MEMORANDUM

DATE: March 25, 2011
TO: Ecosystem and Ocean Planning Committee (Kray, McMurray, Berg, Augustine, DeFur, Pate, Schafer, Zeman, Miko, Luisi, Travelstead, Munden, Saunders, O'Shea)
FROM: Tom Hoff
SUBJECT: Background info to Prioritize Recommendations from December Workshop

The Committee will meet on April 12 from 2 to 5 PM. Our major job will be to prioritize among the nearly 100 recommendations from the December workshop. The Chairman and I met in Dover on March 8 and then a subcommittee (Kray, McMurray, Augustine, DeFur, O'Shea, Jason Link (SSC) and Tom Bigford (NMFS Habitat) met on March 15 in Philly to begin the sorting process.

The first two attachments are the recommendations from each author with a number and time associated. Gene and I classified items as short-term (less than two years), intermediate (two to five years) long-term (longer than 5 years) and considered-but-rejected/not applicable for the Council. We then incorporated those recommendations into a spreadsheet from Jason Link that is very elaborate (see electronic version) but which we focused on in the March 15 meeting and classified according to their potential "return on investment". Hopefully we can use these at our Committee meeting to develop your recommendations to the Council. Please realize that there are many years or lifetimes worth of work with these recommendations.

The Committee Chairman envisions spending the first 2.5 hours on these priorities.

Additionally, there are two emails from Ms. Bonnie Spinazzola concerning the NSF Pioneer Array that the Council was briefed on at the December meeting. I hope to have the position of NSF for your consideration by the Committee meeting.

Finally, there is a lot of information on BOEMRE. The Committee does not need to take a position as there will be a full discussion in front of the Council on Thursday. Simply FYI.
Subcommittee Chairman Jason Link opened the meeting at 10:00 A.M. Other SSC ESC members on the call were John Boreman, Ed Houde, David Secor, Mike Wilberg, Cynthia Jones, Wendy Gabriel, and Mark Holliday (and his vice). Others participants included Rick Robins, Gene Kray, Lee Anderson, Tom Hoff and Chris Moore.

Jason Link gave an overview of the agenda and discussed the role of the ESC relative to the TORs.

Rick Robbins, Chris Moore and Gene Kray noted several issues from the Council regarding ecosystem issues, chief of which is to have the SSC help the Council identify their overarching ecosystem goals and objectives (ESC TOR 1). Everyone concurred that this would be an iterative process between the SSC and Council.

The bulk of the call centered around discussions on the Council’s Ecosystems and Ocean Planning (EOP) table of ecosystem recommendations from the December Virginia Beach workshop. In summary, there were approximately 100 recommendations, which the EOP and ESC representative winnowed down to approximately 35 short term, high priority issues. Of these, eight were forwarded to the SSC’s ESC. This exercise was in part to address the ESC’s TOR 1 and to help, via inferred priorities, explore the main goals of such ecosystem issues.

Cynthia Jones noted that the full range of recommendations would constitute effectively a “lifetime” of research. There was broad concurrence with this observation, leading to a reiteration of focusing upon those items passed onto the ESC.

The ESC commented on each of the eight recommendations passed on to them. The recommendations and comments thereon are noted here:

47. **SHORT-TERM** Develop (along with SSC Ecosystem Subcommittee) website for ecosystem consideration papers

The ESC agreed that it was a good idea, but raised the issue of who would own such a website and who would populate it. This is directly related to the ESC’s TOR 4 and could be ongoing by interested individuals.

50. **SHORT-TERM** Continue discussions of enhanced mechanisms for MAFMC participation in MARCO processes in order to incorporate the needs of the commercial and recreational fishing community into our future work.
This recommendation was somewhat unclear, particularly as the MARCO and regional planning body process is still being developed. It was suggested by the ESC to more appropriately ask the Social Sciences subcommittee of the SSC to examine this topic.

51. **SHORT-TERM** Work with the MAFMC (especially the Council's Ecosystems and Ocean Planning Committee) to provide the MAFMC with scientific advice to support and inform the development of the Council's ecosystem level goals, objectives, and policies.

The ESC endorsed this recommendation, particularly as part of its TOR 1.

**Action Item #1:** Based on observations from Rick Robbins, some of the ASMFC stocks had ecosystem goals associated with them. Mike Wilberg will find salient papers and distribute (DONE).

**Action Item #2:** Jason Link to provide ESC with draft examples of ecosystem goals and principles; upon review to be forwarded to the Council.

**Action Item #3:** ESC members to await results from April Council meeting and then provide comment as to the ESC's TOR 1, in helping the Council to establish their ecosystem goals and objectives.

53. **SHORT-TERM** Describe scientific information that the MAFMC could consider so as to anticipate or respond to shifts in ecological conditions (e.g., climate change and other externalities) or processes in its management programs.

The ESC endorsed this recommendation, noting the timing might take a 12-18 months to execute the work. This recommendation relates directly to the ESC’s TOR 3.

54. **SHORT-TERM** Summarize what other countries and regions are doing to incorporate ecosystem-based fishery management principles in their management plans and programs.

The ESC agreed. See also recommendation #47.

**Action Item #4:** R. Seagraves to follow up on poll of other Councils and regional fisheries commissions relative to their activities/programs/FMPs in the area of ecosystem based fishery management.

55B. **SHORT-TERM** evaluate any potential effects of predatory removals on mackerel, longfin inshore and northern shortfin squid, butterfish;

The ESC concurred with this recommendation. Discussion ensued that this issue can be anticipated to be one of the top issues facing the Council, and work underway on this topic (related to the ESC’s TOR 2) should be escalated.
71. SHORT-TERM ($): Carefully consider the tradeoffs of adopting EBFM approaches compared to current fisheries management approaches.

See response to #51.

34A ($). SHORT-TERM Evaluate and measure bycatch and discards, accordingly (sensu Vince)

ESC agreed this was important and could help. A matrix of all the potential interactions should be developed. Further, extant reports on bycatch issues should similarly be tabled.

**Action Item #5: Tom Hoff will contact Ken Hinman to obtain copies of their document describing potential matrices of technical and ecological interactions among MAFMC and ASMFC managed stocks. Once received, these shall be distributed. (DONE, IN MAIL from Hinman).**

Progress on TOR 2 and 4 was also discussed.

The summary of the discussion was that the ESC can reasonably anticipate that identifying ecosystem goals, addressing and evaluating forage issues in an ACL context, and exploring protocols to generally evaluate habitat issues in an ACL context (not a direct recommendation passed on) can be some of the higher priority ecosystem-related topics in the coming months.

It was reiterated that the national SSC meeting, to be held in early October, is being hosted by the Council. One of the main themes was noted as focusing on ecosystem issues. That meeting was again identified as an opportunity to showcase work done on TORs 1, 2 and 4.

Meeting was adjourned at ~11:30AM.
CONNECTING OPPORTUNITIES IN THE MID-ATLANTIC

Pat A. Montanio, Director, NOAA/National Marine Fisheries Service, Office of Habitat Conservation, Silver Spring, MD

Major Recommendations
1. INTERMEDIATE The MAFMC should review the National Ocean Policy for opportunities with the nine priority objectives. The strategic action plans for each objective, available in mid-2011 at: <http://www.whitehouse.gov/blog/2011/01/24/open-comments-ntl-ocean-policy-strategic-action-plans> offer entrees into regional ecosystem protection and restoration, ecosystem-based management, coastal and marine spatial planning, and other national coastal and ocean priorities. Our regional discussions should help us identify opportunities for success in the mid-Atlantic and beyond. Similarly, we have much to learn from other efforts elsewhere.

2. SHORT-TERM This workshop highlighted many NOAA programs with potential connections to managing the mid-Atlantic regional ecosystem. Let us commit to working with other workshop attendees and others not present but who share our interests. Other federal agencies, each state, the private sector (industry and environmental groups), separately and through joint efforts, offer opportunities to leverage and succeed.

NATIONAL PERSPECTIVES ON THE MAFMC’S HABITAT/ECOSYSTEM APPROACHES

Thomas E. Bigford, Chief, NOAA/National Marine Fisheries Service, Office of Habitat Conservation/Habitat Protection Division, Silver Spring, MD

Major Recommendations
3. SHORT-TERM Continue and expand these discussions to include groups and issues not represented at the December 2010 workshop in Virginia Beach, including protected resources, state coastal programs, defense, telecommunications, and ocean energy.

4. SHORT-TERM Pursue opportunities for other sectors or groups to share the roles as host, convener, and facilitator so the MAFMC need not carry an undue burden and their issues are not perceived as receiving undue attention. As two options, consider the opportunity to work with ASMFC’s Habitat Committee on a joint meeting in April 2011 and any options to partner with the Mid-Atlantic Regional Council on the Ocean (MARCO).

5. INTERMEDIATE Identify pilots for specific action in 2011 to fulfill the intent established at the Virginia Beach workshop, using existing knowledge, staff, and funds as we shift from business as usual to an ecosystem approach.

HABITAT PRIORITIES AND COUNCIL OPPORTUNITIES FROM A NOAA/NMFS REGIONAL PROGRAM

Peter Colosi, Assistant Regional Administrator, NOAA/National Marine Fisheries Service, Northeast Regional Office, Habitat Conservation Division, Gloucester, MA

Major Recommendations
6. INTERMEDIATE (S) Invest in the process and context of essential fish habitat (EFH) reviews. Do so with a view beyond the MAFMC’s immediate Magnuson-Stevens Act regulatory requirements to designate EFH in its fishery management plans. View it as an investment. While designation will help us manage habitat impacts associated with fishing gear and waterway development activities, it is also an opportunity for the Council to expand into an ecosystem-based design for EFH designations that can benefit fishery management. This can result in more accurate and precise application of EFH in fishery management in terms of the ecological drivers of productive capacity of fish resources. In this regard, this Council could be one of the first to incorporate ecosystem-based components into its EFH work. It can expand our influence with more precision and focus for fishery management, and result in greater influence in the consideration for living marine resource conservation among the various interests in the ocean development arena and the broader ocean use discussion.

7. SHORT-TERM Continue discussing coastal and marine spatial planning (CMSP). NMFS is in this discussion also and
will continue partnering with you. We in the Northeast Regional Office (NERO) are involved with the Mid-Atlantic Regional Council on the Ocean (MARCO), the Northeast Regional Ocean Council (NROC), Ocean Special Area Management Plan (Ocean SAMP) coordination with states, and soon will be involved in the Ocean Policy Task Force Regional Planning Bodies for CMSP. It is our job and yours to integrate fish and the longstanding history of fisheries into the considerations of CMSP and the development of marine spatial planning tools.

8. **INTERMEDIATE** It’s the Council’s insight that counts when framing its habitat agenda. Stay grounded in the perspective of your mandates, and see what opportunities there are for the Council to better manage fishery resources for a healthy fishing industry.

**NOAA’s Approach to Deep-Sea Coral Research and Management in the Mid-Atlantic Region**

Chih-Fan Tsao, Thomas F. Hourigan, David B. Packer, NOAA/National Marine Fisheries Service, Office of Habitat Conservation, Silver Spring, MD

**Major Recommendations**

9. **SHORT-TERM** Participate in the Deep-Sea Coral Research and Technology Program’s northeast/mid-Atlantic research priorities workshop and fieldwork planning for 2013-15. The Council’s participation is critical to ensure the fieldwork informs the Council’s management needs. The workshop is planned for spring or summer 2011.

10. **INTERMEDIATE** Exercise discretionary authority to designate deep-sea coral protection zones. The New England Fishery Management Council (NEFMC) is actively exploring the use of the MSA Section 303(b) authority to designate deep-sea coral zones for its fisheries, including those in areas that are managed cooperatively with the MAFMC, so this effort can be precedent-setting.

11. **INTERMEDIATE** Use essential fish habitat (EFH) and habitat areas of particular concern (HAPCs) as tools for deep-sea coral management. Several fishery management councils in the U.S. have designated biogenic habitats, such as deep-sea coral and sponge areas, as EFH and HAPCs. This is a tool at the Council’s disposal for use in managing fishing impacts and ensuring consultation on potential non-fishing impacts on deep-sea coral and sponge habitats.

12. **INTERMEDIATE** Monitor bycatch and habitat impacts of fishing. Strengthened monitoring of fishing impacts will help fine-tune management measures designed to reduce gear interactions with corals.

13. **SHORT-TERM** To enable effective and efficient collaboration between MAFMC and NOAA on these and other deep-sea coral endeavors, it would be beneficial for the Council to designate a primary point of contact for coral-related issues.

**Habitat Restoration Interests in the Mid-Atlantic**

John Catena, Northeast Regional Supervisor, NOAA/National Marine Fisheries Service, Office of Habitat Conservation/Restoration Center, Gloucester, MA

**Major Recommendations**

14. **SHORT-TERM** Participate with regional Restoration Center staff in our regional prioritization efforts to identify priority watersheds and waterbodies for habitat restoration.

15. **SHORT-TERM** Work with regional Restoration Center staff and local partners in the mid-Atlantic to develop funding proposals and projects of mutual interest to the Council and the Restoration Center.

16. **SHORT-TERM** Explore the possibility of becoming a formal partner with the Restoration Center in response to our FY 2012 solicitation for partnerships.

16A. **INTERMEDIATE** Advocate the importance of assessing and understanding the link between nearshore and estuarine habitats, diadromous fish species, and federally managed species.

16B. **LONG-TERM** Work with the Restoration Center to develop outreach products that address the importance of habitat restoration for federally managed species.
SUPPORTING MID-ATLANTIC HABITAT AND ECOSYSTEM PRIORITIES THROUGH THE NATIONAL SYSTEM OF MARINE PROTECTED AREAS

Lauren Wenzel, National MPA System Coordinator, NOAA/National Ocean Service, National Marine Protected Areas Center, Silver Spring, MD

Major Recommendations

17. CONSIDERED-BUT-REJECTED Developing a regional MPA network for the mid-Atlantic. The MPA Center is working to support regional coordination and networks of MPAs as resources permit through training and small grants. Networks can help protect a wide range of habitats needed by species at different life stages, and can provide opportunities for partnerships and sharing of resources. For example, Friends of Rookery Bay National Estuarine Research Reserve is leading an effort to develop a regional MPA plan for the southeast that will establish common priorities and actions. A similar type of effort could be undertaken for the mid-Atlantic.

18. INTERMEDIATE (S) Conducting "condition report" workshops for selected MPAs. The MPA Center has been working with the North American MPA Network (NAMPAN), a cooperative effort among MPA agencies in the U.S., Canada, and Mexico, to develop a “report card” format on MPA conditions, based on the Conditions Reports used by the Office of National Marine Sanctuaries. NAMPAN is interested in extending this effort to the Atlantic Coast, and is interested in identifying potential partners who wish to develop condition reports for their sites as both a monitoring and a communications tool.

19. INTERMEDIATE (S) Mapping human uses of the ocean. The MPA Center has developed a participatory GIS methodology to map 30 major human activities across three sectors (industrial and military, fishing, and non-consumptive). These maps will contribute to improved management and planning for MPAs and other approaches to coastal and marine spatial planning. The MPA Center has completed human use mapping for some states, and is interested in partnering in the mid-Atlantic region to continue and complete ocean use mapping.

20. INTERMEDIATE (S) Integrating MPAs with the Integrated Ocean Observing System (IOOS). The MPA Center is working with the national IOOS program and its regional associations to identify issues for coordination between these two national systems, including how MPAs can be used as platforms for ocean monitoring, the range of observing and monitoring requirements at MPAs, and the ocean monitoring parameters and processes most important to monitoring environmental changes at the national scale. The MPA IOOS Task Team is interested in identifying key monitoring parameters for MPAs at the regional scale, and ways in which climate change monitoring can be better incorporated into regional and national observing systems.

21. INTERMEDIATE Providing training. The MPA Center has established a partnership with the Office of National Marine Sanctuaries (ONMS) to bring the international training expertise of the ONMS to a domestic audience. ONMS and MPA Center have the capacity to provide training on adaptation to climate change, developing MPA networks, coastal and marine spatial planning, and other topics.

22. INTERMEDIATE (S) Providing an information clearinghouse on MPA resources. The MPA Center hosts several databases on MPAs and spatial management, including the MPA Inventory and the de facto MPA Inventory (includes areas conserved for reasons other than conservation, such as safety zones). The MPA Inventory is currently being expanded to include more data on MPA resources and authorities. This information is readily accessible, and can help inform the MAFMC’s work on spatial management.

NOAA’S NATIONAL MARINE SANCTUARY PROGRAM: OPPORTUNITIES TO SUPPORT MID-ATLANTIC AND NEW ENGLAND CANYON AND SEAMOUNT HABITAT CONSERVATION

Reed Bohne, Northeast and Great Lakes Regional Director, NOAA/National Ocean Service, Office of National Marine Sanctuaries, Savannah, GA

Major Recommendations

23. LONG-TERM (S) Convene a workshop on canyon and seamount habitat in the mid-Atlantic and New England regions to assess the status of resources, state of scientific knowledge, resource threats, and conservation alternatives available through the Magnuson-Stevens Fishery Conservation and Management Act, National Marine Sanctuaries Act, and other authorities.

24. LONG-TERM (S) Support and encourage surveys and research to address fundamental questions regarding the diversity, distribution, and abundance of species living in canyon and seamount features in the mid-Atlantic and New
England regions.

CONNECTING STATE COASTAL LAND CONSERVATION PRIORITIES WITH FISHERY HABITAT CONSERVATION PRIORITIES

Elaine Vaudreuil, Manager, NOAA/National Ocean Service, Office of Ocean and Coastal Resource Management, Coastal and Estuarine Land Conservation Program, Silver Spring, MD

Major Recommendations
25. LONG-TERM ($). MAFMC staff and NMFS regional habitat conservation should get to know the state Coastal and Estuarine Land Conservation Program (CELCP) leads in the region. Their contact information can be found at: <http://coastalmanagement.noaa.gov/land/media/celepstateleadcontacts.pdf>
26. LONG-TERM ($). Council staff should review state CELCP plans to identify shared priority habitats or landscapes, and, if desired, contact state CELCP leads to share information on additional fisheries priority habitats, if not addressed in the plan.
27. LONG-TERM ($). CELCP staff should notify the MAFMC and NMFS regional offices of funding opportunities under the program.

POLICY/MANAGEMENT PANEL DISCUSSION WITH COUNCIL

Rapporteur: Joe Nohner, NOAA/National Marine Fisheries Service, Office of Science & Technology, Silver Spring, MD

Major Recommendations
28. SHORT-TERM. The panel recommended that the Council identify decision processes in NMFS management and express their support for projects which align with the Council’s objectives. Possible examples for such decisions are the identification of key areas for restoration and EFH or HAPC consultations.
29. SHORT-TERM. The panel recommended that the Council write letters on behalf of projects of interest. Lou Chiarella, NMFS/Northeast Regional Office, offered to provide information on projects which could be targeted for Council support.

NMFS HABITAT ASSESSMENT IMPROVEMENT PLAN (HAIP) – AN OVERVIEW

Thomas Noji, NOAA/National Marine Fisheries Service, Northeast Fisheries Science Center, Director, James J. Howard Marine Sciences Laboratory, Highlands, NJ

Major Recommendations
30. INTERMEDIATE. NMFS, along with the Fishery Councils, should develop criteria to prioritize stocks and geographic locations that would benefit from habitat assessments.
31. SHORT-TERM. NMFS habitat and stock assessment scientists should work together with fishery managers to initiate demonstration projects that incorporate habitat data into stock assessment models, perhaps focusing on well-studied species.
NMFS Science in Support of New Management Initiatives: Perspectives from Headquarters

Ned Cyr, Director, NOAA/National Marine Fisheries Service, Office of Science & Technology, Silver Spring, MD

Major Recommendations

32. INTERMEDIATE (SSC SUBCOMMITTEE) NMFS supports an ecosystem-based approach to fisheries management, and seeks to develop and provide tools to accomplish this goal. NMFS strongly encourages the efforts of the MAFMC to build an ecosystem approach and recommends maintaining a dialogue to develop science products that meet the needs of the Council. One potential mechanism to accomplish this would be to develop and update the 5-year research priorities submitted to the NMFS Science Center Directors reflecting ecosystem and habitat science needs identified by the Council.

33. SHORT-TERM NMFS supports the Council’s acknowledgement of the importance of marine, estuarine, and riverine habitat to fish stocks and their ecosystems, and recommends a renewed effort to work with state and local partners in protecting fish habitat.

34. SHORT-TERM NMFS recommends that the Council continue to seek recognition on the Regional Planning Body and that the Council participates to the fullest extent possible in the coastal and marine spatial planning process in order to maximize its impact on the process.

Spatial Considerations for Ecosystem-Based Management on the Northeast U.S. Continental Shelf

Mike Fogarty, Robert Gamble, Sean Lucey, NOAA/National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole Laboratory, Woods Hole, MA

Kimberly Hyde, NOAA/National Marine Fisheries Service, Northeast Fisheries Science Center, Narragansett Laboratory, Narragansett, RI

Major Recommendations

35. INTERMEDIATE ($) We recommend that the MAFMC evaluate options for the designation of spatial management units as the basis for development of integrated management plans for defined ecoregions. The proposed ecological units cleanly delineates the main area of responsibility of the council in the Mid-Atlantic Bight although for some migratory species under council authority, coordination with other management authorities (notably the ASMFC and the NEFMC) will be necessary. A transition strategy can be defined that first adopts place-based management as the ultimate goal for the Council and then begins to assess how existing management plans can be adjusted to accommodate broader ecosystem objectives. These extended plans would then ultimately be absorbed into a fully integrated Ecosystem-Based Management Plan for the Mid-Atlantic Bight.

Strengthening Science to Improve Habitat Protection and Restoration in Chesapeake Bay

Peyton Robertson, Director, NOAA/National Marine Fisheries Service, Office of Habitat Conservation/Chesapeake Bay Office, Annapolis, MD

Major Recommendations

36. INTERMEDIATE ($) Explore opportunities to better connect the science and management activities of the Chesapeake
Bay Fisheries Goal Team, Atlantic States Marine Fisheries Commission, and MAFMC.

37. INTERMEDIATE (S) Convene a NOAA habitat mapping consortium/meeting at the NMFS/NEFSC James J. Howard Marine Sciences Laboratory, including representatives of the NOAA Chesapeake Bay Office (NCBO), NEFSC, Hudson River National Estuarine Research Reserve, The Nature Conservancy, and others.

38. INTERMEDIATE (S) Improve communication pathways and networks to include all sectors with influence over land and marine habitats and develop better visualization tools describing ecosystems, their inter-relationships, and the specific outcomes that can result from applying ecosystem approaches to management.

39. CONSIDERED-BUT-REJECTED Fully integrate modeling, observations, and research to facilitate scenario testing and tradeoff discussions.

HABITAT SCIENCE AT THE NORTHEAST FISHERIES SCIENCE CENTER

Thomas Noji, NOAA/National Marine Fisheries Service, Northeast Fisheries Science Center

Major Recommendations

40. INTERMEDIATE (S) Incorporate more habitat information in the fisheries management process.
41. INTERMEDIATE -- SAME AS #30 Prioritize species and habitats whose management would benefit most from additional habitat-specific information.
42. SHORT-TERM Establish an improved protocol for providing Northeast Fisheries Science Center habitat-science support to the MAFMC.

WHAT MAKES SOME PARTS OF THE OCEAN STICKY TO FISH? OCEAN OBSERVING FOR MARINE HABITAT SCIENCE AND ECOSYSTEM MANAGEMENT

John P. Manderson, NOAA/National Marine Fisheries Service, Northeast Fisheries Science Center, Ecosystems Processes Division, James J. Howard Marine Sciences Laboratory, Highlands, N

Major Recommendations

43. LONG-TERM (S) Establish the resilience of the ecosystem and key populations in the ecosystem as the goal of ecosystem science and management in the Mid-Atlantic Bight. This is a different goal than the central goal of single species fisheries management which is to maximize the abundance of exploitable stocks. Preserving resilience requires managing variance and diversity rather than maximizing the mean. Resilience is provided by different forms of “storage.” For single species populations this storage takes the form of habitat and age class diversity. For ecosystems it is provided by species diversity and the functional redundancy that results from it. Identifying and managing the diversity of habitats and the connections between them that promote resilience to ecosystem key populations and others that provide functional redundancy to the ecosystem is central to ecosystem based management.
44. LONG-TERM (S) The physical and biological data required for space based ecosystem science and management is spatially fine-grained but regional in extent. For water column features it must also be very fine-grained in time. These kinds of data are expensive to collect and there appears to be a lot of redundancy in the data collection and analyses being performed in the region. The Council needs to strongly encourage open data and information sharing along with collaborative monitoring efforts in the region. The regional Integrated Ocean Observing System (IOOS) is providing a great deal of information about critical pelagic processes. A collaborative, well-organized effort to identify the bottom data available; to merge it, identify the gaps, and then to systematically address those gaps needs to be strongly encouraged by the MAFMC. These data should be merged with the regional IOOS into an open access portal(s).
45. SHORT-TERM A research set-aside program focused on the goals of ecosystem science and management needs to be established in the region. While there are other parties with stakes in the ecosystem, the fishing community has the most extensive practical ecological knowledge of the ecosystem. Government and academic scientists should be encouraged to openly collaborate with the fishing community to perform the science required to identify processes in the Mid-Atlantic Bight ecosystem that promote the resilience of keystone populations and the ecosystem as a whole.
46. CONSIDERED-BUT-REJECTED Education of the public and stakeholders about the complexity of the ecosystem is
absolutely critical for effective ecosystem management.

SCIENCE PANEL DISCUSSION WITH COUNCIL

Rapporteur: Dave Packer, NOAA/National Marine Fisheries Service, Northeast Fisheries Science Center, ecosystems Processes Division, James J. Howard Marine Sciences Laboratory, Highlands, NJ

47. INTERMEDIATE Develop (along with SSC Ecosystem Subcommittee) website for ecosystem consideration papers

PERSPECTIVES FROM THE MID- ATLANTIC REGIONAL COUNCIL ON THE OCEANS (MARCO)

Greg Capobianco, Director, Ocean and Great Lakes Program, New York State Department of State, Albany, NY

Major Recommendations
48. INTERMEDIATE Compile GIS information on offshore ocean areas, and share specific information on habitats that we have a mutual interest in protecting, particularly the offshore canyons. The exchange of data and information through the online MARCO Mapping and Planning Portal will help to coordinate regulatory and planning activities based on the best available science, and will help identify information gaps.
49. INTERMEDIATE Coordinate on developing overarching management objectives and a path forward for the creation of the Mid-Atlantic’s Regional Planning Body, and defining roles for the two Fishery Management Councils.
50. SHORT-TERM Continue discussions of enhanced mechanisms for MAFMC participation in MARCO processes in order to incorporate the needs of the commercial and recreational fishing community into our future work.

START BY DOING WHAT’S NECESSARY; THEN DO WHAT’S POSSIBLE; AND SUDDENLY YOU ARE DOING THE IMPOSSIBLE – FRANCIS OF ASSISI

Jason S. Link, NOAA/National Marine Fisheries Service, Northeast Fisheries Science Center, and Chair, Ecosystems Subcommittee, MAFMC /Science and Statistical Committee, Woods Hole Laboratory, Woods Hole, MA

Major Recommendations
51. SHORT-TERM Work with the MAFMC (especially the Council’s Ecosystems and Ocean Planning Committee) to provide the MAFMC with scientific advice to support and inform the development of the Council’s ecosystem level goals, objectives, and policies.
52. INTERMEDIATE Identify and describe scientific advice that the MAFMC could use to address and incorporate ecosystem structure and function in its fishery management plans and quota specification process to ensure that the Council’s management practices effectively account for ecological sustainability.
53. SHORT-TERM Describe scientific information that the MAFMC could consider so as to anticipate or respond to shifts in ecological conditions (e.g., climate change and other externalities) or processes in its management programs.
54. SHORT-TERM Summarize what other countries and regions are doing to incorporate ecosystem-based fishery
management principles in their management plans and programs.

55. LONG-TERM Describe how ecosystems principles could be used by the MAFMC in the long-term to evolve its single-species and multi-species fishery management plans into a regional ecosystem-based fishery management plan.

55A. LONG-TERM evaluate any potential effects of climate for all MAFMC managed stocks;
55B. SHORT-TERM evaluate any potential effects of predatory removals on mackerel, longfin inshore and northern shortfin squid, butterfish;
55C. INTERMEDIATE evaluate and identify specific/localized habitat requirements for black sea bass, scup, tilefish, Atlantic surfclam, ocean quahogs, and summer flounder;
55D. INTERMEDIATE explore areas/regions/features of interest for all stocks; and
55E. LONG-TERM explore tradeoffs among full system and total fisheries production potential for all stocks.

DISCOVERING REEF: POSSIBILITIES OF ACCELERATED AND PERMANENT REEF FISH RESTORATION

Captain Monty Hawkins, Owner/Operator, Party Boat Morning Star, Ocean City, MD

Major Recommendations
56. CONSIDERED-BUT-REJECTED Interview remaining old-timers to piece together a picture of what once was. Insights will highlight the need to protect what we have and restore what we’ve lost. Listen attentively and use charts dating to the era for perspectives on:
   • species that once fouled nets and hooks but are now rare, e.g., deadman's sponge;
   • fish populations that have moved from inshore habitats to offshore, with similar impacts on fleet movements and effort and be vigilant for shifts over the years and decades; e.g., extirpation of red hake within 20 nautical miles of shore, white marlin was once caught 4 to 8 miles out and now 60 is caught plus miles, and scup having been a major fishery but now has been absent for 40 years; and
   • insights from fishing techniques and navigation devices used to indicate former reef footprint, even use of rudimentary equipment like a weighted grapple on steel cable to locate rocky patches by feel.
57. LONG-TERM (S) Protect remnant hard bottom habitats either with paper protections/regulations or with large boulders.
58. CONSIDERED-BUT-REJECTED When contemplating an action to protect or restore habitat, focus not on the substrate but on the growth that provides habitat. Any rock will work fine – concrete rubble too. Eventually, engineered concrete units to maximize fishery production in a given area could be built.
59. CONSIDERED-BUT-REJECTED Strongly consider transportable reef units sited in areas with abundant growth to gather natural set corals for later transplant.
60. INTERMEDIATE Recognize that cold water azooxanthellate corals are important to fish populations wherever they now occur or did occur, including all waters.
61. LONG-TERM The term “high energy environment” is a scapegoat. There are many corals growing in 25 feet of water and fantastic assemblages in 40 feet of water in the Mid-Atlantic Bight.

REGULATORY REQUIREMENTS THAT EXCEED OUR KNOWLEDGE OF THE OCEAN ENVIRONMENT AND THE IMPACT ON THE PUBLIC

Greg Di Domenico, Executive Director, Garden State Seafood Association, Trenton, NJ

62. SHORT-TERM Beware duplication of CMSP
62A. SHORT-TERM  Participate in planning process

62B. SHORT-TERM  Not too crazy governance (don't recreate management process)

PREPARATION MEETS OPPORTUNITY FOR MID-ATLANTIC HABITAT CONSERVATION

Jay Odell, The Nature Conservancy, Mid-Atlantic Regional Program, Richmond, VA

Major Recommendations

65. SHORT-TERM  Near-term: The Essential Fish Habitat Omnibus Amendment that is being jointly developed by NEFMC and MAFMC provides a policy vehicle for expanded habitat protection and a process that provides for substantial public input as decisions are shaped and made. Additionally, the Councils have a new tool under the Magnuson-Stevens Act (Section 303(b)(2)), discretionary authority to protect deep-sea corals that urgently need protection. It is likely that the mid-Atlantic region contains substantial cold water coral resources at depths as shallow as 15 meters, in addition to those well documented offshore of Maryland (e.g., Astrangia poculata and new records for Leptogorgia virgulata). These habitats are well known to support high densities of MAMFC managed species such as black sea bass and tautog. Regardless of depth, deep-sea coral habitats are highly vulnerable to physical disturbance of any kind and their damage and loss has potentially serious and difficult to reverse ecological and economic impacts. Conversely, their identification and protection would provide lasting benefits.

66. INTERMEDIATE  Long-term: A regional CMSP process can help the ocean use and conservation sectors to more precisely develop their individual and shared goals and subsequently develop a plan that best meets multiple objectives. It should be no surprise that, despite stereotypes, fishermen and environmental groups have many common interests. Some valuable and important ocean use sectors such as sand mining, shipping, transportation, and energy development can be sustained in severely degraded ocean ecosystems, but biodiversity conservation, fishing, and some forms of tourism cannot. A CMSP process that is conducted openly and transparently and based on sound science can provide managers with choices for better alignment of human uses with their most ecologically and socio-economically compatible places to provide lasting benefits for people and nature.

ATLANTIC STATES MARINE FISHERIES COMMISSION ECOSYSTEM HABITAT PROGRAMS AND COLLABORATION OPPORTUNITIES

Wilson Laney, Patrick Campfield, representing Habitat Committee, Atlantic States Marine Fisheries Commission, Arlington, VA

Major Recommendations

The ASMFC and MAFMC should:

67. SHORT-TERM  Strengthen communication between their habitat program staff and committees.

68. SHORT-TERM  Hold joint meetings and workshops focused on EBFM.

69. INTERMEDIATE  Identify projects for funding by the Atlantic Coastal Fish Habitat Partnership, Southeast Aquatic Resources Partnership, and other National Fish Habitat Partnerships.

70. LONG-TERM  Develop joint habitat educational materials.

70A. SHORT-TERM  Collaborate on essential fish habitat designations.

70B. INTERMEDIATE  Develop and adopt common habitat policies (i.e., Resolution 89-IV, revisit and update).

70C. INTERMEDIATE  Partner to build on existing efforts to develop a coast-wide fish habitat Geographic Information System.
PROGRESS ON HABITAT CONSERVATION AND ECOSYSTEMS-BASED FISHERIES MANAGEMENT
BY THE NEW ENGLAND FISHERY MANAGEMENT COUNCIL

Christopher Kellogg, Deputy Director, New England Fishery Management Council, Newburyport, MA

Major Recommendations
71. SHORT-TERM ($) Carefully consider the tradeoffs of adopting EBFM approaches compared to current fisheries management approaches.
72. SHORT-TERM ($) Understand and prepare for some of the needed changes to organizational structure before embarking on EBFM.
73. SHORT-TERM ($) Coordinate development of EBFM approaches with adjacent Fishery Management Councils, states and the ASMFC.

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL HABITAT CONSERVATION, ECOSYSTEM COORDINATION, AND COLLABORATION

Roger Pugliese, South Atlantic Fishery Management Council, North Charleston, SC

Major Recommendations
74. LONG-TERM An initial step is sharing the existing EFH policy statements shown below. Other areas include evaluating linking between or collaboration on the development of future ecological models where species may overlap jurisdiction. To further the mutual cooperation, we could also cooperate on including updated information for future South Atlantic Fishery Ecosystem Plan revisions for mid-Atlantic managed species occurring in south Atlantic waters (e.g., bluefish, summer flounder).
75. SHORT-TERM Some timely issues the Councils can continue to share information on is in developing activities and policies pertaining to offshore energy development or marine aquaculture. To expand the broader view of habitat and understanding impacts across regions there may be the opportunity to hold joint workshops on habitat issues with other east coast Councils and the ASMFC.
76. LONG-TERM One newer opportunity for collaboration may be in respective organization participation in the Department of Interior’s North Atlantic and South Atlantic Landscape Conservation Cooperatives depending on the desired focus areas of each region. Finally, an area where regions can also share experiences and policy development is in marine habitat identification and conservation for diadromous species.

CLOSING REMARKS
John Boorman, Chair, Mid-Atlantic Fishery Management Council/Science and Statistical Committee, Dover, DE

79. INTERMEDIATE ($) The MAFMC can serve as a habitat information clearinghouse.

80. INTERMEDIATE Refine terms of reference for stock assessments as more knowledge is gained.
IDENTIFICATION OF COLUMNS IN SPREADSHEET

Recommendations
Timing
Duration (Ongoing, Pending, One-offs, Completed)
Policy, Science or Stakeholder Recs
Science or Policy application???
pass to SSC ESC
Urgency/criticality/importance/Priority
ROI (H, M, L) "Juiciness" -- return on investment
Feasibility (see timing)
directly Actionable vs Planning or review or further study
Directly Affects ACL, etc. setting
Directly Affects Council decisions
Principle
Contextual
Coordination across jurisdictions
Governance
New workshop
Develop new process, venue, institution
Develop new tools
Protected and Endangered Spp
Fisheries Sustainability
Biodiversity
Habitat
Coastal Zone Management & Nutrients
HABs
Trophic balance
Systemic Considerations
Climate Effects
Invasive spp
Toxic Deposition
Offshore Energy Systems
Navigation routes
Relativity & interactions among drivers
Cumulative impacts
Systemic resilience
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<th>Recommendations</th>
<th>Timing</th>
<th>Policy, Science or Stakeholder Recs</th>
<th>pass to SSC ESC</th>
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<tr>
<td><strong>2. SHORT-TERM</strong> This workshop highlighted many NOAA programs with potential connections to managing the mid-Atlantic regional ecosystem. Let us commit to working with other workshop attendees and others not present but who share our interests. Other federal agencies, each state, the private sector (industry and environmental groups), separately and through joint efforts, offer opportunities to leverage and succeed.</td>
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<td><strong>3. SHORT-TERM</strong> Continue and expand these discussions to include groups and issues not represented at the December 2010 workshop in Virginia Beach, including protected resources, state coastal programs, defense, telecommunications, and ocean energy.</td>
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<td><strong>4. SHORT-TERM</strong> Pursue opportunities for other sectors or groups to share the roles as host, convener, and facilitator so the MAFMC need not carry an undue burden and their issues are not perceived as receiving undue attention. As two options, consider the opportunity to work with ASMFC's Habitat Committee on a joint meeting in April 2011 and any options to partner with the Mid-Atlantic Regional Council on the Ocean (MARCO).</td>
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<td><strong>5. SHORT-TERM</strong> Identify pilots for specific action in 2011 to fulfill the intent established at the Virginia Beach workshop, using existing knowledge, staff, and funds as we shift from business as usual to an ecosystem approach.</td>
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7. **SHORT-TERM** Continue discussing coastal and marine spatial planning (CMSP). NMFS is in this discussion also and will continue partnering with you. We in the Northeast Regional Office (NERO) are involved with the Mid-Atlantic Regional Council on the Ocean (MARCO), the Northeast Regional Ocean Council (NROC), Ocean Special Area Management Plan (Ocean SAMP) coordination with states, and soon will be involved in the Ocean Policy Task Force Regional Planning Bodies for CMSP. It is our job and yours to integrate fish and the longstanding history of fisheries into the considerations of CMSP and the development of marine spatial planning tools.

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9. **SHORT-TERM** Participate in the Deep-Sea Coral Research and Technology Program’s northeast/mid-Atlantic research priorities workshop and fieldwork planning for 2013-15. The Council’s participation is critical to ensure the fieldwork informs the Council’s management needs. The workshop is planned for spring or summer 2011.

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13. **SHORT-TERM** To enable effective and efficient collaboration between MAFMC and NOAA on these and other deep-sea coral endeavors, it would be beneficial for the Council to designate a primary point of contact for coral-related issues.

14. **SHORT-TERM** Participate with regional Restoration Center staff in our regional prioritization efforts to identify priority watersheds and waterbodies for habitat restoration.

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15. **SHORT-TERM** Work with regional Restoration Center staff and local partners in the mid-Atlantic to develop funding proposals and projects of mutual interest to the Council and the Restoration Center.

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16. **SHORT-TERM** Explore the possibility of becoming a formal partner with the Restoration Center in response to our FY 2012 solicitation for partnerships.

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16A. **INTERMEDIATE** Advocate the importance of assessing and understanding the link between nearshore and estuarine habitats, diadromous fish species, and federally managed species.
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<td><strong>16B. LONG-TERM</strong></td>
<td>Work with the Restoration Center to develop outreach products that address the importance of habitat restoration for federally managed species</td>
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<td><strong>28. SHORT-TERM</strong></td>
<td>The panel recommended that the Council identify decision processes in NMFS management and express their support for projects which align with the Council's objectives. Possible examples for such decisions are the identification of key areas for restoration and EFH or HAPC consultations.</td>
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<td><strong>29. SHORT-TERM</strong></td>
<td>The panel recommended that the Council write letters on behalf of projects of interest. Lou Chiarella, NMFS/Northeast Regional Office, offered to provide information on projects which could be targeted for Council support.</td>
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<td><strong>31. SHORT-TERM</strong></td>
<td>NMFS habitat and stock assessment scientists should work together with fishery managers to initiate demonstration projects that incorporate habitat data into stock assessment models, perhaps focusing on well-studied species.</td>
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<td><strong>33. SHORT-TERM</strong></td>
<td>NMFS supports the Council's acknowledgement of the importance of marine, estuarine, and riverine habitat to fish stocks and their ecosystems, and recommends a renewed effort to work with state and local partners in protecting fish habitat.</td>
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<td><strong>34. SHORT-TERM</strong></td>
<td>NMFS recommends that the Council continue to seek recognition on the Regional Planning Body and that the Council participates to the fullest extent possible in the coastal and marine spatial planning process in order to maximize its impact on the process.</td>
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<td><strong>34A (S). SHORT-TERM</strong></td>
<td>Evaluate and measure bycatch and discards, accordingly (sensu Vince)</td>
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<td><strong>36. SHORT-TERM (S)</strong></td>
<td>Explore opportunities to better connect the science and management activities of the Chesapeake Bay Fisheries Goal Team, Atlantic States Marine Fisheries Commission, and MAFMC.</td>
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<td><strong>42. SHORT-TERM</strong></td>
<td>Establish an improved protocol for providing Northeast Fisheries Science Center habitat-science support to the MAFMC.</td>
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<td><strong>45. SHORT-TERM</strong></td>
<td>A research set-aside program focused on the goals of ecosystem science and management needs to be established in the region. While there are other parties with stakes in the ecosystem, the fishing community has the most extensive practical ecological knowledge of the ecosystem. Government and academic scientists should be encouraged to openly collaborate with the fishing community to perform the science required to identify processes in the Mid-Atlantic Bight ecosystem that promote the resilience of keystone populations and the ecosystem as a whole.</td>
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<td><strong>45A (S). SHORT-TERM</strong></td>
<td>Explore topics to address ecosystem issues via RSA and other sources similar to RSA program</td>
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<td><strong>46A (S). SHORT-TERM</strong></td>
<td>Look for partnerships to improve communication with stakeholders</td>
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<td><strong>47. SHORT-TERM</strong></td>
<td>Develop (along with SSC Ecosystem Sub ...)</td>
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<td><strong>50. SHORT-TERM</strong></td>
<td>Continue discussions of enhanced mechanisms for MAFMC participation in MARCO processes in order to incorporate the needs of the commercial and recreational fishing community into our future work.</td>
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<td><strong>51. SHORT-TERM</strong></td>
<td>Work with the MAFMC (especially the Council's Ecosystems and Ocean Planning Committee) to provide the MAFMC with scientific advice to support and inform the development of the Council's ecosystem level goals, objectives, and policies.</td>
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<td><strong>53. SHORT-TERM</strong></td>
<td>Describe scientific information that the MAFMC could consider so as to anticipate or respond to shifts in ecological conditions (e.g., climate change and other externalities) or processes in its management programs.</td>
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<td><strong>54. SHORT-TERM</strong></td>
<td>Summarize what other countries and regions are doing to incorporate ecosystem-based fishery management principles in their management plans and programs.</td>
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55B. SHORT-TERM: evaluate any potential effects of predatory removals on mackerel, longfin inshore and northern shortfin squid, butterfish.

62. SHORT-TERM: Beware duplication of CMSP

62A. SHORT-TERM: Participate in planning process

62B. SHORT-TERM: Not too crazy governance (don't recreate mgt process)

65. SHORT-TERM: Near-term: The Essential Fish Habitat Omnibus Amendment that is being jointly developed by NEFMC and MAFMC provides a policy vehicle for expanded habitat protection and a process that provides for substantial public input as decisions are shaped and made. Additionally, the Councils have a new tool under the Magnuson-Stevens Act (Section 303(b)(2)), discretionary authority to protect deep-sea corals that urgently need protection. It is likely that the mid-Atlantic region contains substantial cold water coral resources at depths as shallow as 15 meters, in addition to those well documented offshore of Maryland (e.g., *Astrangia poculata* and new records for *Leptogorgia virgulata*). These habitats are well known to support high densities of MAMFC managed species such as black sea bass and tautog. Regardless of depth, deep-sea coral habitats are highly vulnerable to physical disturbance of any kind and their damage and loss has potentially serious and difficult to reverse ecological and economic impacts. Conversely, their identification and protection would provide lasting benefits.

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68. SHORT-TERM: Hold joint meetings and workshops focused on EBFM

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70A. SHORT-TERM: Collaborate on essential fish habitat designations
71. **SHORT-TERM ($)** Carefully consider the tradeoffs of adopting EBFM approaches compared to current fisheries management approaches.

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72. **SHORT-TERM ($)** Understand and prepare for some of the needed changes to organizational structure before embarking on EBFM.

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73. **SHORT-TERM ($)** Coordinate development of EBFM approaches with adjacent Fishery Management Councils, states and the ASMFC.

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75. **SHORT-TERM** Some timely issues the Councils can continue to share information on is in developing activities and policies pertaining to offshore energy development or marine aquaculture. To expand the broader view of habitat and understanding impacts across regions there may be the opportunity to hold joint workshops on habitat issues with other east coast Councils and the ASMFC.

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80. **SHORT-TERM** Refine terms of reference for stock assessments as more knowledge is gained.

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1. **INTERMEDIATE** The MAFMC should review the National Ocean Policy for opportunities with the nine priority objectives. The strategic action plans for each objective, available in mid-2011 at: <http://www.whitehouse.gov/blog/2011/01/24/open-comments-ntl-ocean-policy-strategic-action-plans>
6. **INTERMEDIATE**  
*Invest in the process and context of essential fish habitat (EFH) reviews. Do so with a view beyond the MAFMC’s immediate Magnuson-Stevens Act regulatory requirements to designate EFH in its fishery management plans. View it as an investment. While designation will help us manage habitat impacts associated with fishing gear and waterway development activities, it is also an opportunity for the Council to expand into an ecosystem-based design for EFH designations that can benefit fishery management. This can result in more accurate and precise application of EFH in fishery management in terms of the ecological drivers of productive capacity of fish resources. In this regard, this Council could be one of the first to incorporate ecosystem-based components into its EFH work. It can expand our influence with more precision and focus for fishery management, and result in greater influence in the consideration for living marine resource conservation among the various interests in the ocean development arena and the broader ocean use discussion.*

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8. **INTERMEDIATE**  
*It’s the Council’s insight that counts when framing its habitat agenda. Stay grounded in the perspective of your mandates, and see what opportunities there are for the Council to better manage fishery resources for a healthy fishing industry.*

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10. **INTERMEDIATE**  
*Exercise discretionary authority to designate deep-sea coral protection zones. The New England Fishery Management Council (NEFMC) is actively exploring the use of the MSA Section 303(b) authority to designate deep-sea coral zones for its fisheries, including those in areas that are managed cooperatively with the MAFMC, so this effort can be precedent-setting.*

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11. **INTERMEDIATE** Use essential fish habitat (EFH) and habitat areas of particular concern (HAPCs) as tools for deep-sea coral management. Several fishery management councils in the U.S. have designated biogenic habitats, such as deep-sea coral and sponge areas, as EFH and HAPCs. This is a tool at the Council's disposal for use in managing fishing impacts and ensuring consultation on potential non-fishing impacts on deep-sea coral and sponge habitats.

12. **INTERMEDIATE** Monitor bycatch and habitat impacts of fishing. Strengthened monitoring of fishing impacts will help fine-tune management measures designed to reduce gear interactions with corals.

18. **INTERMEDIATE** Conducting “condition report” workshops for selected MPAs. The MPA Center has been working with the North American MPA Network (NAMPAN), a cooperative effort among MPA agencies in the U.S., Canada, and Mexico, to develop a “report card” format on MPA conditions, based on the Conditions Reports used by the Office of National Marine Sanctuaries. NAMPAN is interested in extending this effort to the Atlantic Coast, and is interested in identifying potential partners who wish to develop condition reports for their sites as both a monitoring and a communications tool.

30. **INTERMEDIATE** NMFS, along with the Fishery Councils, should develop criteria to prioritize stocks and geographic locations that would benefit from habitat assessments.

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<td>18. INTERMEDIATE</td>
<td>Conducting “condition report” workshops for selected MPAs. The MPA Center has been working with the North American MPA Network (NAMPAN), a cooperative effort among MPA agencies in the U.S., Canada, and Mexico, to develop a “report card” format on MPA conditions, based on the Conditions Reports used by the Office of National Marine Sanctuaries. NAMPAN is interested in extending this effort to the Atlantic Coast, and is interested in identifying potential partners who wish to develop condition reports for their sites as both a monitoring and a communications tool.</td>
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<td>30. INTERMEDIATE</td>
<td>NMFS, along with the Fishery Councils, should develop criteria to prioritize stocks and geographic locations that would benefit from habitat assessments.</td>
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</table>
32. **INTERMEDIATE (SSC SUBCOMMITTEE)** NMFS supports an ecosystem-based approach to fisheries management, and seeks to develop and provide tools to accomplish this goal. NMFS strongly encourages the efforts of the MAFMC to build an ecosystem approach and recommends maintaining a dialogue to develop science products that meet the needs of the Council. One potential mechanism to accomplish this would be to develop and update the 5-year research priorities submitted to the NMFS Science Center Directors reflecting ecosystem and habitat science needs identified by the Council.

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35. **INTERMEDIATE (S)** We recommend that the MAFMC evaluate options for the designation of spatial management units as the basis for development of integrated management plans for defined ecoregions. The proposed ecological units clearly delineates the main area of responsibility of the council in the Mid-Atlantic Bight although for some migratory species under council authority, coordination with other management authorities (notably the ASMFC and the NEFMC) will be necessary. A transition strategy can be defined that first adopts place-based management as the ultimate goal for the Council and then begins to assess how existing management plans can be adjusted to accommodate broader ecosystem objectives. These extended plans would then ultimately be absorbed into a fully integrated Ecosystem-Based Management Plan for the Mid-Atlantic Bight.

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High (with many caveats)

37. **INTERMEDIATE (S)** Convene a NOAA habitat mapping consortium/meeting at the NMFS/NEFSC James J. Howard Marine Sciences Laboratory, including representatives of the NOAA Chesapeake Bay Office (NCBO), NEFSC, Hudson River National Estuarine Research Reserve, The Nature Conservancy, and others.

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<tr>
<th>38. <strong>INTERMEDIATE</strong> Improve communication pathways and networks to include all sectors with influence over land and marine habitats and develop better visualization tools describing ecosystems, their inter-relationships, and the specific outcomes that can result from applying ecosystem approaches to management.</th>
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<td>40. <strong>INTERMEDIATE</strong> Incorporate more habitat information in the fisheries management process.</td>
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<td>41. <strong>INTERMEDIATE</strong> Same as #30 Prioritize species and habitats whose management would benefit most from additional habitat-specific information.</td>
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<td>48. <strong>INTERMEDIATE</strong> Compile GIS information on offshore ocean areas, and share specific information on habitats that we have a mutual interest in protecting, particularly the offshore canyons. The exchange of data and information through the online MARCO Mapping and Planning Portal will help to coordinate regulatory and planning activities based on the best available science, and will help identify information gaps.</td>
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<td>49. <strong>INTERMEDIATE</strong> Coordinate on developing overarching management objectives and a path forward for the creation of the Mid-Atlantic’s Regional Planning Body, and defining roles for the two Fishery Management Councils.</td>
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<td>52. <strong>INTERMEDIATE</strong> Identify and describe scientific advice that the MAFMC could use to address and incorporate ecosystem structure and function in its fishery management plans and quota specification process to ensure that the Council’s management practices effectively account for ecological sustainability.</td>
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<tr>
<td>55C. <strong>INTERMEDIATE</strong> Evaluate and identify specific/localized habitat requirements for black sea bass, scup, tilefish, Atlantic surf clam, ocean quahogs, and summer flounder.</td>
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<td>55D. <strong>INTERMEDIATE</strong> Explore areas/regions/features of interest for all stocks; and</td>
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60. **INTERMEDIATE** Recognize that cold water azooxanthellate corals are important to fish populations wherever they now occur or did occur, including all waters.

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66. **INTERMEDIATE** Long-term: A regional CMSP process can help the ocean use and conservation sectors to more precisely develop their individual and shared goals and subsequently develop a plan that best meets multiple objectives. It should be no surprise that, despite stereotypes, fishermen and environmental groups have many common interests. Some valuable and important ocean use sectors such as sand mining, shipping, transportation, and energy development can be sustained in severely degraded ocean ecosystems, but biodiversity conservation, fishing, and some forms of tourism cannot. A CMSP process that is conducted openly and transparently and based on sound science can provide managers with choices for better alignment of human uses with their most ecologically and socio-economically compatible places to provide lasting benefits for people and nature.

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70B. **INTERMEDIATE** Develop and adopt common habitat policies (i.e., Resolution 89-IV, revisit and update

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70C. **INTERMEDIATE** Partner to build on existing efforts to develop a coast-wide fish habitat Geographic Information System

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25. **LONG-TERM** MAFMC staff and NMFS regional habitat conservation should get to know the state Coastal and Estuarine Land Conservation Program (CELCP) leads in the region. Their contact information can be found at: <http://coastalmanagement.noaa.gov/land/media/celepsstateleadcontacts.pdf>

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26. **LONG-TERM** Council staff should review state CELCP plans to identify shared priority habitats or landscapes, and, if desired, contact state CELCP leads to share information on additional fisheries priority habitats, if not addressed in the plan.

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27. **LONG-TERM ($)** CELCP staff should notify the MAFMC and NMFS regional offices of funding opportunities under the program.

43. **LONG-TERM ($)** Establish the resilience of the ecosystem and keystone populations in the ecosystem as the goal of ecosystem science and management in the Mid-Atlantic Bight. This is a different goal than the central goal of single species fisheries management which is to maximize the abundance of exploitable stocks. Preserving resilience requires managing variance and diversity rather than maximizing the mean. Resilience is provided by different forms of “storage.” For single species populations this storage takes the form of habitat and age class diversity. For ecosystems it is provided by species diversity and the functional redundancy that results from it. Identifying and managing the diversity of habitats and the connections between them that promote resilience to ecosystem keystone populations and others that provide functional redundancy to the ecosystem is central to ecosystem based management.

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<tr>
<td>44. <strong>LONG-TERM ($)</strong> The physical and biological data required for space based ecosystem science and management is spatially fine-grained but regional in extent. For water column features it must also be very fine-grained in time. These kinds of data are expensive to collect and there appears to be a lot of redundancy in the data collection and analyses being performed in the region. The Council needs to strongly encourage open data and information sharing along with collaborative monitoring efforts in the region. The regional Integrated Ocean Observing System (IOOS) is providing a great deal of information about critical pelagic processes. A collaborative, well-organized effort to identify the bottom data available; to merge it, identify the gaps, and then systematically address those gaps needs to be strongly encouraged by the MAFMC. These data should be merged with the regional IOOS into an open access portal(s).</td>
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### 55. LONG-TERM
Describe how ecosystems principles could be used by the MAFMC in the long-term to evolve its single-species and multi-species fishery management plans into a regional ecosystem-based fishery management plan.

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### 55A. LONG-TERM
-evaluate any potential effects of climate for all MAFMC managed stocks;

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### 55E. LONG-TERM
explore tradeoffs among full system and total fisheries production potential for all stocks.

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### 57. LONG-TERM (S)
-Protect remnant hard bottom habitats either with paper protections/regulations or with large boulders.

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### 57A. LONG-TERM
Document hard bottom habitats, map accordingly

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### 57B. LONG-TERM
Explore & identify potential HAPCs, perhaps using SASI model

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### 61. LONG-TERM
The term "high energy environment" is a scapegoat. There are many corals growing in 25 feet of water and fantastic assemblages in 40 feet of water in the Mid-Atlantic Bight.

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### 70. LONG-TERM
Develop joint habitat educational materials

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### 74. LONG-TERM
An initial step is sharing the existing EFH policy statements shown below. Other areas include evaluating linking between or collaboration on the development of future ecological models where species may overlap jurisdiction. To further the mutual cooperation, we could also cooperate on including updated information for future South Atlantic Fishery Ecosystem Plan revisions for mid-Atlantic managed species occurring in south Atlantic waters (e.g., bluefish, summer flounder).

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76. **LONG-TERM** One newer opportunity for collaboration may be in respective organization participation in the Department of Interior’s North Atlantic and South Atlantic Landscape Conservation Cooperatives depending on the desired focus areas of each region. Finally, an area where regions can also share experiences and policy development is in marine habitat identification and conservation for diadromous species.

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81. **LONG-TERM** Aquaculture issues

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17. **CONSIDERED-BUT-REJECTED** Developing a regional MPA network for the mid-Atlantic. The MPA Center is working to support regional coordination and networks of MPAs as resources permit through training and small grants. Networks can help protect a wide range of habitats needed by species at different life stages, and can provide opportunities for partnerships and sharing of resources. For example, Friends of Rookery Bay National Estuarine Research Reserve is leading an effort to develop a regional MPA plan for the southeast that will establish common priorities and actions. A similar type of effort could be undertaken for the mid-Atlantic.

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19. **INTERMEDIATE** (S) Mapping human uses of the ocean. The MPA Center has developed a participatory GIS methodology to map 30 major human activities across three sectors (industrial and military, fishing, and non-consumptive). These maps will contribute to improved management and planning for MPAs and other approaches to coastal and marine spatial planning. The MPA Center has completed human use mapping for some states, and is interested in partnering in the mid-Atlantic region to continue and complete ocean use mapping.

| N/A | P | Action | N | MAYBE |
20. **INTERMEDIATE (S)** _Integrating MPAs with the Integrated Ocean Observing System (IOOS)._ The MPA Center is working with the national IOOS program and its regional associations to identify issues for coordination between these two national systems, including how MPAs can be used as platforms for ocean monitoring, the range of observing and monitoring requirements at MPAs, and the ocean monitoring parameters and processes most important to monitoring environmental changes at the national scale. The MPA IOOS Task Team is interested in identifying key monitoring parameters for MPAs at the regional scale, and ways in which climate change monitoring can be better incorporated into regional and national observing systems.

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21. **INTERMEDIATE** _Providing training._ The MPA Center has established a partnership with the Office of National Marine Sanctuaries (ONMS) to bring the international training expertise of the ONMS to a domestic audience. ONMS and MPA Center have the capacity to provide training on adaptation to climate change, developing MPA networks, coastal and marine spatial planning, and other topics.

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22. **INTERMEDIATE (S)** _Providing an information clearinghouse on MPA resources._ The MPA Center hosts several databases on MPAs and spatial management, including the MPA Inventory and the de facto MPA Inventory (includes areas conserved for reasons other than conservation, such as safety zones). The MPA Inventory is currently being expanded to include more data on MPA resources and authorities. This information is readily accessible, and can help inform the MAFMC’s work on spatial management.

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<td>23. <strong>LONG-TERM (S)</strong> Convene a workshop on canyon and seamount habitat in the mid-Atlantic and New England regions to assess the status of resources, state of scientific knowledge, resource threats, and conservation alternatives available through the Magnuson-Stevens Fishery Conservation and Management Act, National Marine Sanctuaries Act, and other authorities.</td>
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<td>24. <strong>LONG-TERM (S)</strong> Support and encourage surveys and research to address fundamental questions regarding the diversity, distribution, and abundance of species living in canyon and seamount features in the mid-Atlantic and New England regions.</td>
<td>N/A</td>
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<td>39. <strong>CONSIDERED-BUT-REJECTED</strong> Fully integrate modeling, observations, and research to facilitate scenario testing and tradeoff discussions.</td>
<td>N/A</td>
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<td>pass to SSC</td>
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<td>46. <strong>CONSIDERED-BUT-REJECTED</strong> Education of the public and stakeholders about the complexity of the ecosystem is absolutely critical for effective ecosystem management.</td>
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<td>56. <strong>CONSIDERED-BUT-REJECTED</strong> Interview remaining old-timers to piece together a picture of what once was. Insights will highlight the need to protect what we have and restore what we’ve lost. Listen attentively and use charts dating to the era for perspectives on:</td>
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<td>58. <strong>CONSIDERED-BUT-REJECTED</strong> When contemplating an action to protect or restore habitat, focus not on the substrate but on the growth that provides habitat. Any rock will work fine – concrete rubble too. Eventually, engineered concrete units to maximize fishery production in a given area could be built.</td>
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<td>59. <strong>CONSIDERED-BUT-REJECTED</strong> Strongly consider transportable reef units sited in areas with abundant growth to gather natural set corals for later transplant.</td>
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<td>79. <strong>INTERMEDIATE (S)</strong> The MAFMC can serve as a habitat information clearinghouse.</td>
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- species that once fouled nets and hooks but are now rare, e.g., deadman's sponge;
- fish populations that have moved from inshore habitats to offshore, with similar impacts on fleet movements and effort and be vigilant for shifts over the years and decades; e.g., extirpation of red hake within 20 nautical miles of shore, white marlin was once caught 4 to 8 miles out and now 60 is caught plus miles, and scup having been a major fishery but now has been absent for 40 years; and

* insights from fishing techniques and navigation devices used to indicate former reef footprint, even use of rudimentary equipment like a weighted grapple on steel cable to locate rocky patches by feel.
Hoff, Thomas B.

From:          Moore, Christopher
Sent:         Friday, March 18, 2011 2:15 PM
To:            Hoff, Thomas B.
Subject:       FW: nys micro-siting

Fyi – check this out and let me know if it is something for the Council or just ecosystem committee? C

From: bhs1206@gmail.com [mailto:bhs1206@gmail.com] On Behalf Of Bonnie Spinazzola
Sent: Thursday, March 17, 2011 10:53 AM
To: Bonnie Brady; Bonnie Spinazzola; Capt. Rick Bellavance; Chris Brown; Moore, Christopher; Dave Preeble; Greg Mataronas; Lanny Delinger; Margaret Petruny-Parker; Mike Marchetti; Mike McGveney; Mike McGveney; Howard, Paul; Rod Sykes; Russ Walls; Ted Platz; Bill Palombo; Bro Cote; David Spencer; Heidi Henninger; Nick Jenkins - personal; Norbert Stamps; John - IMP
Subject: Fwd: nys micro-siting

Dear All,
We need to contact our Congressional delegations in all the States from MA - NJ. The Pioneer Array could create huge problems for anyone fishing in the area. I asked Fred Mattera for a list of people (mobile gear) who would be interested parties regarding the Pioneer Array; his list compiled with mine will hopefully keep ALL interested parties aware of what is happening. I have been working with Senator Whitehouse's office (RI), as they have been dealing with all of the dialog with NSF. As many of you are aware, the NSF along with "their" WHOI scientists has been LESS than helpful and extremely arrogant to the fishing community; they have been unwilling to sit down with stakeholders (i.e. fishermen) to discuss the siting of the monitoring buoys. NSF has determined it would be illegal to hold a meeting with a "select group"(we were representing ALL of us) of individuals, with regard to this project.....YET, there was a PRIVATE meeting held, only with scientists - ONLY invited individuals were allowed (i.e. NO stakeholders or even any PUBLIC were even allowed in the meeting room.....hmmm, public funds). (the aforementioned was strictly an FYI to keep in your back pocket, I don't feel there is any action necessary, regarding the meeting, at this time).

Just to keep you up to date, I am attaching a copy of the summary of the Socio-economic Report, as well as the chart where the Array will be located, I have also included the "compromise language" that was sent to Senator Whitehouse's office to try to have it added to the Array's Army Corps Permit,.. This language, as noted above, is a COMPROMISE from earlier language, drafted by me and approved by Fred, as we have been taking the lead on this. There is no language in the permit request regarding mitigation for gear damage, as the moorings have been designated as Coast Guard buoys, and therefore relieve NSF of any responsibility for gear damage. We plan to discuss this with the Senator also.

Through discussions, it became clear that we need to reach out to ALL the areas that have fishermen who fish in the area in which the Pioneer Array will be located. I believe this would include MA - NJ, hence my reason for writing. Senator Whitehouse's office is working the issue, yet, it is clear that it is IMPERATIVE that we get ALL the Senator's involved in the affected states. NSF is pretending there are few fishermen concerned about this (only the ones making noise.....Fred, me, and a few others); we need to make an impression and push back. We have been requesting a "guarantee" that this oceanographic project which was just dropped in one of the most fruitful fishing grounds in the Northeast, will not create a closure of the area to commercial fishing The only way we will do that is through our congressional delegations, and their support for language in the Army Corps permit, preventing closures. PLEASE HAVE YOUR SENATORS CONTACT ANNA-MARIE LAURA IN SENATOR WHITEHOUSE'S OFFICE ASAP. I am happy to continue being the "active" industry rep. on this and to do most of the necessary work, however, I need you to get your Senator involved, otherwise, I can't promise a positive outcome.....one Senator is
not going to be enough.

**Bonnie**

Bonnie Spinazzola, Ex. Dir.

Atlantic Offshore Lobstermen's Assn.
(603) 206-5468
(603) 498-3032 - cell
bonnie@offshorelobster.org

-------- Forwarded message --------
From: Laura, Anna-Marie (Whitehouse) <Annamarie_Laura@whitehouse.senate.gov>
Date: Fri, Mar 11, 2011 at 1:36 PM
Subject: nsf micro-siting
To: Bonnie Spinazzola <bonnie@offshorelobster.org>

Hi Bonnie,

Wanted to keep you in the loop on my communications with NSF about the timing and language in the letter that will announce the public comment period for micro-siting of the array. See the email from Karen, NSF's legislative affairs contact, below.

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Anna-Marie, I'm sorry I missed your call yesterday afternoon. I have been planning to follow up with you. I wanted to thank you for your recent message in which you provided draft language for possible inclusion in NSF’s micro-siting letter to the public and also in the application for an Army Corps of Engineers permit. With regard to the suggested language for possible inclusion in the permit application, please note that it has been passed on to the Consortium of Ocean Leadership (OL), as that is the entity responsible for construction and initial operations for the OOI project. As such, OL will be applying for the permit. As for the language suggested for inclusion in NSF’s micro-siting public letter, NSF will consider both the language you drafted and that prepared by the member of the commercial fishing industry. Once NSF has determined the appropriate language to include in its letter and the letter is ready to be released to the public, I will, as mentioned during our phone conversation, let you know. The letter will likely be released by NSF within a week. As you may recall, the letter will initiate a 60-day written public comment period followed by a public meeting in June. Through NSF’s micro-siting process, we hope to continue to receive input from other members of the public. It is also our hope that you will continue to participate in the micro-siting effort through that established process. Input into NSF’s micro-siting process is highly valued and is precisely the reason why NSF decided to offer the public an additional procedure to provide input.

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Would you have time to talk briefly this afternoon or Monday? I want to speak with you before I respond to Karen.

Hope you’re doing well,


*Anna-Marie Laura*

Sen. Sheldon Whitehouse (RI)

224-2921
Figure 2-8b
Location of the Proposed Mid-Atlantic Bight CSN (Pioneer Array) and Associated Glider and AUV Mission Boxes on the Area NOAA Chart
Hi Anna-Marie,
It was very nice to meet you and put a face with a name, this past Monday.
Thanks so much for introducing yourself to me!

Have you heard anything about their "letter" that NSF/OOI keeps promising that will notify stake holders of the public comment period? Has the comment period already started, or has it been extended already, without anyone knowing?? I'm wondering, since the time-line is getting a bit ridiculous, if this is just a stalling tactic. Also, I don't know if you are aware, but they are putting a test mooring(s) out sometime in April. We have heard nothing about it, only that it is the "plan." We have no idea what, exactly is going out, what the structure or structures will encompass (cables, etc), and where they will be "planted." I'm beginning to think this letter is a tactic to keep us quiet until the test structure(s) are in the water and/or until the comment period has ended.

I think it's time to really push these people to get information out to stakeholders; I have never, ever seen a project run in such a clandestine manner. The fact that they have gotten away with it for this long a period of time, just feeds into their belief, and actions, that they can and WILL continue to operate in this fashion. Have you heard from any of the other delegations, or have you contacted any of them to see if perhaps a joint letter can go out "demanding" stakeholder input and an open process?

Please let me know where we are, as if necessary, I will call industry in other states, again to contact their delegations. Further, as Kate mentioned at the beginning of this whole mess, perhaps the best approach would be to meet with the scientists, and if we can agree on the location of the moorings, we (fishing industry and scientists) can get this project moving forward in an acceptable, pro-active and collaborative manner.

I await your thoughts; thank you,

*Bonnie*

Bonnie Spinazzola, Ex. Dir.

Atlantic Offshore Lobstermen's Assn.
(603) 206-5468
(603) 498-3032 - cell
bonnie@offshorelobster.org
**Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE)**

**Delaware Task Force Meeting Agenda**

DNREC Lewes Field Facility

901 Pilottown Road, Lewes, Delaware 19958

March 24, 2011 9:00 a.m. – 12:45 p.m. ET

<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
</tr>
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<tbody>
<tr>
<td>9:00 – 9:30 a.m.</td>
<td><strong>Registration</strong></td>
</tr>
<tr>
<td>9:30 – 9:45 a.m.</td>
<td><strong>Welcome, Introductions, and Meeting Purpose</strong>&lt;br&gt;Erin Trager, Delaware Project Coordinator, BOEMRE Office of Offshore Alternative Energy Programs (OAEP), and Brandi Carrier Jones, Meeting Facilitator, EM&amp;A</td>
</tr>
<tr>
<td>9:45 – 10:15 a.m.</td>
<td><strong>DOI Delaware Update and Discussion of Smart from the Start</strong>&lt;br&gt;Ned Farguhar, Deputy Assistant Secretary for Land and Minerals Management, Department of the Interior</td>
</tr>
<tr>
<td>10:15 –10:25 a.m.</td>
<td><strong>Remarks by the Delaware Department of Natural Resources and Environmental Control (DNREC)</strong>&lt;br&gt;Collin O’Marra, Secretary of Delaware Department of Natural Resources and Environmental Control (DNREC)</td>
</tr>
<tr>
<td>10:25 – 10:35 a.m.</td>
<td><strong>Remarks by the U.S. Coast Guard Fifth District</strong>&lt;br&gt;Rear Admiral William “Dean” Lee, Commander, Fifth Coast Guard District</td>
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<tr>
<td>10:35 – 10:45 a.m.</td>
<td><strong>Break</strong></td>
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<tr>
<td>10:45 – 11:15 a.m.</td>
<td><strong>Discussion of NEPA Next Steps: NEPA Analysis and Consultations – Regional and Delaware</strong>&lt;br&gt;Jean Thurston, Delaware NEPA Lead, BOEMRE OAEP</td>
</tr>
<tr>
<td>11:15 – 11:45 a.m.</td>
<td><strong>Discussion of RFCI Responses and Leasing Next Steps</strong>&lt;br&gt;Erin Trager, BOEMRE OAEP</td>
</tr>
<tr>
<td>11:45 – 12:00 p.m.</td>
<td><strong>Meeting Wrap Up: Action Items and Next Steps</strong>&lt;br&gt;Erin Trager, BOEMRE OAEP, and Brandi Carrier Jones, EM&amp;A</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td><strong>Intergovernmental Meeting Adjourns</strong></td>
</tr>
<tr>
<td>12:15 – 12:45 p.m.</td>
<td><strong>General Public Q&amp;A Session with BOEMRE Staff</strong></td>
</tr>
</tbody>
</table>
Ms. Jessica Bradley
Renewable Energy Program Specialist
Bureau of Ocean Energy Management Regulation and Enforcement
Office of Offshore Alternative Energy Programs
381 EIden Street, Mail Stop 4090
Herndon, Virginia 20170

RE: Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Massachusetts – Request for Interest (RFI)

Dear Ms. Bradley:

The National Marine Fisheries Service (NMFS) has reviewed the Bureau of Ocean Energy Management, Regulation, and Enforcement’s (BOEMRE) Request for Interest (RFI) – Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Massachusetts, published in the Federal Register on December 29, 2010. As noted in the Federal Register, the RFI area of interest is located south and east of Martha’s Vineyard and Nantucket, and encompasses an area of approximately 2,224 square nm, and contains 321 whole OCS lease blocks, as well as 163 partial lease blocks. The purpose of the RFI is to solicit interest for potential development of wind energy projects within the proposed area, as well as to solicit comments and information - including information on environmental issues and data – that will be useful in the consideration of the RFI area commercial wind energy leases.

We understand that this is part of the Secretary of Interior’s Smart from the Start OCS renewable energy initiative. Based on responses to this RFI, certain portions of the area may be designated as Wind Energy Areas (WEA’s) by BOEMRE for further study and consultation to foster responsible and efficient leasing and development. NMFS has been a member of the Massachusetts Renewable Energy Task Force since its inception and has provided initial information regarding NMFS issues and concerns. As such, NMFS offers the following general comments regarding the established process, as well as additional comments regarding NMFS trust resources, commercial fishing activity, and management concerns within the RFI area. Due to the fact that specific projects, and associated project components, have yet to be proposed within the RFI area, our comments focus on resources, activities, and management actions that presently occur within the site. It is NMFS’s intention to provide this information to assist BOEMRE in avoiding and minimizing conflicts with fishery interests and resources in the future siting of offshore renewable energy facilities.

General Comments
In July 2010, President Obama signed Executive Order 13547 to establish the National Ocean Council, and to establish a comprehensive, integrated national policy for the stewardship of the nation’s ocean, coasts and Great Lakes. In particular, it provides a process for the development of ecosystem-based coastal and marine spatial planning (CMSP), through the work of regional planning bodies. As described within the recommended framework, CMSP takes a regional
approach to the development of CMS plans, including planning for multiple existing and emerging uses, such as offshore wind energy facilities. At the same time, BOEMRE’s Smart from the Start initiative (including this RFI solicitation) established a process for the leasing of sites for offshore wind energy facilities as well. However, BOEMRE’s process is being conducted on a state-by-state basis and is focused on a single sector – offshore wind. While NMFS has raised this issue on multiple occasions, it is unclear how these two parallel processes will intersect in a comprehensive manner.

The establishment of regional planning bodies (RPBs) under the National Ocean Policy’s CMSP framework establishes a formal coordination mechanism with the regional fishery management councils (RFMCs). This has been highlighted within the National Ocean Policy due to their “unique statutory responsibilities under the Magnuson-Stevens Fishery Conservation and Management Act, and their quasi-regulatory role.” As such, the Council Coordinating Committee has formally requested a role on the RPBs, once established. Likewise, the RFMCs have expressed interest in engaging on the Federal-State task forces, due to their important role in identifying commercial and recreations fishing interests. As a parallel track is being considered for the broader CMSP process, involvement of the RFMCs in the BOEMRE offshore wind siting process can further encourage linkages of the CMSP and BOEMRE processes.

**Fishery habitat resources within the RFI area**

The proposed RFI area has been designated as essential fish habitat (EFH) for a broad range of federally managed species including, but not limited to, Atlantic cod, haddock, pollock, winter flounder, yellowtail flounder, scup, summer flounder, Atlantic surf clam, Atlantic sea scallop, squid, black sea bass, and Atlantic herring. For each of these species, descriptions of specific habitat parameters can be found at http://www.nero.noaa.gov/hed/list.htm.

The proposed RFI area consists of substrates ranging from mud and sand to cobble and boulder habitat. Recent research on surficial sediment characteristics (Harris and Stokesbury 2010, USGS) has revealed that the eastern portion of the RFI area contains areas of granule-pebble, cobble and boulder substrates. Larval and juvenile sea scallops prefer bottom habitat composed of gravelly sand and adults are found in areas of coarse substrate, usually gravel, shells and rock (Packer et al. 1999). American lobster, which is an important NMFS trust resource, also use cobble substrate (ASMFC 1997), particularly during early benthic phase (Barshaw and Bryant-Rich 1988). Early benthic phase lobster utilize cobble for shelter from predation and for feeding (Wahle and Steneck 1991). The structural complexity of gravel and cobble habitat provides important functional value for fish as shelter and refuge from predators (Auster 1998; Auster and Langton 1999; NRC 2002; Stevenson et al 2004). These complex benthic substrates, such as gravel, cobble and boulder, are vulnerable to disturbance, particularly due to extended recovery times (Collie et al 2005; Bradshaw et al. 2000). With regards to offshore wind energy development, benthic disturbance could result from underwater cable installation, monopile installation, and scour protection structures.

An understanding of the role and relationship these habitats and resources have in the ecological system is important in order to integrate wind energy development appropriately into the ocean use setting. The NMFS Northeast Fisheries Science Center (NEFSC) has identified certain ecologically important factors within the RFI area, including chlorophyll concentrations, areas of
primary productivity, as well as benthic organism species richness and biomass. This information may be utilized by BOEMRE in the site leasing analysis to identify areas that serve critical ecosystem functions. This information is displayed in figures 1-10.

**Essential Fish Habitat Consultation**

Due to the potential for substantial adverse effects on essential fish habitat (EFH) from offshore wind energy projects on the OCS, specific proposals within the RFI area must include an expanded EFH assessment under the federal review process, and should be included within the draft NEPA document. This is a separate review mandated pursuant to the terms of the Magnuson Stevens Fishery Conservation and Management Act (16 U.S.C. 1855), although BOEMRE may use the draft NEPA document as the vehicle within which to present the EFH assessment. The required contents of an expanded EFH assessment include: a description of the action; an analysis of the potential adverse effects of the action on EFH and the managed species; the federal action agency’s conclusions regarding the effects of the action on EFH; and proposed mitigation, if applicable. Other information that should be contained in the EFH assessment, if appropriate, includes: the results of on-site inspections to evaluate the habitat and site-specific effects; the views of recognized experts on the habitat or the species that may be affected; a review of pertinent literature and related information; and an analysis of alternatives to the action that could avoid or minimize the adverse effects on EFH. The expanded EFH assessment will be a key component of our consultation that will establish protections to trust fishery resources in the course of offshore energy development.

**Protected Resources within the RFI area**

*Endangered Species Act*

Federaely endangered Northern right whales (*Eubalaena glacialis*), fin (*Balaenoptera physalus*), and humpback whales (*Megaptera novaeangliae*) are found seasonally in the waters off of Massachusetts and have been documented in the waters of the RFI area. Sei (*Balaenoptera borealis*) and sperm (*Physeter macrocephalus*) whales may also be present in the deeper offshore waters included in the RFI.

Listed sea turtles are also found seasonally in the waters off of Massachusetts identified in the RFI area, typically between June and November. The sea turtle species that are likely to be present in the RFI area include threatened loggerhead (*Caretta caretta*) sea turtles as well as endangered Kemp’s ridley (*Lepidochelys kempi*), leatherback (*Dermochelys coriacea*) and green (*Chelonia mydas*) sea turtles.

In 1994, certain New England waters were designated as critical habitat for the Northern right whale (*Eubalaena glacialis*) (Final Rule at 59 FR 28793). The Great South Channel critical habitat is the area bounded by 41°40’ N/69°45’ W; 41°00’ N/69°05’ W; 41°38’ W; and 42°10’ N/68°31’ W. The Cape Cod Bay critical habitat is the area bounded by 42°02.8’ N/70°10’ W; 42°12’ N/70°15’ W; 42°12’ N/70°30’ W; 41°46.8’ N/70°30’ W and on the south and east by the interior shore line of Cape Cod, Massachusetts. In 2008, a revision to the Northern Right Whale listing resulted in the listing of North Atlantic right whales (*Eubalaena glacialis*) and North Pacific right whales (*Eubalaena japonica*) as two separate species (see 73 FR 12024). It appears that certain portions of the RFI area border the Great South Channel critical habitat area. On October 6, 2010 NMFS announced that the rulemaking process to revise the existing critical
habitat designation is ongoing with the expectation that a proposed critical habitat rule for the
North Atlantic right whale will be submitted to the Federal Register for publication in the second
half of 2011. As the boundaries and status of the North Atlantic right whale critical habitat area
may change in the future, NMFS recommends that BOEMRE and any potential lessee obtain
updated status information from NMFS prior to the submittal of any applications or consultation
requests.

Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) occur in the coastal waters identified in the
RFI area. On October 6, 2010, NMFS published two proposed rules to list five distinct
population segments (DPS) of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). NMFS is
proposing to list four DPSs as endangered (New York Bight, Chesapeake Bay, Carolina and
South Atlantic) and one DPS of Atlantic sturgeon as threatened (Gulf of Maine DPS). Atlantic
sturgeon are highly migratory and in marine waters, such as those identified in the RFI, sturgeon
from any of the 5 DPSs could be present; however, outside of the Gulf of Maine, Atlantic
sturgeon are found almost exclusively in waters less than 20 meters in depth. Please note that
once a species is proposed for listing, the conference provisions of the ESA apply (see 50 CFR
402.10). As the listing status for this species may change, NMFS recommends that BOEMRE
and any potential lessee obtain updated status information from NMFS prior to the submittal of
any applications or consultation requests.

*Section 7 Consultation*
The construction and operation of a wind energy facility in the RFI area, as well as certain pre-
construction activities such as geophysical and geotechnical surveys, may affect fish populations,
marine mammals, sea turtles and the habitats on which they depend. Under Section 7(a)(2) of
the ESA, each Federal agency is required to insure that any action they authorize, fund or carry
out is not likely to jeopardize the continued existence of any endangered or threatened species.
Consultation would be necessary for any permits, authorizations, leases, easements or right of
ways issued by BOEMRE. It is NMFS understanding that BOEMRE will be the lead Federal
agency for any section 7 consultations regarding any wind energy facility proposed in the RFI
area and that section 7 consultation would be completed prior to the issuance of any lease or
other necessary authorization. As required by the section 7 consultation process, any
environmental documentation regarding a proposed wind facility in the RFI area must fully
examine all potential impacts to NMFS listed species and designated critical habitat including:
acoustic impacts of construction and operation, any pre-construction geophysical and/or
geotechnical surveys, effects on prey, effects to migratory behavior, potential entanglement,
vessel traffic, benthic impacts, and impacts to water quality.

*Marine Mammal Protection Act*
Several species of marine mammals are common residents or occasional visitors to the waters
identified in the RFI. All marine mammals receive protection under the Marine Mammal
Protection Act (MMPA) of 1972, as amended. The MMPA prohibits, with certain exceptions,
the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the
importation of marine mammals and marine mammal products into the U.S. NMFS may issue
permits under MMPA Section 104 (16 U.S.C. 1374) to persons that authorize the taking or
importing of specific species of marine mammals. As previously indicated, several marine
mammals are likely to occur in the project area and thus could be affected by a proposed
offshore wind project, including pre-construction activities such as geophysical and geotechnical surveys. As noted above regarding listed species, any environmental documentation should fully examine all potential impacts to species protected under the MMPA including: effects on prey, effects to migratory behavior, potential entanglement, vessel traffic, benthic impacts, and impacts to water quality. It is recommended that any project proponent discuss permitting needs with NMFS’ Office of Protected Resources Permits, Conservation, & Education Division (301-713-2289). Information on “incidental take” authorizations can also be found online at: https://apps.nmfs.noaa.gov/questionnaire/questionnaire.cfm.

**Fishing Activity and Associated Fishery Resources within the RFI Area**

The RFI area contains a broad range of federally managed fishery resources, which are the economic base of an extensive and valuable commercial fishing industry; specifically, the RFI is within active fishing grounds for cod, haddock, pollock, winter flounder, yellowtail flounder, as well as other species managed under the Northeast Multispecies Fishery Management Plan (FMP). In addition, the RFI area is an active fishing area for summer flounder, black sea bass, squid, and butterfish. The eastern portions of the RFI area are utilized by the valuable Northeast sea scallop fishery, while southern portions of the RFI area are utilized for harvest of Atlantic surf clams. Furthermore, monkfish trawl and gillnet vessels utilize this area, and the area is important for the herring and mackerel fisheries during January through April. Figures 11-20 highlight specific fishing activity for the RFI area, utilizing Vessel Trip Report (VTR) data; specifically, the VTR data display fishing effort and catch data for otter trawl, dredge, gillnet, pot and longline fishing activities from 2006-2010.

The RFI area continues to be an important lobster harvesting area for the lobster trap fishery, as the area is the nexus between the dayboat and offshore fleets. Between 1982 and 2007, NMFS statistical area 537 (area nearest RFI location) has yielded among the highest lobster landings south of the Gulf of Maine (ASMFC 2009). This area may continue to become more important as lobster abundance and landings decline in the adjacent nearshore areas of southern New England.

Based on the extensive fisheries that are present within the RFI area, it is critical for BOEMRE to determine the anticipated impact of wind energy development to current and future fishing activities, including the potential for exclusion zones to be proposed for offshore wind lease areas. Although exclusion zones are not currently anticipated by the U.S. Coast Guard, experiences in Europe suggest that fishing vessel insurance companies may require restricted access to wind energy areas as conditions of policies. As large closures of fishing grounds (for reasons other than fishery management) may affect the sustainable harvest of fishery resources, BOEMRE should investigate further the potential for vessel exclusion from areas identified within the RFI, and the impacts to fisheries associated with such exclusions.

**Fishery Management Actions within the RFI Area**

In association with the fisheries resources and fishing activities that occur within the RFI, portions of the RFI area are actively managed by NMFS for a variety of resource management
goals. Detailed information regarding these management areas can be found at http://www.nero.noaa.gov/nero/fishermen/charts.html http://www.nero.noaa.gov/nero/regs/info.html

Generally, the RFI area overlaps with portions of the Nantucket Lightship Closure Area which excludes certain gear types and fisheries, as well as the Nantucket Lightship Habitat Closure Area, in which the use of bottom-tending mobile gear is prohibited. The RFI area overlaps with geographic areas defined for various regulatory provisions in the Multispecies FMP (such as an area where certain species cannot be retained or where a particular fishing gear restriction is applied). The RFI area covers a large portion of the current Nantucket Light Ship Closed Access Area, under the Atlantic Sea Scallop FMP. Also, it overlaps with the SW portion of the Great South Channel scallop dredge exemption area and the NE portion of the SNE scallop dredge exemption area, both of which provide valuable scallop resources to the fishing industry. In addition, the RFI Area overlaps with the spiny dogfish gillnet exemption area, and with the Atlantic Herring FMP Herring Management Area 2. Finally, the RFI area also currently encompasses areas closed to certain types of shellfish harvesting due to concerns over Paralytic Shellfish Poisoning. For each of the fishery management areas described above, both the physical location and intent of these management areas should be considered in the leasing of areas for offshore wind energy projects. It is also important to note that fishery management regulated areas can change based on the specific resource management goals. Therefore, it is important that BOEMRE recognize the importance of maintaining fishing access should current closed areas reopen in the future.

Conclusion
Thank you for the opportunity for NMFS to provide our issues and concerns into the RFI process. We look forward to working with BOEMRE to clearly establish the process for input of NMFS data and information, and to refine the coordination process for fulfilling statutory requirements under the Magnuson-Stevens Fisheries Conservation and Management Act and the Endangered Species Act. We encourage BOEMRE and any potential lessees to work with NMFS as specific project plans become more developed to identify and evaluate the potential for impacts to NMFS trust resources. If any applicant intends to conduct biological or geophysical surveys at the project site, we encourage coordination with both the NMFS Northeast Regional Office and the NMFS Northeast Fisheries Science Center. Should you have any questions regarding the information presented on listed species or about the ESA Section 7 process, please contact Julie Crocker of NMFS Protected Resources Division at (978)282-8480 or Julie.Crocker@Noaa.gov. For all other information regarding this RFI, please contact Christopher Boelke at 978-281-9131.

Sincerely,

Patricia A. Kurkul
Regional Administrator
Cc: Maureen Bornholdt, BOEMRE
    Mel Cote, US EPA
    Tom Chapman, US FWS
    Karen Adams, US ACOE
    Paul Howard, NEFMC
    Christopher Moore, MAFMC
    Jenifer Lukens, NOAA CMSP Program
    Betsy Nicholson, NOAA CMSP Regional Lead
References


Harris, B.P and K.D Stokesbury. 2010. The spatial structure of local surficial sediment characteristics on Georges Bank, USA. Continental Shelf Research 30: 1840-1853.


Resource Access International, LLC
P.O. Box 241
Cambridge, MD 21613
P 410 221 8100

February 9, 2011

Bureau of Ocean Energy Management, Regulation and Enforcement
Office of Offshore Alternative Energy Programs
381 Eelden Street, Mail Stop 4090
Herndon, Virginia 20170-4817.

Re: Request for Competitive Interest (RFCl) in Proposed Lease Area off of Delaware

Please accept these comments in response to a RFCl associated with a wind energy lease area proposed seaward of Delaware state waters and the entry to Delaware Bay.

The surf clam/ocean quahog fishery is one of the most established and sustainably managed fisheries on the eastern seaboard. These shellfish are harvested from fishing grounds extending from Virginia to Massachusetts, typically in waters between 30 meters and 80 meters depth. The clam fishery is most likely to occur in substrates ranges from high-energy sand environments to sand-gravel-shell environments, habitats which predominate throughout the proposed lease area.

Harvesting is done by vessels 30 to 50 meters in length; catcher vessels typically employ a hydraulic dredge which is towed across the sea floor behind the vessel. A manifold on the leading edge of the dredge directs a stream of pressurized water into the substrate ahead of the dredge, temporarily "liquefying" the tow path. The dredge, followed by a steel collection cage, travels through this sand/sand-gravel substrate, recessed into the sea floor by 0.5 to .75 meter depth, sieving out the largest mollusks.

Because surf clams and ocean quahogs are slow-growing shellfish, sustainable fishing practice requires harvesters to disperse their efforts in order to avoid overfishing an area; typically, shellfish habitat is worked for a period and then allowed to lay fallow. All of the lease blocks being considered in this RFCl have been subject to surf clam/ocean quahog harvesting in the recent past and will see periodic fishing activity in the coming years. Clams that have been taken from the proposed lease area were worth millions of dollars. The resource inhabiting the proposed lease area is expected to generate tens of thousands of bushels of clams in the future.

Principle landing ports for surf clams and ocean quahogs in the Delmarva region are Ocean City, MD, Atlantic City, NJ, and Cape May, NJ. The approximately 20 of catcher vessels berthed in these three ports are dependent on access to the proposed lease area off of Delaware, and other lease areas proposed for waters outside of Maryland and New Jersey. A large clam processor maintains a processing facility in Delaware which is the principle shucking plant for surf clams and ocean quahogs, buying from harvesters throughout the region. This facility contributed tens million dollars in revenues to the Delaware economy and hundreds of jobs.
Overall, the surf clam/ocean quahog industry, with harvesting and processing combined, ranging from Maryland to Maine, generates on average $75 million annually.

Our concern is that any wind power generating facilities permitted in this proposed lease area will result in effectively denying surf clam/ocean quahog harvesters' future access to the shellfish resource in the area subject to development. There are four ways that this will happen:

- The cumulative footprint of turbine towers and riprap buffering will represent a significant loss of habitat to these shellfish;
- Insurance coverage for fishing vessels operating near wind turbine towers will be prohibitively expensive or impossible to obtain; and
- In the dynamic marine environment of the lease area, buried transmission cables will be unpredictably exposed to hydraulic dredge activities due to seafloor scouring by ocean currents.
- Exclusion zone placed around each wind turbine will deny the right to fishing in the entire area.

Finally, of necessity, catcher vessels already avoid harvesting activities in the USCG Traffic Separation Scheme approaches to Delaware Bay as a matter of vessel safety. If this proposed lease area and other proposed lease areas are developed for wind power in the future, it will have the net effect of forcing fishing activities into the high-traffic lanes of the USCG TSS, jeopardizing lives and property.

There is reason to hope that offshore wind power development and high-value fisheries can co-exist compatibly. To date however, the process for determining if and how that can be accomplished has been obscure, to the point of needless exclusion of existing industries which place high importance on access to this marine environment. This must not continue. We strongly urge the Bureau of Ocean Energy Management, Regulation and Enforcement to amend its lease process in the several states from Virginia to Maine where wind power development is most likely to occur, to adopt a much more comprehensive approach including greater consultation with NOAA Fisheries, the Mid-Atlantic and New England Fishery Management Councils, and representatives of relevant fishing industries.

Thank you in advance for considering our comments.

Sincerely,

D. H. Henry
RAI, LLC
Hoff, Thomas B.

From: Trager, Erin C <Erin.Trager@boemre.gov>
Sent: Friday, February 11, 2011 10:19 AM
To: Hoff, Thomas B.; Kray, Eugene
Cc: Hooker, Brian; Moore, Christopher; stanley.w.gorski@noaa.gov
Subject: RE: BOEMRE Delaware Proposed Lease Area and RFCI Now Available

Tom,

Thank you very much for your email. We will certainly consider NMFS’ comments submitted in response to the RFI this past summer as we move forward with the leasing process offshore Delaware. The RFCI comment period closed COB yesterday, so we will be considering the information we’ve received in response to that notice and determining our next steps over the next few days. I look forward to seeing you this spring.

Best Regards,
Erin

From: Hoff, Thomas B. [mailto:thoff@mafmc.org]
Sent: Thursday, February 10, 2011 2:06 PM
To: Trager, Erin C; Kray, Eugene
Cc: Hooker, Brian; Moore, Christopher; stanley.w.gorski@noaa.gov; Hoff, Thomas B.
Subject: RE: BOEMRE Delaware Proposed Lease Area and RFCI Now Available

Erin,

Thank you for making us aware of the very tight deadline for providing comments. We discussed the DE Lease Area again briefly at our Ecosystem and Ocean Planning Committee meeting yesterday in New Bern NC. We believe the letter that Stan Gorski sent you on June 25, 2010 with the associated maps (both attached) cover our concerns about the proposed DE lease area. We provided our input into that correspondence this past summer. The ‘old grounds’ are significant recreational fishing locations and we encourage a very precautionary approach to leasing those areas.

We understand that you are under tight timelines to move wind energy projects and hope to be able to provide important resource and fisheries input quickly to your efforts. We look forward to having you and Brian at our April Council Ecosystem and Ocean Planning Committee meeting in Annapolis.

Tom

From: Trager, Erin C [mailto:Erin.Trager@boemre.gov]
Sent: Friday, January 28, 2011 5:23 PM
To: Kray, Eugene
Cc: Hoff, Thomas B.; Hooker, Brian
Subject: BOEMRE Delaware Proposed Lease Area and RFCI Now Available

Gene,

Brian has been out of the office for the last few days, so I'm not sure he's had the opportunity to notify you that the Delaware Notice of Proposed Lease Area and Request for Competitive Interest (RFCI) is now published in the Federal Register. The comment period closes at close of business on February 10, 2011. Both the notice and the corresponding map are available on our web site at the link below:

http://www.boemre.gov/offshore/RenewableEnergy/StateActivities.htm#Delaware

Please let me know if you have any questions or troubles accessing the notice.
Thank you!

Best,
Erin

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From: Sigma58@aol.com [mailto:Sigma58@aol.com]
Sent: Friday, December 17, 2010 3:34 PM
To: Hooker, Brian; Trager, Erin C
Cc: thoff@mafmc.org
Subject: MAFMC Workshop

Hi Erin and Brian, I wanted to thank you for attending our workshop this week in Virginia Beach. I hope it met your needs. As I mentioned to both of you, we are hoping to have another one this summer and would like to see if you would be able to give a presentation on how your agency might be able to assist us as we try to include ecosystem based principles into our fishery management plans.

Also, please I would appreciate it if you would keep me abreast of the status of the movement of windmills off Rehoboth Beach, DE (Old Grounds) in accordance with the Habitat request from Stan Gorski.

I hope you both have a very Merry Christmas.......Gene

Dr. Gene Kray
Chris,

Yesterday I attended the BOEMRE Delaware Task Force Meeting in Lewes. It was an impressive meeting with the Secretary of DNREC and Ned Farquhar, Deputy Assistant Secretary for Land and Mineral Management (DOI) announcing that DOI was ready to issue a lease with Bluewater Wind. It should be in the local papers as there were lots of reporters and TV crews there. This lease is not for commercial development yet and specific blocks can still be dropped, but DOI has gotten to this point without an EIS, simply an Environmental Assessment. They had 4 commenters including Resource Access International, LLC which was very concerned over the lack of access to the wind area for fishing. At the end of the meeting, when the public could speak (the Council is not part of the Task Force and I had to wait) I told them about VMS on many commercial fishing vessels and that those data could be obtained from Woods Hole. I then asked why my email comments from Feb 10 (last day of comment period and the day after the Ecosystem and Ocean Planning committee suggested we reiterate the NMFS comments from last June which we supported) had not been incorporated along with the 4 sets of other public comments and Erin Trager (who will be at our April Council meeting) mentioned that she didn’t include them because they were simply reiterating others earlier comments. I also asked about access to any wind array field for either commercial or recreational fishermen and no one would say that fishermen would not be allowed, but the Coast Guard representative mentioned that that might be an issue for the National Ocean Commission to address. It was mentioned that insurance companies might be the driving force on this issue. Bottom line, I think we should be honest with our fishermen (not alarmist) but tell them there is a very very good probability that they will NOT be allowed near these structures. Thus this is defacto marine spatial planning.

At this point, I hate to advocate for any more work, I have clam specs to do next month, but this is something big and will very likely have huge impacts to the fishermen of the mid-Atlantic. On Wednesday the Maryland Task Force met. There are proposals for NJ and NC, while VA and NY are not too far behind. The areas are NOT small that are being considered also.

Finally, another indication of the level of this is that not only was an Assistant Secretary of DOI there, but so was a Rear Admiral from the Coast Guard.

Tom

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