fishing gears into unfished areas for potential impacts to benthic habitats, until it has determined the sensitivity of these areas to the proposed fishing activity and adopted management measures to minimize those impacts.

Habitat Areas of Particular Concern:

21. Designate and protect Habitat Areas of Particular Concern (HAPCs) for all managed species. HAPCs are discrete areas within EFH that have importance for ecological function, particular sensitivity, stress from human activity, and rarity.

22. Create HAPCs that:

- a. Protect habitats that are difficult to restore. Many habitats (like corals) take a long time to recover from damage. The council should proactively protect sensitive benthic habitat and not rely on potential restoration after negative impacts.
- b. Minimize adverse impacts of fishing in sensitive benthic habitats in fisheries management decision making. Regarding the MSA requirement to minimize adverse effects on EFH to the extent practicable, the phrase "to the extent practicable" does not mean that *any* economic impact makes minimization impracticable. In considering the economic impact, the value of habitat protection (e.g., spawning habitat, nursery habitat, and forage habitat) must also be considered in the analysis.
- c. Ensure heightened protections for areas of particular sensitivity. Different habitats have different ecological and biological significance and vulnerability to particular stressors. Manage to ensure heightened protections for all sensitive benthic habitats.
- d. Ensure heightened protections for areas of ecological significance to managed species including spawning, and nursery habitat areas that, because of their importance to species survival and healthy ecosystems need increased safeguards from degradation.

Fishing Gear:

23. Implement measures which avoid or reduce the potential for lost gear, or “ghost gear” in fishery management plans.
24. Implement fishing gear modifications or substitutions which reduce the impacts on benthic habitats in fishery management plans. Gear should have the lowest impact possible.
25. Incentivize less damaging gear and techniques to reduce the ecological footprint of fisheries analogous to the living shorelines policy.

Research and EFH Updates:

26. Enhance habitat research by establishing a network of Dedicated Habitat Research Areas (DHRAs), including reference areas protected from all fishing and other local human disturbance. These areas are essential elements of adaptive and Ecosystem-Based Fishery Management (EBFM).
27. Use the Best Scientific Information Available, consistent with NS2 and the EFH Guidelines when describing, identifying, enhancing, and conserving EFH.
28. Implement a 5-year review of all EFH, as required in the EFH regulations.
29. Carefully review any and all scientific information on EFH that had become available since the last review and ensure that description and identification of EFH is consistent with the any new scientific information. Update and augment EFH conservation measures as necessary to ensure compliance with the Best Available Science.

Public input:

30. Fully inform the public of all EFH 5-year review processes, and allow for public comment and input.
31. Ensure open informed decisions with public input where gear or habitat priorities conflict, like when fisheries overlap in space and time.
32. Fully inform the public of gear and fishing adverse impacts to sensitive benthic habitat including corals, and allow for the opportunity for public comment and input.
33. Fully inform the public of all consultations with the federal government for all anthropogenic adverse impacts to EFH and allow the opportunity for public comment and input.

Action Plan (as of 5/02/16) to develop an EFH Review Technical Report

Council: Mid-Atlantic

Additional Expertise Sought:

Fishery Management Action Team (FMAT)		
Agency	Role	Person
MAFMC staff	FMAT Chair	Jessica Coakley
NMFS GARFO	Habitat	David Stevenson
NMFS HCD	Habitat	Terra Lederhouse
NMFS HCD	Habitat	Howard Townsend
NMFS NEFSC	Habitat	Dave Packer
NEFMC staff	Habitat	Michelle Bachman

Title of Action: Development of an “EFH Review” Technical Report.

Objective of Action: A report will be developed to address the 10 components of the Habitat Review for the Council. In this report, the Council will be presented with information to support revising habitat designations and descriptions and/or other aspects of the FMPs. The Council can then initiate FMP action(s), to consider revising EFH components or management measures within their individual FMPs or as an Omnibus action to amend all FMPs simultaneously.

1. Description and Identification of EFH

Evaluate new scientific literature and information from other relevant sources to see whether species-specific EFH description and identification, as written in the FMP as text and provided as maps, is appropriate and reflects best available information and methods. Suggest changes to EFH text or map designations as appropriate.

2. Fishing activities that may adversely affect EFH

Review whether there have been changes in or newly available information on fishing activities that may adversely affect EFH. Evaluate the impact of fishing activities on EFH.

3. Non-Magnuson-Stevens Act fishing activities that may adversely affect EFH

Review whether there have been changes in current Non-Magnuson-Stevens Act fishing (e.g., state water fisheries). Evaluate the impact of non-MSA fishing activities on EFH.

4. Non-fishing related activities that may adversely affect EFH

Review whether there have been changes to or newly available information on non-fishing activities affecting habitat. Evaluate the impact of non-fishing activities on EFH.

5. Cumulative impacts analysis

Review cumulative impacts discussions across all FMPs, and update if appropriate.

6. Conservation/Fishing Impact Recommendations

Review fishing and non-fishing activities and determine whether actions to minimize impacts on EFH or other conservation actions are appropriate.

7. Prey species

Review prey species information and determine if updates are appropriate.

8. Identification of HAPC

Review current HAPC designations and approach, and consider new approaches and/or new candidate HAPC designation and approaches.

9. Research Needs

Review existing habitat research needs and determine whether updates are appropriate.

10. Develop approaches to better integrate goals and objectives into habitat actions.

Consider how habitat goals and objectives can be used to make the Council’s use of its habitat authorities more effective.

Fisheries that Apply: All Council managed FMPs, excluding Monkfish (as MAFMC is not the lead Council).

Type of NEPA Analysis Expected: To be addressed by another FMAT if Council decides to develop an FMP action.

Applicable Laws/Issues: To be determined if Council decides to develop an FMP action.

Other Issues: At this time, no additional issues have been identified.

Timing Issues: At this time, no timing issues have been identified.

Timeline for Development:

2016-2018 Development Track	
First FMAT Meeting	May 2016
Develop report (may include additional meetings of the FMAT or other technical meetings as needed)	June 2016 – May 2017
Update Ecosystem and Ocean Planning (EOP) Committee on progress to date on 10 components of EFH Review	June 2017
Continued report development by FMAT	July 2017 – May 2018
Present EOP Committee and Council with final technical report	June 2018
Council can consider FMP action and form another FMAT to develop, as needed	?

MAFMC MEETING – GARFO HCD Updates.

Offshore G&G Activities

NMFS HCD SERO and GARFO issued combined comments on BOEM’s PDEIS for G&G survey work in the Mid and South Atlantic in 2012 (letter attached). At that time, it was determined that a programmatic EFH assessment provided by BOEM did not assess adequately the potential impacts of the G&G activities on EFH. We also disagreed that the impacts to EFH from the seafloor disturbance would be negligible. We determined that a programmatic consultation was inappropriate based upon the information available and issued an EFH conservation recommendation (cr) that BOEM consult with is on each individual application for G&G activities that would affect EFH adversely. BOEM concurred with the EFH cr in their 2014 response (attached).

BOEM agreed to review each application and request from the applicant additional information deemed necessary to analyze impacts of the specific activity within specified locations or areas on marine protected species, archaeological resources, biological features, and EFH. During that review, BOEM would draft a site-specific environmental assessment (SEA) with the EFH Assessment as an appendix. On the basis of the SEA and the EFH Assessment, BOEM would then make the determination whether or not proposed specific activities would adversely affect EFH, which would warrant an EFH consultation. As a matter of process, permit applications for all proposed G&G activities in the Atlantic will be posted to BOEM's webpage:

<http://www.boem.gov/Currently-submitted-Atlantic-OCS-Region-Permits/>

There are currently eight applications posted on the webpage.

[TGS](#) - Permit Number E14-001

[GX Technology Corporation](#) - Permit Number E14-003

[WesternGeco LLC](#) - Permit Number E14-004

[CGG Services \(US\) Inc.](#) - Permit Number E14-005

[Spectrum Geo Inc.](#) - Permit Number E14-006

[PGS](#) - Permit Number E14-007

[TDI-Brooks International, Inc.](#) - Permit Number E14-010

[NEOS GeoSolutions Inc.](#) - Permit Number E15-002

BOEM has not yet initiated consultation with us or with the SERO on any of these.

Wind Energy

New York BOEM Task Force Meeting

A New York BOEM Intergovernmental Task Force meeting was held in Garden City, NY on April 28, 2016. The meeting objectives included an update on the progress of the NY wind energy area (WEA) which was officially identified on March 15, 2016, a discussion of the draft proposed sale notice (PSN), a review major leasing milestones, and a discussion of next

steps. Three major issues arose with regards to the NY WEA including, commercial fishing, navigation, and visual impacts. These issues are identified in the draft PSN, but the WEA was not specifically modified as result of these issues. Preparation of an Environmental Assessment for issuing a lease within the NY WEA is underway and will likely be published by late spring, at the same time as the final PSN. Representatives from the squid fishery and scallop fishery were present and provided comments during the public comment period, including concerns regarding impacts to industry in states outside New York, including Rhode Island and Massachusetts ports. BOEM environmental studies program will be partnering with New York State University at Stony Brook on a tagging study to look at fish movement. The state of New York is planning to prepare an Offshore Wind Master Plan, led by NYSERDA.

NJ Task Force Meeting

New Jersey BOEM Task Force Meeting was held on May 19, 2016. HCD staff was unable to attend. The agenda included a presentation of the New Jersey auction results, an overview of the commercial leases and next steps, an overview of the environmental stipulations and the next steps for the environmental review of the site assessment plans, and an overview of the relevant studies in the NJ lease areas. There also was an introduction of the commercial lessees –

Lease OCS-A 0498 (RES America Developments, Inc.)

Lease OCS-A 0499 (U.S. Wind Inc.)

US Wind

US Wind is planning to construct and operate a 500-600 MW wind farm offshore Maryland in 2017. The cable for the project will run through Indian River Bay, Delaware. NOAA received the Site Assessment Plan (SAP) from BOEM on March 22, 2016 for the installation and operation of a MET tower located in the Maryland Wind Energy Area. We provided comments on EFH and ESA species potentially impacted by that part of the project in a letter on April 20, 2016. This project was also recently discussed at May 19, 2016, Delaware joint state/federal interagency permit processing meeting.

Block Island Wind Farm – Rhode Island

The five jacket foundations are now installed and construction to install the turbines will begin this summer. Horizontal Directional Drilling (HDD) for the cable has been completed at Scarborough Beach in Narragansett and at Block Island. On Block Island, the export submarine cable to the wind farm has been complete and the cable laying barge will work on the remainder of the cable within the wind farm. The submarine cable from Narragansett to Block Island will be laid in May and June.

Ocean Outfall - Delaware

The city of Rehoboth Beach has applied for an Army Corps permit to install a wastewater outfall pipeline and diffuser via directional drilling and mechanical dredging in the Atlantic Ocean east of Deauville Beach, Rehoboth Beach, Sussex County, Delaware. The purpose of installing this

force main and ocean outfall is to comply with the consent order by discharging treated wastewater effluent from the Rehoboth Beach Waste Water Treatment Plant to the diffuser, eliminating the discharge into the Lewes and Rehoboth Canal. Construction of the ocean outfall is expected to begin in October 2017 and continue until April 2018, avoiding the timeframe from May 1 through October 1 to reduce the risk of impacts to local marine species. A copy of this PN was sent to the council.

Aquaculture - Maryland

Man O' War Shoals – Council was copied on our comment letter. The Maryland Department of Natural Resources has applied for a permit from the Army Corps of Engineers to hydraulically dredge two to five millions bushels (120,000 to 300,000 cubic yards) of oyster (*Crassostrea virginica*) shell from Man O' War Shoal in the Chesapeake Bay near the mouth of the Patapsco River, Baltimore County, Maryland over a five year period. The shell would be used for oyster reef restoration and for private aquaculture leases. Our letter recommended that the processing of the permit be held in abeyance until additional information was provided to describe the project and its potential affects more fully and a complete EFH assessment was provided. The Army Corps has requested additional information from the Maryland Department of Natural Resources (the applicant). This information is due to the Corps by August 1. We expect an interagency meeting will follow.

Port Development

The Baltimore District of the Army Corps is contemplating the deepening and widening of the Baltimore Harbor and approach channels. The SEIS is anticipated to be out for public comment soon.

Beach Nourishment Projects.

There are a number of beach nourishment projects on going or proposed along the Mid-Atlantic coast including almost all of NJ and the south Shore of Long Island. HCD recently commented on the following:

1. Fire Island to Montauk Point Reformulation Study. The project area extends from Fire Island Inlet east to Montauk Point in Long Island, New York. The proposed action includes beach and dune restoration, inlet modifications, groin modifications, a breach response plan, and other non-structural measures, as well as, the continuation of the authorized dredging in Fire Island, Moriches and Shinnecock Inlets and the ebb shoals outside of the inlets with the placement of the dredged material in down drift areas.
2. Asharoken Storm Damage Reduction Project. The proposed project is on the north shore of Long Island in the Town of Huntington, Suffolk County, New York. The proposed plan includes dredging 600,000 cubic yards (cy) of sand from a new 55 acre offshore borrow area with placement along the shoreline for beach nourishment and rebuilding the berm.
3. Little Egg Inlet Sand Resource Borrow Area Investigation. The project involves use of a new 3,288-acre sand borrow area within the Little Egg Inlet as a source of sand for beach

nourishment along the 17-mile stretch of Long Beach Island's (LBI) Atlantic coastline between the Barnegat Inlet and Little Egg Inlet, NJ. The borrow area is an HAPC for sandbar shark.

A number of projects are on-going including Long Beach Island, NJ using existing borrow areas. The number occurring at any given time is limited by the number of suitable dredges available. SERO reports that there are a few beach nourishment projects in the Kitty Hawk, NC area mining several hundred acres of offshore bottom for sand. These bottoms, while not featureless, have much less topography than the shoal areas off the other part of the Mid-Atlantic that GARFO has focused on.

Transportation Projects:

The US Department of Transportation has initiated the NEC FUTURE study to determine a program of investments to improve passenger rail service on the Amtrak Northeast Corridor between Washington, D.C., and Boston. No specific actions have been proposed. However an offshoot of this is the Gateway project, a new passenger rail tunnel under the Hudson River. It was formerly known as the Access to the Region's Core project.

Tappan Zee Bridge construction of the new bridge is underway. Coordination has just begun on the removal of the old bridge.

In NC, the replacement of Bonner Bridge over Oregon Inlet and relocation of NC Highway 12 leading to the bridge from Rodanthe (the south) is a continuing controversy due to impacts within Pamlico Sound.

Miscellaneous:

On June 1, the Army Corps issued a Federal Register Notice announcing the reissuance of the existing Nationwide Permit and two new permits (removal of low head dams and the construction of living shorelines). Nationwide permits are supposed to allow the authorization of activities that will have no more than a minimal adverse effect, individually and cumulatively on the environment. HCD will be working with the individual Corps Districts (NY, Philadelphia, Baltimore and Norfolk) to develop regional conditions to minimize impacts to EFH and other species such as river herring and shad. A copy of the FRN is attached.