Summary

Northeast Regional Planning Body Meeting

June 3-4, 2015

Mystic, Connecticut

This document summarizes discussions and presentations at the sixth meeting of the Northeast Regional Planning Body. The meeting took place on June 3-4, 2015 in Mystic, Connecticut. The summary was produced by Meridian Institute, which provides meeting planning and facilitation services for the Northeast Regional Planning Body.

Contents

Executive Summary

The sixth meeting of the Northeast Regional Planning Body (NE RPB) took place on June 3-4, 2015 at the Hilton Mystic in Mystic, Connecticut. The NE RPB meeting was attended by state, federal, New England Fishery Management Council and tribal NE RPB appointed members or their alternates. Approximately 64 members of the public attended as observers and 16 total public comments were provided during two public comment sessions held over the course of the meeting. A list of NE RPB members and alternates and public participants is included in Appendix A.

Objectives of the meeting were to:

- Discuss updates on NE RPB activities and progress since November 2014.
- Review and make decisions on next steps for the synthesis and use of data and other information under existing authorities.
- Review Draft Northeast Ocean Plan Outline and make decisions about next steps.
- Provide opportunities for public input about the topics being considered by the NE RPB.

Meeting materials, including discussion documents and a summary from the recent stakeholder forum can be found by clicking here[1]. Additional information about the NE RPB and ocean planning in general is available here[2]. This includes information on past and upcoming NE RPB meetings and opportunities for public comment.

The first day of the meeting, June 3, the NE RPB heard updates on key projects, reviewed a Draft Northeast Ocean Plan Outline, considered the Draft Work Plan, which included next steps for data synthesis and agency use to guide the development of the draft plan, and heard public comments. On the second day of the meeting, June 4, the NE RPB continued to discuss the Draft Work Plan and Outline, next steps for data synthesis and agency use over the next six months, and heard additional public comments.

The NE RPB adopted the Draft Work Plan that advances development of the Northeast Ocean Plan. As part of this Work Plan, the NE RPB will establish an Ecosystem Based Management (EBM) Work Group. The Terms of Reference for this Work Group will be developed by the Co-Leads for further review and discussion by the NE RPB. Fall agency workshops and a public stakeholder forum will occur in advance of the next NE RPB meeting in November 2015.

[1] http://neoceanplanning.org/events/june-2015-rpb-meeting/

[2] http://neoceanplanning.org/

About This Meeting

The sixth meeting of the Northeast Regional Planning Body (NE RPB) took place on June 3-4, 2015 at the Hilton Mystic in Mystic, Connecticut. The NE RPB meeting was attended by state, federal, New England Fishery Management Council (NEFMC), and tribal NE RPB appointed members or their alternates. Approximately 64 members of the public also attended and 16 total public comments were provided during two public comment sessions during the meeting. A list of NE RPB members and alternates and public participants is included in Appendix A.

The meeting was called by the NE RPB state and federal Co-Leads. The state Co-Lead is Grover Fugate, Executive Director, Coastal Resource Management Council, State of Rhode Island; the federal Co-Lead is Betsy Nicholson of the National Oceanic and Atmospheric Administration (NOAA); the tribal Co-Lead is Richard Getchell, All Nations Consulting and Former Tribal Chief, Aroostook Band of Micmac Indians. The meeting was organized in collaboration with John Weber, Nick Napoli, and Katie Lund, ocean planning staff, and Meridian Institute staff, which provided meeting planning and facilitation services and developed this summary document.

Meeting Objectives

Objectives of the meeting were to:

- Discuss updates on NE RPB activities and progress since November 2014.
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- Provide opportunities for public input about the topics being considered by the NE RPB.

Meeting materials, including discussion documents and a summary from the May 2015 stakeholder forum can be found by clicking here[3]. Additional information about the NE RPB and ocean planning in general is available here[4]**.** This includes information on past and upcoming NE RPB meetings and opportunities for public comment.

[3] http://neoceanplanning.org/events/june-2015-rpb-meeting/
[4] http://neoceanplanning.org/

Wednesday, June 3, 2015

On the first day of the meeting, June 3, the NE RPB heard updates on key projects, reviewed the Draft Northeast Ocean Plan Outline and the Draft Work Plan to guide the development of the ocean plan, reviewed options for next steps for data synthesis and agency use, and heard public comments.

Tribal Blessing

Ms. Lynn Malerba, Mohegan Tribe, opened the meeting by offering a blessing for meeting participants.

Welcoming Remarks

Commissioner Rob Klee, Connecticut Department of Energy and Environmental Protection, welcomed NE RPB members to Connecticut on behalf of Governor Dannel Malloy. He emphasized the value of Long Island Sound to the state and referenced the recent announcement that the Connecticut legislature passed legislation to create and implement a "Blue Plan" with marine spatial planning at its core (Bill No. 6839, An Act Concerning a Long Island Sound Blue Plan and Resource and Use Inventory). He highlighted the intersections between this state planning effort and the NE RPB's work and said that climate change should be an important theme in both of these plans.

Introductions and Agenda Review

Ms. Laura Cantral, Meridian Institute, facilitated a round of introductions. A list of attending NE RPB members, alternates, and public participants is included in Appendix A. Ms. Cantral explained that the meeting would be focused on four objectives:

- Discuss updates on NE RPB activities and progress since November 2014.
- Review and make decisions on next steps for the synthesis and use of data and other information under existing authorities.
- Review draft Northeast Ocean Plan Outline and make decisions about next steps.
- Provide opportunities for public input about the topics being considered by the NE RPB.

She informed the group that there would be two opportunities to receive public comment about the topics being considered by the NE RPB, one at the end of the first day of discussion and one at the end of the second. She also directed attention to two documents that were released prior to the meeting: the *Draft RPB Work Plan*[5] and the *Draft Northeast Ocean Plan Outline*.[6]

[5] http://neoceanplanning.org/wp-content/uploads/2015/06/RPB-Work-Plan-Decision-June-2015.pdf
[6] http://neoceanplanning.org/wp-content/uploads/2015/06/Draft-NE-Ocean-Plan-Outline-June-2015.pdf

Opening Remarks, Overview of NE RPB Progress, and Presentation of Draft Northeast Ocean Plan Outline

Mr. Grover Fugate welcomed participants and emphasized the importance of this stage of the planning process. The NE RPB will begin knitting together the work of various NE RPB activities into the ocean plan.

Ms. Betsy Nicholson provided an overview of topics to be discussed at this meeting in the context of the NE RPB's origins and progress over the past few years. She shared the NE RPB's timeline, which is in Appendix B, and thanked stakeholders and RPB members for their continued participation and contribution to the process. She reiterated Mr. Fugate's emphasis on the important work to be pursued over the next six months in building out the content of the plan and building support and commitments for its implementation. She explained that there will be three more formal public NE RPB meetings before the plan is completed, and emphasized the importance of public engagement throughout the upcoming drafting and review process.

Ms. Nicholson also mentioned that the National Ocean Council (NOC) recently released draft guidance to the NE RPB providing an outline for the NOC's plan review process. The NE RPB has until July 1, 2015 to supply feedback to the NOC on this document, and Ms. Nicholson asked NE RPB members to supply input to the Co-Leads prior to this date.

Ms. Nicholson reviewed the Draft Northeast Ocean Plan Outline. She reviewed the four major sections of the plan: (1) framing narrative, (2) management applications, (3) plan implementation, and (4) a list of regional ocean science and research priorities extending beyond the initial scope of the plan. She emphasized the importance of writing the plan so it is clear how the plan will be used by RPB entities. She then introduced Mr. Nick Napoli, Northeast Regional Ocean Council (NROC), to walk through the Outline in more detail.

Mr. Napoli reviewed the Draft Ocean Plan Outline in detail, emphasizing that subsequent sessions of this meeting will be focusing on particular sections of the Outline. Section 1 will include an overview of the NE RPB process, a description of how the plan will achieve the NE RPB's three goals, and references to the projects that underpin the plan like the baseline assessment and data portal. Most of the June 2015 NE RPB meeting focused on Section 2, discussing NE RPB activities for the next six months to aggregate various projects' results and think about their management application through existing programs. NE RPB members heard many updates on projects that contribute to Section 2 in the next meeting session. Section 3 is about ocean plan implementation. Finally, Section 4 will identify additional and on-going science and research priorities necessary to further advance the interests of the region.

The NE RPB members discussed the review process for the plan, inquiring if draft sections of the plan will be reviewed by the NE RPB as they become available, or whether they will review the plan as a whole. One NE RPB member expressed preference for reviewing individual sections as they are drafted.

Update on Recent Activities and Projects

Mr. John Weber, NROC, introduced research and project teams involved with the various projects being carried out by the NE RPB. Each presenter shared an update on activities and next steps, followed by brief NE RPB discussion.

Commercial Fishing

Mr. George LaPointe, George LaPointe Consulting, shared an update on data collection and stakeholder engagement related to the characterization of commercial fisheries, including Vessel Monitoring System (VMS), lobster fishery, and party/charter mapping. Powerpoint slides from his presentation are available in Appendix C.

This work continues previous efforts exploring the use of VMS data to describe certain commercial fisheries. To better understand vessel patterns in specific fisheries, data were organized by fishery and, using an approximation of vessel speed, and by vessel activity (fishing or in transit). Results generally help indicate where there are concentrated areas of fishing and 'highways' for fishing vessels.

The team is working on incorporating feedback and suggestions from the fishing industry. For example, data will be superimposed on NOAA charts, federal fisheries management areas will be added, and temporal trends will be identified.

The project team has determined that a region-wide vertical line analysis is currently the most comprehensive across the region for characterizing the lobster fishery. This existing vertical line survey was developed as part of the North Atlantic Right Whale take reduction effort. While available for the entire planning area, it is at a relatively large scale (approximately 10-minute grid size).

He also provided a brief overview of a pilot party/charter project underway, recognizing that there is little to no spatial data suitable for characterizing the spatial activity of such vessels. Project partners include the Atlantic Coastal Cooperative Statistics Program, state fishery managers, and SeaPlan; the methodology is to add location-capturing capability to mobile device units (tablets) that can also be used to record catch if a captain desires. The mobile application is currently under review and should be certified in the next few weeks. This will result in specific location information relayed from the approximately 12 vessels participating in this pilot project.

For all of the types of information that is resulting from this project, Mr. LaPointe highlighted limitations, but explained that they do provide a solid amount of baseline information. In the future, maps would need to be used in tandem with other sources of information in order to provide a comprehensive and/or site-specific picture.

NE RPB members provided comments and questions in response to the presentation:

- The northern shrimp fishery is not included in the current maps. Mr. LaPointe said that this is an example of a fishery that does not have VMS data; finding information for

those fisheries not covered by VMS is challenging.

- A question was raised about the availability of additional commercial fisheries products for Section 2 of the ocean plan and the status of synthesized data products. It was clarified that data synthesis is in the initial stages, and that current maps do not include data for non-VMS fisheries. The NE RPB will need to have further conversation about synthesis products to include in the plan.
- A question was asked about what extent the NE RPB can utilize products incorporating state-level information. Mr. Weber clarified that is the data is at a regional scale and that the plan will also need to reference related state-level data (where available) in addition to map guidance. The NE RPB may want to look to the Rhode Island and Massachusetts state plans as a model for synthesizing and aggregating information across fisheries.
- There is a need for discussion on the analysis of the compatibility of fishing and other potential uses. Mr. Weber replied that this issue will require additional discussion and clarification. Now that there is a large amount of data gathered about various uses, the next step is to have conversations about how to link those together, and this step is accounted for in the Draft Work Plan.
- A question was raised about whether Ms. Kathy Mills' research on fisheries and climate at the Gulf of Maine Research Institute would be integrated into this work, with a suggestion that it would be interesting to see animations of fisheries or fish resource changes associated with temperature and other trends. Mr. Weber clarified that the NE RPB would be able to look at the results of Ms. Mills' work shortly.
- The importance of the lobster fishery in New England was highlighted. Mr. Weber pointed out that this might be a topic to include in Section 4 of the ocean plan, science and research priorities.
- A NE RPB member asked if Mr. LaPointe's team is going to include analysis of stock assessments to identify potential future fishing areas. Mr. Weber responded that there are other research efforts that are using existing data (such as from trawl surveys) and models of future conditions to assess recent and future trends in fisheries.
- A concern was raised about the possibility that information about historic fishing locations would not be incorporated into NE RPB products. An area may have once been used for fishing but then closed due to unfavorable conditions. When conditions become favorable again, fishermen may want to return to that area, but the lack of current fishing activity may indicate to other ocean users that it is free to develop in other ways, especially if NE RPB maps only depict static information. Mr. LaPointe responded that this is a good example of why those using the ocean plan will need guidance and be directed to other sources of data.

Marine Life Characterization

Dr. Pat Halpin, Duke University, provided an update on research underway by the Marine Life Data & Analysis Team (MDAT). The team includes NOAA National Center for Coast and Ocean Research, the NMFS Northeast Fisheries Science Center, and Loyola University. Powerpoint slides from his presentation are available in Appendix D.

Dr. Halpin gave an overview of the project timeline. The team has recently focused on data aggregation and consulted expert work groups to review a strategy for modeling species' distribution and abundance, including marine mammals, sea turtles, birds, and fish. In the coming months, the team will focus on finalizing the data and model products and setting up a distribution system for the products so that they can be seamlessly incorporated into the Northeast and Mid-Atlantic data portals. This system will allow for real-time updates to both portals housing this information and the integration on existing data portals will allow viewers to narrow in on specific data layers (e.g., for particular species and/or at particular timescales).

Dr. Halpin showed example data products and described some elements of the data gathered, including the environmental covariates incorporated into the models from which products are derived. Additionally, the team is developing products to characterize uncertainty for each of the data products.

The next phase of the project involves exploring the feasibility of data products that identify "hotspots" for single or multiple species. These products can be tailored to inform regulatory needs. Mr. Halpin also described efforts to identify core areas of importance by examining different thresholds related to species e.g., including various percentages of species' occurrences. There are also efforts to accurately depict relative importance of areas across different scales, as results will be different if assessing across the Northeast rather than along the entire Atlantic seaboard.

He then described next steps for the project team through the end of 2015, which include delivering final species abundance products, continuing to develop species-specific products in parallel with the regulatory-use discussion, continuing the development of single species hotspots, research and development on multi-species hotspots, and planning for other products that will support the drafting of the Northeast Ocean Plan.

The NE RPB provided the following feedback or questions for Dr. Halpin on the progress towards marine life characterization:

- A NE RPB member asked if the team is incorporating biophysical habitat (e.g., kelp beds) information into data products. Dr. Halpin explained that the team is using physical, oceanographic, and productivity covariates when constructing its products. The team is planning to add more of those biophysical features when producing multi-species products.
- Another NE RPB member asked if the abundance information is effort-corrected and it was clarified that it is.
- A NE RPB member asked how historical data has been incorporated so that trends can be assessed. Dr. Halpin said the team is planning to conduct a side analysis comparing information from the past couple years with baseline data from the previous decade to identify trends.
- Further in-depth conversation with the MDAT team will be important as more thinking goes into what products will be developed. Dr. Halpin responded that he would

welcome and seek out this deeper engagement.

Baseline Assessment

Mr. Hauke Kite-Powell, Woods Hole Oceanographic Institution's Marine Policy Center, shared an update on the baseline assessment, a compilation of existing information to characterize the region's natural resources, infrastructure, economy, cultural resources, trends, and future planning considerations. He said the purpose of the baseline assessment is to support the regional ocean planning process, summarize what is known about the region's marine resources and value derived therefrom, and suggest how this information can be applied in the context of planning decisions. Mr. Kite-Powell's presentation is available in Appendix E.

The assessment team includes researchers from Woods Hole Oceanographic Institution's Marine Policy Center, the University of Southern Maine, the University of Massachusetts Boston, and the New England Aquarium. Where appropriate, data from the baseline assessment also will be available via the Northeast Ocean Data Portal[7]. A first draft of the baseline assessment report is anticipated mid-summer with editing and review to follow and a final assessment in September 2015.

Mr. Kite-Powell asked for specific input from NE RPB members on sources of information on cultural resources and nontraditional ways of thinking about ocean value. He asked that RPB members contact the project team or ocean planning staff with suggestions.

Informal NE RPB and Public Discussion About Projects

The public and NE RPB had an opportunity to informally discuss and ask questions of specific project teams during a world café-style session. Each of the teams served as a lead for a tabletop discussion where they were available to answer additional questions. NE RPB members and the public were welcome to move from table to table during these informal discussions.

Continued Updates on Recent Activities and Projects

Following lunch, Ms. Cantral reconvened the meeting for more five additional updates on recent NE RPB activities and projects and a brief NE RPB discussion followed each presentation.

Coastal Zone Management Act (CZMA) Update

Mr. Weber provided an update on recent CZMA-related activities. The NE RPB states previously had identified several topics of state interest at the intersection of regional ocean planning and the federal CZMA. David Kaiser, NOAA staff, is drafting a white paper, to be delivered this summer, which more fully flesh out some of the ideas generated through this process. Ms. Nicholson added to Mr. Weber's update by clarifying that Mr. Kaiser is interested in talking to the U.S. Navy, Coast Guard, and the Federal Emergency Management Agency (FEMA) about certain federal activities under those agencies' authorities.

[7] http://www.Northeastoceandata.org/

Regional Restoration Priorities

Mr. William Hubbard, U.S. Army Corps of Engineers (USACE), provided an update on work to identify, prioritize, and address restoration projects in the context of the NE regional ocean plan. His presentation can be found in Appendix F.

He reminded NE RPB members that prior to their last meeting in November 2014, an expert subcommittee was formed and a spreadsheet of federal funding opportunities was developed. This spreadsheet will be updated as conditions change. Since the November meeting, this subcommittee also has drafted several alternatives for how to represent restoration in the ocean plan and created a data layer for the data portal with additional detail about priority restoration projects.

Mr. Hubbard identified that there are areas where the project team needs NE RPB involvement, and he requested that RPB members and their staff review the draft approaches created by the subcommittee (see document 3.2B in the meeting materials[8]) to help identify the appropriate way for this topic to be represented in the Northeast Ocean Plan. He also requested that NE RPB members review options for how to incorporate a list of restoration projects in the plan (see document 3.2C in the meeting materials[9]).

NE RPB members discussed how they would like to see restoration incorporated into the plan, specifically whether they would like to include a list of specific projects the NE RPB supports and whether this information will be static or living. The following points were raised in this discussion:

- It is important to agree on types of projects and a set of criteria to help define "regionally significant" restoration projects. The list of criteria that the subcommittee created is an important start to that process. Members discussed the value of adopting criteria instead of endorsing specific projects and recognized the need for additional discussion on this point.
- Mr. Hubbard clarified that the subcommittee did not rank projects.
- Each agency has its own set of criteria by which it determines if projects are eligible or not, and like most of the other content of this plan, this list would be a value-added overlay to help entities make better decisions.
- Several NE RPB members expressed preference for a dynamic and flexible system for managing the list of priority projects, so that it can be updated based on changing conditions.
- Several NE RPB members expressed support for the idea of having the Northeast Regional Ocean Council (NROC) manage the updates to the project list. The NE RPB's

[8] http://neoceanplanning.org/wp-content/uploads/2015/05/June-2015-RPB-Meeting-Materials.pdf
[9] http://neoceanplanning.org/wp-content/uploads/2015/05/June-2015-RPB-Meeting-Materials.pdf

role should focus on defining the process for review and criteria for acceptance to the list.

- It was suggested that one outcome of this work might be to have federal agencies structure their habitat restoration programs to use the criteria and restoration data layer as guidance.

Mr. Hubbard reminded NE RPB members that this process is inherently valuable because this is the first list of priority restoration projects that is region-wide.

Following this discussion, Ms. Ivy Mlsna, U.S. Environmental Protection Agency, demonstrated the developmental portal data layer with additional detail about the restoration projects on the priority list. Following this presentation, the NE RPB asked questions and provided comment on the data layer. Their discussion is summarized below:

- A question was raised about whether the projects presented on the portal are current or completed. It was clarified that these projects are in various stages of completion and none of the projects on this list have full funding. The information on the stage of completion for each project will be incorporated into the data layer in the future. Habitat information will also be incorporated in the future.
- A NE RPB member asked if the database identifies existing and/or potential funding for the projects. Ms. Mlsna explained that information on current levels of funding and the amount needed to complete the projects is incomplete but could be researched further. The NE RPB member identified this as important information to have.
- A NE RPB member asked what sources of information were used to develop this data layer. Members of the subcommittee collected the information and Mr. Hubbard asked that NE RPB members let him know if projects are missing. One NE RPB member identified that Natural Resources Conservation Science (NRCS) projects in Cape Cod should be included.

Ms. Cantral summarized this discussion by reminding NE RPB members to provide feedback on the subcommittee's criteria and options for incorporating the list of priority restoration projects into the ocean plan.

Sand and Gravel

Mr. Bob LaBelle, Bureau of Ocean Energy Management (BOEM), updated the NE RPB on activities related to sand and gravel. He explained that there was a recent NROC meeting where the Sand and Gravel Work Group met with the Coastal States Organization (CSO) and the USACE to discuss a regional approach to sand management for coastal restoration using sand sources in both state and federal waters. The NE RPB can gather geological information from both an ongoing BOEM sand study in federal waters and other studies completed by New England states to characterize their sand sources in state waters. The group would like to develop a plan to assess and meet needs on a regional basis.

Mr. Hubbard provided further detail on the work USACE is conducting in this area. He emphasized the need for a regional approach for sand management for projects to be successful in the authorization and appropriations processes. He mentioned that the Northeast region should carefully examine a recent sand study conducted for coastal California that could serve as a model to advise future action in this region.

A NE RPB member clarified that the work discussed by Mr. Hubbard is beyond the scope of the initial Northeast Ocean Plan and the member asked about the timing of incorporating Northeast survey information into the data portal. The response was that it is unlikely the BOEM survey data will be ready for the data portal by 2016. Some geological information for state waters is currently available.

It was acknowledged that the existence of a subcommittee to focus on this topic with a regional lens is a benefit to the planning process.

Offshore Wind

Mr. LaBelle provided a brief update on offshore wind activities underway in the region. He mentioned that BOEM is conducting a lobster ventless trap survey in coordination with the University of Rhode Island in the Massachusetts and Rhode Island wind energy area. BOEM also has a cooperative agreement with Massachusetts for three years of field surveys led by the New England Aquarium on birds, mammals, and turtles in the state's wind energy area. This project is nearing completion, and results will be submitted to the MDAT team for inclusion in their work. BOEM is also funding the National Marine Fisheries Service (NMFS) Northeast Fisheries Science Center's benthic assessments and integrated habitat ecosystems analysis. He also mentioned a study collecting input on possible wind farm impacts on fisheries in New England.

A NE RPB member inquired about the status of development of the three leased wind energy areas. Mr. LaBelle answered that there is detailed information about these leases available online on the BOEM Office of Renewable Energy Programs' website. He also offered to send around additional information.

A NE RPB member expressed a desire to continually update the data portal with information on the current stage of development for offshore wind projects. The response was that portal information related to offshore energy is updated on a monthly basis.

Another NE RPB member expressed concern about the electromagnetic fields surrounding undersea cables that are needed for offshore wind projects. Mr. LaBelle responded that this is an active field of study, and BOEM is looking to do further research in this area.

Aquaculture

Mr. Weber shared an update on NE RPB activities related to aquaculture. The NE RPB decided to form the Aquaculture Work Group at the November 2014 meeting. The Work Group decided to initially focus on cultivation of blue mussels in federal waters because there is recent

experience with those types of projects in the region, but may broaden its focus to other project types in the future.

The Work Group is exploring if the cultivation of blue mussels in federal waters requires special attention in the NE RPB's other work on improving pre-application practices and the use of data and information. The Work Group feels that the current approach to these topics is suitable for mussel cultivation. The Work Group would like to engage with industry over the next couple months to better understand if there are certain types of siting or environmental conditions that is conducive to mussel-production, particularly in federal waters.

To date, Work Group membership has mostly consisted of federal agency representatives because of the focus on federal waters. Mr. Weber mentioned that the group has discussed whether it would make sense to include state representatives going forward. A NE RPB member suggested that the work group reach out to the states, especially since Rhode Island just completed permitting blue mussel long line operation in state waters. There will be important lessons learned to share in this regard.

Regulatory Pre-Application Best Practices
Mr. Deerin Babb-Brott, SeaPlan, updated the NE RPB on work associated with the development of draft pre-application best practices. He presented the NE RPB with an overview of current regulatory practices and an outline of a "best practices" document. His presentation is in Appendix G.

The NE RPB Regulatory Work Group is developing an approach to standardize permit pre-application processes and make them more successful and efficient for agencies and project proponents alike. When successful, pre-application procedures allow for informal discussion between project proponents and agencies to explore proposed activities prior to the commencement of formal review. These discussions include the regulatory environment in which the project will occur, the informational context for the project, the knowledge of local and regional stakeholder interests, and knowledge about existing conditions.

Mr. Babb-Brott discussed considerations for developing best practices. The work group focus has been on improving the existing process through the use of the data portal and Northeast Ocean Plan and enhancing opportunities for more informed stakeholder and public participation in the permit review process.

Mr. Babb-Brott then turned to Mr. Hubbard to speak to his experiences with the existing USACE pre-application process and how it can be improved through ocean planning. Mr. Hubbard said that USACE conducts a coordinated site visit that starts the planning process for a project. He sees the data portal as a useful tool for agencies and the public, as it could allow for virtual site visits. It also provides a mechanism for the federal and state governments to talk about proposed projects.

The work group is considering various formats to convey information on best practices in the ocean plan, such as plain text and checklists for agencies to include in regulatory guidance materials.

Following the presentations, NE RPB members asked questions about the regulatory best practices work.

- A question was asked about efforts to map stakeholders and identify those with interest in specific projects. Mr. Babb-Brott replied that there has not been such an effort, but that the work group wants to spend more time thinking about how to provide such information.
- Another NE RPB member asked how the NE RPB could expect to get this guidance into the hands of private applicants. Mr. Babb-Brott replied that it will be important to incorporate these best practices in as many agency products and on as many webpages as possible. He mentioned that most of the activities that will need to go through pre-application will be relatively large projects, and applicants are likely to know about these best practices through consultants and professional experience.
- A follow-up question was asked about whether the Regulatory Work Group has been in conversation with such project consultants and proponents when developing these best practices. This has been done on an informal basis and through presentations to the Environmental Business Council of New England, an existing forum that includes such organizations.
- A comment was made as a note of caution that terms like "consultation" and "best practices" can make the process sound more prescriptive than voluntary. If a project proponent comes in and does not want to use the NE RPB's best practices, there should be no negative impact on the proposal.
- Another NE RPB member asked whether agencies should start developing guidance on the use of ocean plan-developed data before the completion of the plan. In response, ocean planning staff clarified that over the coming months agencies will be engaged to develop such guidance as part of the ocean planning process.
- A comment suggested that a simulated scenario/case study would be helpful to test this best practice guidance in practice; experience with particular projects in Massachusetts and Rhode Island would be a valuable resource.

NE RPB Discussion on Next Steps for Data Synthesis and Agency Use

Mr. Nick Napoli provided an overview of the *Draft RPB Work Plan* that will inform the upcoming months of the development of the Northeast Ocean Plan. Slides for this presentation are available in Appendix H.

Mr. Napoli explained that the Draft Work Plan focuses on NE RPB activities ,primarily focused on Section 2 and also related to Sections 3-4 of the *Draft Northeast Ocean Plan Outline*. During these six months, the NE RPB will work on developing and aggregating marine life and human

use data, talking to agencies about how they will use that data, and developing agency guidance for their use.

Mr. Napoli then walked NE RPB members through the specific tasks outlined in the *Draft NE RPB Work Plan*, identifying core teams of NE RPB members that will be most involved in specific tasks.

NE RPB members were then invited to provide specific feedback on the Draft Work Plan and were reminded that this discussion would continue on day two of the meeting.

General Comments about the Draft Work Plan

NE RPB members offered the following suggestions or questions about the Draft Work Plan:

- NE RPB activities should continue to identify opportunities for greater state involvement. There was also a request for additional conversation between states and federal agencies about how they will be using the data incorporated into the plan.
- In response to a request to clarify the deliverables for Section 2, Mr. Napoli explained that deliverables (maps plus agency guidance) would be unique to each topic in subsections a-o under Section 2. While aggregate maps might be the primary deliverable for each species, there will also be references to supplemental information provided through the data portal.
- A question was raised about how existing regulatory areas will be referenced in the plan. Some of this information has already been incorporated into the data portal.
- Several NE RPB members expressed support for incorporating aspirational language into Section 1 of the plan to describe the importance of the Northeast ocean, explaining why the NE RPB is undertaking this planning effort, describing the historical context, and drawing from the previous visioning/goal development activities of the RPB.
- Additional time is needed to build out a list of research priorities.
- The plan is an opportunity to further explain specific goals, such as the Healthy Ocean and Coastal Ecosystems goal (each goal has original explanatory text that can be referenced in the final plan), and describe how these goals are to be achieved. This could help clarify what the NE RPB wants to gain from the process.
- There is a need to manage the public's expectations on what the ocean plan can accomplish related to the Healthy Ocean and Coastal Ecosystems goal. In some cases, mitigation of negative environmental problems may be the most realistic objective. The NE RPB should establish a baseline and measure success from that baseline.
- The NE RPB needs to analyze the information produced through this ocean planning process. This will help the NE RPB determine what it has learned about existing uses, conditions, and trends as well as areas of future concern.
- Additional conversations and engagement on agency guidance and the application of data in the regulatory process will be important in implementing this work plan. NE RPB staff clarified that these conversations are critically important, and the staff would like to hear how to best engage agencies.

- Consider ways to involve RPB members in the review process for draft sections of the plan to ensure that they have sufficient time to engage their colleagues. This may involve supplying sections of the plan for agency review as they become available.
- Identify areas that were historically ecologically important, not just the current system.
- There is a need for the NE RPB to work with tribes to find ways to incorporate historical and cultural information into the baseline assessment. This should include information beyond the current consideration of archeological sites. The NE RPB should consider using upcoming events targeting regional tribes as a platform to increase tribal involvement in the RPB process.

Comments about Specific Tasks in the Draft Work Plan

The Draft Work Plan includes additional details about each of the tasks outlined below. It is available online[10] as part of the meeting materials. The comments below all relate to Section 2 of the Draft Northeast Ocean Plan Outline, which is the focus of the Draft Work Plan.

Task 1

- A NE RPB member suggested additional information and further refinement is needed for Task 1b of the work plan. To allow for more substantive input, NE RPB staff should meet more than once with multiple federal agencies to review progress and guidance development.
- A NE RPB member expressed a desire for a timeline of data development to facilitate the involvement of agencies at the right time in the process. NE RPB staff also said that they intend to work with NE RPB contractors to try to meet agency scheduling needs in terms of data development and review.

Task 3

- A NE RPB member inquired if the MDAT team is developing a *new* methodology for identifying important ecological areas. The response was that the team is looking to adapt current methodology, and this should be reflected in the title of the task
- NE RPB members asked for details about the establishment of the new Ecosystem Based Management (EBM) Work Group and suggested that additional information on membership, purpose, and deliverables should be identified. The RPB Co-Leads will draft Terms of Reference for further review by the NE RPB.
- A participant expressed a desire to use the new EBM Work Group to review the entire plan instead of focusing the group's efforts on identifying important ecological areas.
- Support was expressed for this task and the formation of a new EBM Work Group.

Task 4

- A NE RPB member suggested that the work plan describe more concrete outcomes for subsections b-f of Task 4.

[10] http://neoceanplanning.org/wp-content/uploads/2015/06/RPB-Work-Plan-Decision-June-2015.pdf

- Task 4a should be modified to consider conservation and restoration of offshore sites.

Public Comment

Ms. Cantral opened the first of two public comment sessions. Seven individuals provided comments during this session. Major themes from the comments included:

- Support for adding aspirational elements to the plan and also adding more specific desired outcomes to help identify how the plan will address the RPB's three goals.
- Emphasis on establishing strong leadership in the regional ocean planning arena, as the Northeast is poised to be the first completed regional plan.
- Emphasis on greater inclusion of stakeholder input in the planning process and giving the public more ownership over the plan.
- Support for involving stakeholders in the process of reviewing draft agency guidance and request for more information and involvement in Regulatory Work Group activities.
- Support for including information on public value of ocean resources beyond traditional measures of economic value.
- Recommendation to make the concept of EBM a general theme that is well articulated in the Northeast Ocean Plan.
- Request to release public NE RPB documents well ahead of public meetings so that stakeholders can spend time reviewing them and gathering input.
- Request to make the National Ocean Council guidance and CZMA white paper available to the public.
- Support for the idea of not penalizing project proponents who do not want to use the NE RPB's suggested pre-application process.
- General support for developing agency guidance as a useful tool for increasing effectiveness of planning.
- Request for clarification on whether the NE RPB will include hotspots and core areas in the Northeast Ocean Plan.
- Appreciation for the Work Plan and Draft Northeast Ocean Plan Outline documents.
- Concern about small coastal communities not being reflected in regional data sets. Reference to a white paper developed by the Island Institute that could help with incorporating these communities into the plan.
- Request for further thought about how to identify all interested stakeholders in siting processes, especially concerning stakeholders associated with the tuna, lobster, and shrimp fisheries that are not in existing NE RPB data sets.
- Recommendation to add an additional task to the work plan related to documenting stakeholder engagement best practices.
- Emphasis on the importance of temporal variables in fisheries data. Fisheries data must recognize that some fisheries are important to specific communities at specific times of the year.
- Support for advancing the tasks in the Draft Work Plan.

- Support for identifying biodiversity hotspots.
- Recommendation for the NE RPB to find increased ways for both NE RPB members and stakeholder groups to engage with and better understand the data and products developed by the various NE RPB projects.
- Recommendation for the NE RPB to think further about how to identify compatible uses, as aggregating and layering data will not be enough in this arena.
- Comment that beach re-nourishment is not necessarily equal to coastal resiliency. That is a state-level policy decision that needs to be made.
- Request to include benthic communities in Task 1 of the work plan.
- Suggestion to define healthy oceans as emphasizing that human uses should not cause impacts or negative changes to ocean and coastal resources.
- Recommendation that the NE RPB use existing instead of new methodologies in Task 3 of the work plan regarding identifying important ecological areas.
- Request to consider offshore conservation and restoration priorities in Task 4 of the work plan (e.g., kelp forest restoration).

In addition to comment provided during this session, a summary of public comment received during Spring of 2015 is available in online by clicking here[11].

Summary of Day 1

Ms. Cantral wrapped up the discussion and provided a brief summary of the agenda for the second day of the meeting.

Thursday, June 4, 2015

On the second day of the meeting, June 4, the NE RPB continued to discuss next steps for data synthesis and agency use, decided to adopt the Draft Work Plan that advances the development of draft plan content over the next six months, and heard additional public comments.

Welcome Back, Review of Day 1 Outcomes, and Review of Day 2 Agenda

Ms. Cantral provided a brief overview of the day's agenda. She reminded NE RPB members that the morning sessions will continue the discussion about the Draft Work Plan and Outline and that the meeting would end with an opportunity for public comment.

Ms. Nicholson summarized some themes she heard from day one, including:

- The plan should contain aspirational language on the importance of ocean planning and the goals of the ocean planning effort in the Northeast.

[11] http://neoceanplanning.org/wp-content/uploads/2015/06/Public-Comment-Spring-2015.pdf

- The plan should contain information on what the NE RPB has learned from the planning process in terms of observations and trends
- The NE RPB should provide sufficient opportunities for NE RPB members, agency staff, and stakeholders to review draft agency guidance for the use of data products.
- The need for an increased level of effort from all NE RPB members at this important stage in the planning process, including engaging their staff and colleagues in providing feedback on the draft plan.

NE RPB members were invited to offer reflections on the previous day's discussion.

A NE RPB member commented that the progress on activities and data development presented the day before offered reassurance that the NE RPB has a solid foundation for a plan that will meet NE RPB goals.

Another NE RPB member emphasized the importance of further engaging the industry sector in the planning process.

Continued NE RPB Discussion and Decision on Next Steps for Data Synthesis and Agency Use

Mr. Napoli outlined the timeline for RPB activities for the next six months through a presentation found in Appendix H.

The summer and early fall will be focused on engaging specific agencies about the use of marine life and human use data. Ocean planning and agency staff will review data products and related agency guidance templates to further refine these products. In October, the NE RPB will hold a stakeholder forum to review draft ocean plan elements such as the baseline assessment, marine life, human use, and results of the EBM Work Group. The next public NE RPB meeting will be held in November 2015.

NE RPB members were then asked to provide further input on the Draft Work Plan.

Comments on Draft Work Plan Tasks 1-2

NE RPB members identified the need to convene a workshop or series of workshops with agency staff to review the data and products developed to date (specifically, results of Tasks 1-2 of the Draft Work Plan) in August or September 2015. Specific RPB member input on this topic included:

- This workshop could strengthen coordination between states and federal agencies, for example to integrate state and regional planning processes.
- NE RPB members supported the idea of sending a letter from the NE RPB Co-Leads to high-level individuals at each NE RPB agencies, encouraging them to send invited staff members to the workshop. Each NE RPB member should identify appropriate recipients for receive this letter for NE RPB Co-Leads. The dates for this meeting should be set as soon as possible and included in the letter.

- It is important to have a working session of this nature in the region as well as have similar conversations in Washington, DC to ensure awareness at appropriate agency levels.
- Dr. Halpin clarified that this workshop would be useful in building on previous reviews of the marine life products that agencies have already undertaken.
- NE RPB staff will plan to send materials to focus workshop discussions in advance of the meeting.
- There was a concern about the number of participants at this workshop and that large numbers would not be conducive to productive, free-flowing discussion.

NE RPB members were encouraged to send additional ideas about an August/September workshop to NE RPB staff in the coming weeks.

Comments on Draft Work Plan Task 3

Task 3 of the work plan suggests advancing the methodology for identification of ecologically important areas across taxonomic groups and suggests an EBM Work Group be established to support this process. Specific RPB member input on this topic included:

- NE RPB members emphasized that the EBM Work Group should include scientists and managers from NE RPB member entities.
- There were concerns about calling this an EBM Work Group if the sole task is to identify important ecological areas. Such a work group should be tasked with applying an EBM lens to the entire plan.
- NE RPB members emphasized the need to be intentional about terminology, especially with regard to the phrase "important ecological areas."
- The terms of reference drafted by the Co-Leads for this work group may influence the other pieces of this task. NE RPB members should keep this in mind moving forward.
- It was clarified that the term "RPB staff scientists" refers to NE RPB member organization scientists.

NE RPB members decided to create an EBM Work Group and to task the Co-Leads with developing its terms of reference and membership.

Comments on Draft Work Plan Task 4

Ms. Cantral summarized the previous day's conversation regarding the NE RPB's restoration and conservation work. NE RPB members expressed interest in including a list of regional restoration and conservation priorities in the draft plan and keeping this list dynamic and up-to-date. Comments from NE RPB members on this topic included:

- Emphasis on the importance of identifying how the list will be maintained, including who will be responsible for its upkeep and how often it will be updated. There was support for NROC having such responsibilities.
- Support for including information on the data portal describing how much funding has been committed to, and is needed by, each project.

- Support for considering offshore restoration and conservation priorities and reflecting this in the list of criteria.

A NE RPB member requested clarification on the process and timing for NE RPB members writing specific sections of the draft plan outlined in subtopics a-f, and if there would be a standardized outline for each section to ensure consistency. NE RPB staff responded that the answer to this question will be become clearer in the coming months as these sections are developed, but that drafting of particular sections was anticipated to begin this summer.

Comments on Draft Work Plan Task 5-7

Mr. Napoli reviewed Tasks 5-7 of the Draft Work Plan related to Sections 3-4 of the Draft Outline of Northeast Ocean Plan. He mentioned that Mr. Babb-Brott and the Regulatory Work Group will continue their activities through the summer and that this work will be influenced by the development and refinement of data products and agency guidance.

Task 6 is focused on plan monitoring and evaluation, including the potential development and use of indicators. After NE RPB products are developed further, the NE RPB will include indicators regarding how to measure progress toward its goals. The next NE RPB meeting will continue to focus on these topics.

RPB Member comments on task 6 included:

- Support for further discussion of developing plan indicators.
- Clarification that the NE RPB needs to think both about monitoring and evaluation of ocean health and evaluation of the plan itself (i.e., how well the NE RPB is meeting its goals), recognizing these are two different needs.
- Offer of using NOAA evaluation experts to assist in sketching out monitoring and evaluation of the plan.
- Reminder on the importance of setting a benchmark and determining the desired rate of change when developing a monitoring and evaluation strategy. The NE RPB should think about how it will differentiate changes resulting from the plan from those over which it has less control. The strategy will have to be largely based on the content going into the plan. *A Guide to Evaluating Marine Spatial Plans* by Bud Ehler and published by the United Nations Educational, Scientific and Cultural Organization is a good resource for this point.
- Suggestion for the NE RPB to have further discussions on how it defines a successful plan.
- Suggestion that the NE RPB should use the ocean health report that the NEFMC receives every year as a resource.
- Suggestion that the NE RPB should use the Northeastern Regional Association of Coastal and Ocean Observing Systems' Integrated Sentinel Monitoring for Climate Change in Northeastern Coastal Ecosystems project to inform its gap assessment.

Task 7 is focused on identifying the science and research priorities to advance EBM and ocean management in the future. Some information for this section has already been collected and will continue to be collected through NE RPB activities. NE RPB comments on Task 7 included:

- Emphasis that this section of the plan should include ideas that advance ecosystem-based management in its science and research priorities.

Comments on the Draft Northeast Ocean Plan Outline

NE RPB members provided the following comments and suggestions related to the draft outline, and related topics:

- Information about compatibility among uses should be included in in Section 2 of the Draft Northeast Ocean Plan Outline.
- Best Management Practices (BMPs) do not seem to fit in the baseline assessment. This should go in Section 3 of the draft Outline.
- Include benthic habitat, including corals and kelp, as a specific section under Section 2 of the draft Outline.
- Aspirational language for Section 1 could be taken from Obama's executive order creating the National Ocean Policy, and related framing documents. This next phase of work require intense engagement from NE RPB members. It was suggested that the NE RPB think carefully about managing expectations for what the ocean plan can accomplish. Because the plan will be operating completely under existing regulatory authorities, it could be helpful to think of it as a guidance tool rather than as an ocean "master plan."
- The aspirational language should emphasize why regional ocean planning is important and what pressures the region is facing.
- A NE RPB member suggested adding existing and upcoming federal actions to the data portal (i.e., a means of providing a geospatial Federal Register).
- A NE RPB member identified a potential learning opportunity in the form of an upcoming international symposium hosted by the University of Rhode Island on marine spatial planning.
- Concerns were raised about the compressed nature of the timeline. It was emphasized that the NE RPB needs adequate time to carefully review the products and guidance to guarantee a robust plan, and that this should be an iterative process.
- The NE RPB should not lose sight of the need to integrate all of its observations that result from review of the data and products. This will help identify how this process will effect management and planning, not just regulatory decisions.

Public Comment

Ms. Cantral opened the second public comments session. Nine individuals provided comments during this session. Major themes from the comments included:

- Appreciation of the hard work the NE RPB is undertaking on all of its activities.
- Support for adding in aspirational elements to the plan.

- Support for broadening the work of Northeast economic characterization in the baseline assessment to include more information related to public value.
- Suggestion for the stakeholder forum in October 2015 to be focused around the aspirational goals and foundational elements of what the NE RPB sees the ocean plan accomplishing instead of around maps and data products.
- In Task 4, support for incorporating issues of rarity for species and communities into the definition of important ecological areas.
- Suggestion that the definition ocean plan success should be about whether the plan and implementation of the plan leads to better decision-making. There are inferential models that can be used to measure this definition of success.
- Suggestion to look at the work of the National Association of Marine Laboratories to help network scientists.
- Support for considering the importance of education in this plan. The plan should motivate the public to be better stewards of the environment. The New England Ocean Science Education Collaborative can help with this.
- Emphasis on the importance of coordinating this work with and learning from state ocean planning processes.
- Suggestion that when assessing important ecological areas, the NE RPB should use the Long Island Sound Ecological Assessment as a reference.
- Requests for more opportunities for public engagement. Specifically, the public wants to be able to provide input during the development of the agency guidance, thresholds, data products, and the baseline assessment.
- Suggestion to hold workshops to consider stakeholder aspirations and to gather their input on all aspects of ocean uses. The NE RPB should incorporate these public aspirations for the future of the ocean into Section 1 of the plan.
- Request for NE RPB to develop a document that outlines the decisions made about the options presented at the November 2014 public meeting and the progress on these decisions to date.
- Request for the August/September NE RPB workshop(s) discussed earlier in the day to be open to the public and documented for public awareness.
- Suggestion for both the public and NE RPB members to provide input to the ocean and coastal recreation study that is being undertaken by Surfrider, SeaPlan, and Point 97 for the NE RPB. There will be a webinar to present preliminary data on the individual user survey component on June 30, 2015.
- Recommendation to release public NE RPB documents well ahead of public meetings so that stakeholders can spend time reviewing them and gathering input.
- Request for clarification on contents of the baseline assessment with regards to recreational interests. This would include more detail than what was provided in the baseline assessment table of contents in the meeting materials.
- Support for the work of the *Restoration and Conservation Subcommittee*. Suggestion to use

The Nature Conservancy's work in this area as a reference.

- Emphasis on the importance of integrating EBM and ecological data throughout the plan instead of just in Section 4.

Summary and Next Steps

Ms. Cantral and Ms. Nicholson summarized the outcomes and next steps of the meeting.

Next Steps:

- This summer, the RPB will continue developing Section 2 of the plan.
- In August or September the NE RPB would like to host workshops that will bring together NE RPB members and regulatory staff to engage with the products to date.
- There will be a Stakeholder Forum in October 2015.
- The Co-Leads will develop terms of reference and suggest membership for the EBM Work Group.
- Mr. Babb-Brott and the Regulatory Work Group will continue to pursue the items Outlined in Task 5 of the Draft Work Plan.
- The NE RPB should provide input to the Restoration and Conservation Subcommittee on their draft criteria and options for how the list of priority projects should be included in the plan.
- NE RPB members should provide feedback to the NE RPB Co-Leads on the NOC guidance by July 1.
- The NE RPB's Canadian ex-officio member Tim Hall is retiring and Glen Herbert will be serving in that role.
- The NE RPB should begin to prepare for the November 2015 public meeting, which will likely focus on the baseline assessment, data products and related guidance Discussion at the meeting may also include:
    - Long-term sustainability of the data portal.
    - Indicators, monitoring and evaluation, and revisiting the comments made today about the distinction between evaluation of ocean health and evaluation of the plan itself.
    - Discussing a review process for the draft plan.

The NE RPB decided to move forward with the tasks described in the Draft NE RPB Work Plan.

Closing Remarks

Ms. Nicholson and Mr. Fugate offered brief closing remarks, including an emphasis on the importance of this regional ocean planning endeavor, acknowledgement of the positive working relationship of RPB members, and appreciation for public and partner participation in the process. Ms. Cantral then adjourned the meeting.

Appendix A: Regional Planning Body Meeting Participant List

June 3-4, 2015 • Mystic, Connecticut

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Appendix B
Northeast Regional Planning Body

June 3-4, 2015

Mystic, CT

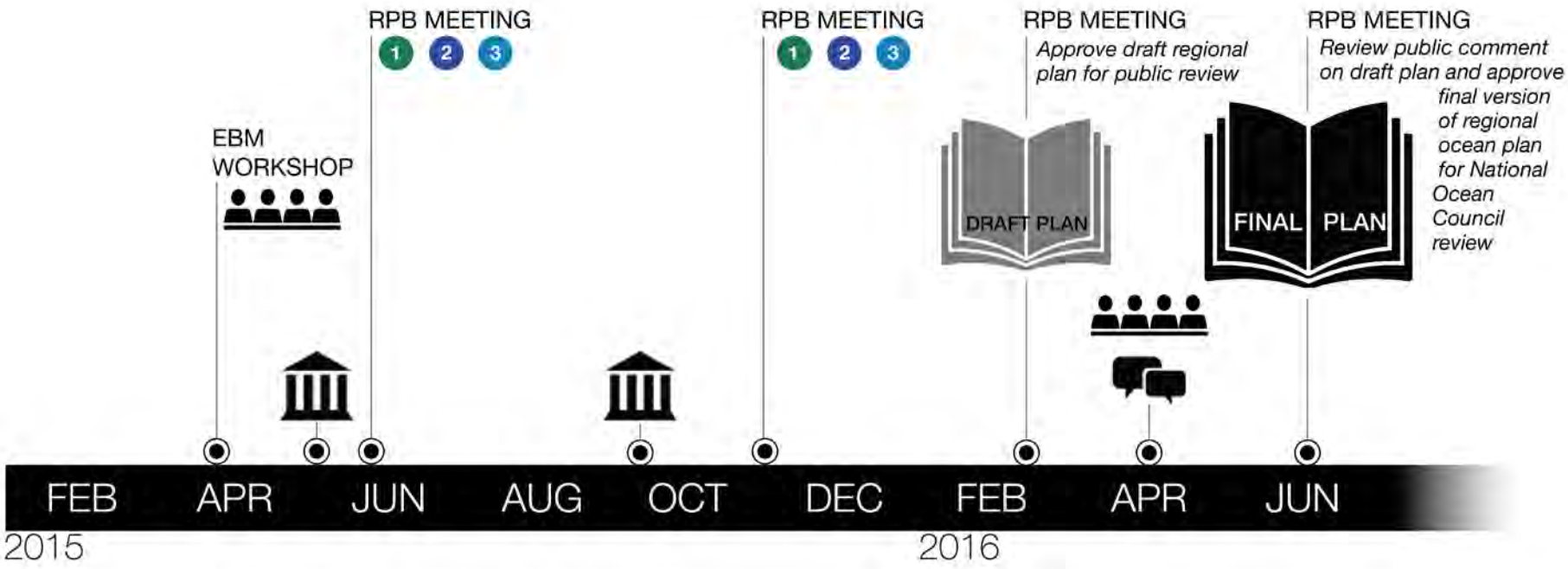
OCEAN PLANNING IN THE NORTHEAST

OCEAN PLANNING GOALS

1. Healthy Ocean and Coastal Ecosystems
2. Effective Decision Making
3. Compatibility of Past, Present & Future Uses

TYPES OF ENGAGEMENT

- PUBLIC FORUMS
- PUBLIC MEETINGS
- COMMENT PERIODS



Appendix C
NROC Commercial Fisheries Characterization, Phase II

Regional Planning Body meeting

3 June 2015

OCEAN PLANNING IN THE NORTHEAST

1

Project Overview

- VMS
  - Separation of fishing from transit
  - Separation of different permit types
- Lobster mapping
- Party / Charter mapping

OCEAN PLANNING IN THE NORTHEAST

2

VMS data, charts for

- Groundfish (multispecies), Scallop, Monkfish, Herring, Surf Clam / Ocean Quahog
  - 2006-2010
  - 2011-2013 including speed breakdown
  - 2014
- Squid, Mackerel
  - 2014 (VMS requirement started September 2014)

OCEAN PLANNING IN THE NORTHEAST

3

Vessel Speed Separation

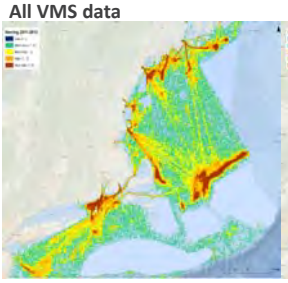
- Input from fishermen, managers said that separation of fishing from transit was important for planning efforts to understand
- Used speed cut off recommended by stakeholders
- Charts for:
  - Groundfish 2011-2013
  - Monkfish 2011-2013
  - Scallop 2011-2013
  - Herring 2011-2013
  - Surf Clam Ocean Quahog 2011-2013

OCEAN PLANNING IN THE NORTHEAST

4

Herring 2011-2013

All VMS data



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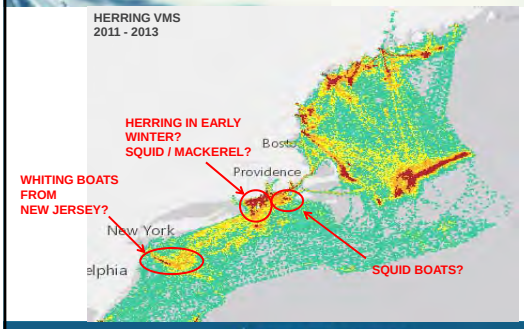
OCEAN PLANNING IN THE NORTHEAST

5

Permit Type Separation



OCEAN PLANNING IN THE NORTHEAST

6

Permit Type Separation

- Main reason for examination, squid and mackerel fishing under herring VMS, has been diminished by squid, mackerel, and butterfish VMS which began in September 2014
- When looking at VMS charts, need to recognize that permit holders maintain flexibility by broad declaring target of trips

OCEAN PLANNING IN THE NORTHEAST

7

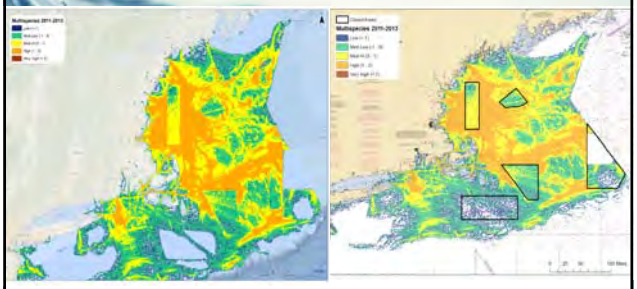
VMS charts

- Use NOAA Chart as background
- Add important management areas, e.g. groundfish closed areas
- Stakeholders said that the charts were largely accurate, some anomalies that need exploration, e.g. scallop activity off continental shelf
- Need to standardize format over time
- Give good regional perspective but should be used with other information sources, particularly more localized information
- Confidentiality impacts on VMS charts – working with NOAA LE

OCEAN PLANNING IN THE NORTHEAST

8

Groundfish VMS on NOAA chart format with closed areas outlined



OCEAN PLANNING IN THE NORTHEAST 9

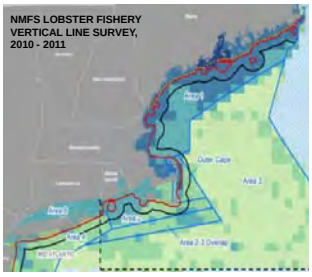
Lobster Fishery Mapping

- Charts
  - VTR based map
  - NMFS vertical line survey
  - State mapping
- Aerial Surveys
  - Expensive, weather dependent
- Vessel surveys
  - Expensive, small survey area, very weather dependent
- Vessel location recording
  - Logistics (geography, participation levels) difficult
  - Need significant participation throughout region

OCEAN PLANNING IN THE NORTHEAST 10

Lobster Fishery Mapping

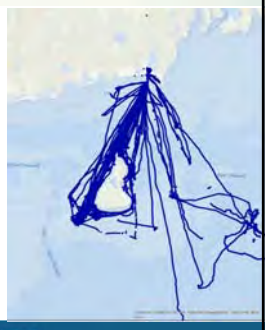
- NMFS Vertical Line Survey Vessel survey
  - Comprehensive, region-wide
  - Conducted 2010-2011
  - Scheduled for update 2016



OCEAN PLANNING IN THE NORTHEAST 11

Party / Charter Mapping

- Pilot work with Atlantic Coastal Cooperative Statistics Program (ACCSP), SeaPlan, States to add location capability to mobile device units
- Mobile device information under review for eVTR (electronic reporting) by NMFS Greater Atlantic office
- Beginning late June, have volunteers in RI, CT, NY



OCEAN PLANNING IN THE NORTHEAST 12

Location of Party Charter pilot volunteers

OCEAN PLANNING IN THE NORTHEAST

Cautions / Take Aways

- What the maps don't show
  - Past fishing patterns, pre-VMS
  - Other fisheries without VMS
  - Permit categories that don't require VMS
  - Locally important fishing activity
- Maps provide baseline information, other information sources needed
- Saturation of mapping effort?
  - Hard to get, hold attention
  - Too much competition for time, thought

OCEAN PLANNING IN THE NORTHEAST

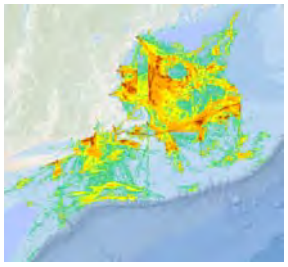
Thank you

Questions / Comments?

OCEAN PLANNING IN THE NORTHEAST

GROUNDFISH 2014

All data



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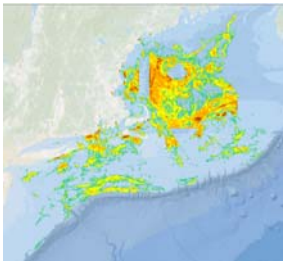


OCEAN PLANNING IN THE NORTHEAST

Appendix D
Marine-life Data & Analysis

Patrick N. Halpin
Marine Geospatial Ecology Lab, Duke University
Marine Life Data & Analysis Team (MDAT) Principal Investigator
Brian Kinlan (Co-I), Earvin Balderama (Co-I), Mike Fogarty (Co-I)
Jason Roberts, Arliss Winship, Corrie Curtice, Jesse Cleary, Emily Shumchenia

North East Regional Planning Body
June 3, 2015

Objective:

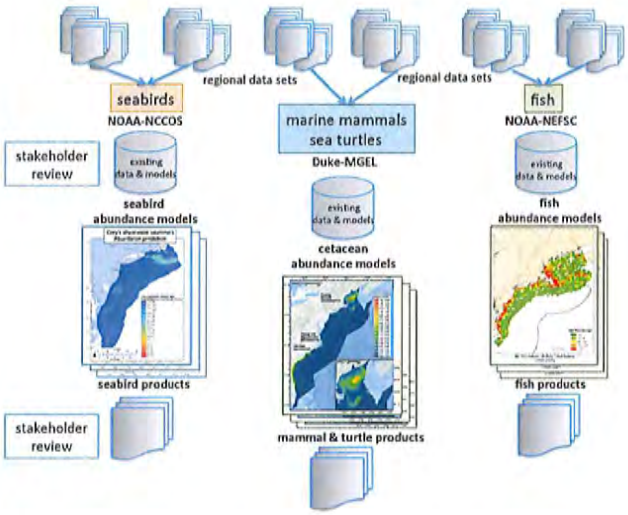
To provide an update on marine-life data and model development and discuss next steps

Overview

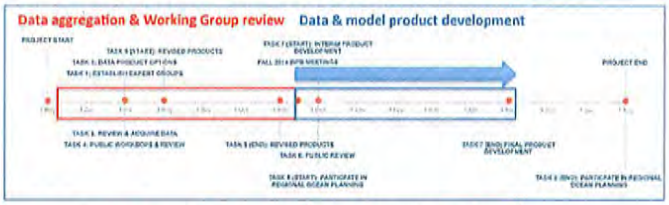
- Timeline
- Marine-life data & model updates
- Synthetic Products - Important Ecological Areas
- Next Steps

Marine-life Data & Analysis Team

- Marine Geospatial Ecology Lab – Duke University
- NOAA – NCCOS
- NOAA – NMFS/NEFSC
- Loyola University



Project timeline



Expert working groups formed (~80 experts) and reviewed data holdings and modeling methods

Data & model product development

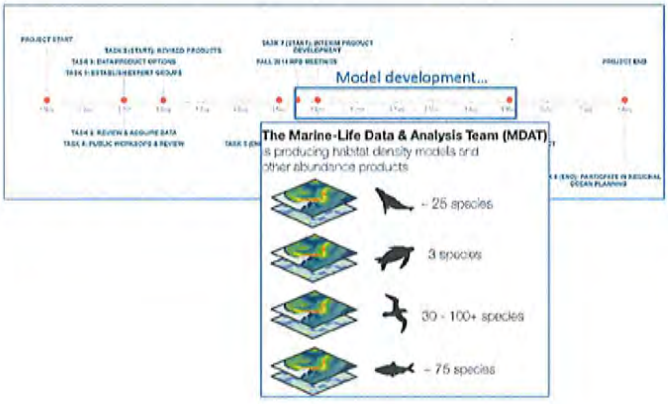
Final data & model products

>3,600 data layers

Options-III + IV?

synthesis products

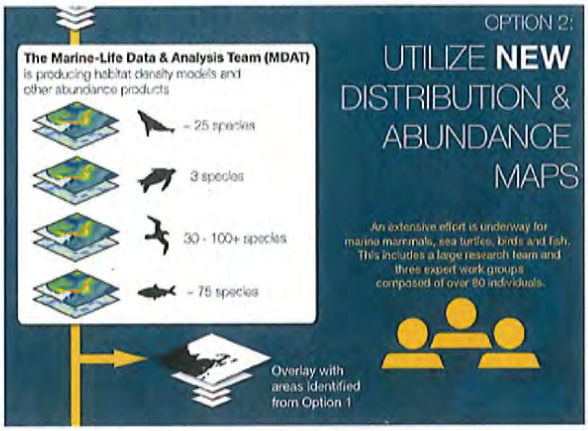
Project timeline



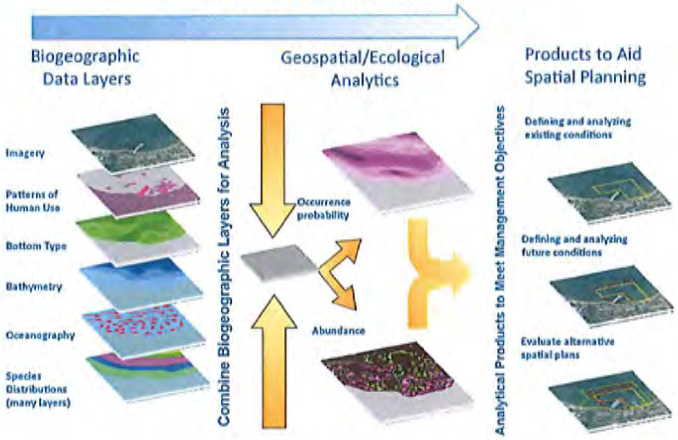
Overview

- Marine-life data & model updates

Distribution & Abundance

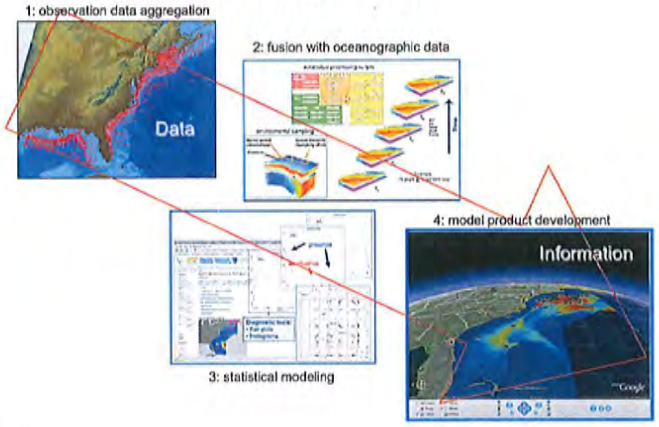


Data Processing Approach

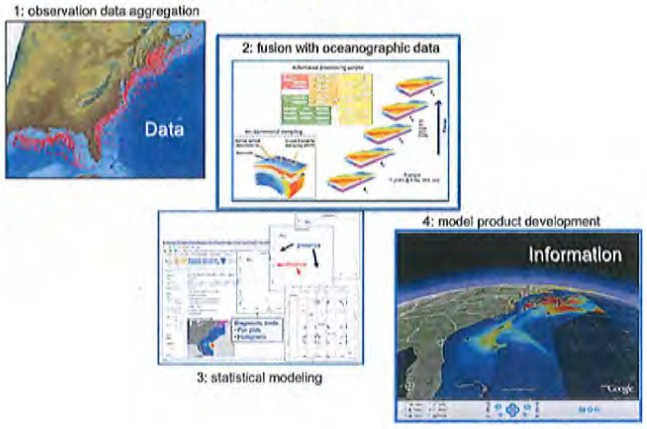


Marine mammal aggregation data overview

Marine habitat modeling process

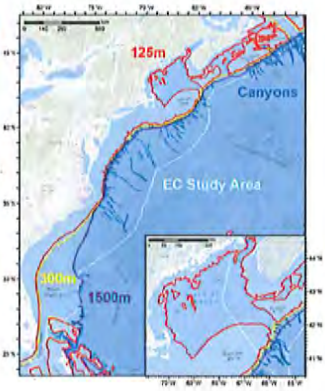


Marine habitat modeling process



Physiographic predictors

Predictor	Description
Depth	Downscaled from SRTM30-PLUS to 10km resolution
Slope	Computed from SRTM30-PLUS
DistToShore	Distance to shore, not including Bermuda
DistTo125m, DistTo300m, DistTo1500m	Distance to isobaths that delineate various ecologically relevant geomorphic features
DistToCanyon	Distance to closest submarine canyon

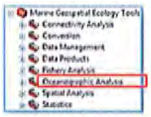


Physical oceanographic predictors

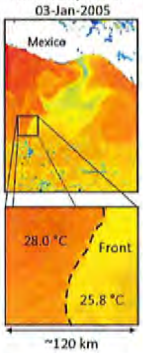
Predictor	Description
SST	Taken from GHRSST CMC 2.0 L4 0.2° daily SST, interpolated up to 10 km resolution
DistToFront	Distance to closest SST front detected in CMC SST using Canny edge detection operator. Tested several alternative formulations.
DistToEddy, DistToAEddy, DistToCEddy	Distance to ring of closest geostrophic eddy having any/anticyclonic/cyclonic polarity, from Chelton et al. (2011) database. Tested eddies at least 9 weeks old, at least 4 weeks old, and without a minimum age.
TKE, EKE	Total kinetic energy and eddy kinetic energy derived from AVISO 1/4° DUACS 2014 geostrophic currents, interpolated up to 10km resolution
WindSpeed	30 day running mean of NCDC 1/4° Blended Sea Winds

Identify fronts in SST images

MGET: Marine Geospatial Ecology Tools
Roberts *et al.* 2010

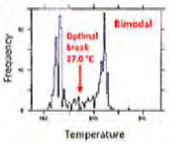


AVHRR Daytime SST
03-Jan-2005

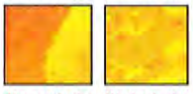


Cayula and Cornillion (1992) edge detection algorithm

Step 1: Histogram analysis



Step 2: Spatial cohesion test

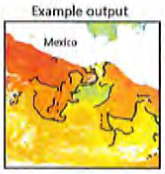


Strong cohesion → front present

Weak cohesion → no front

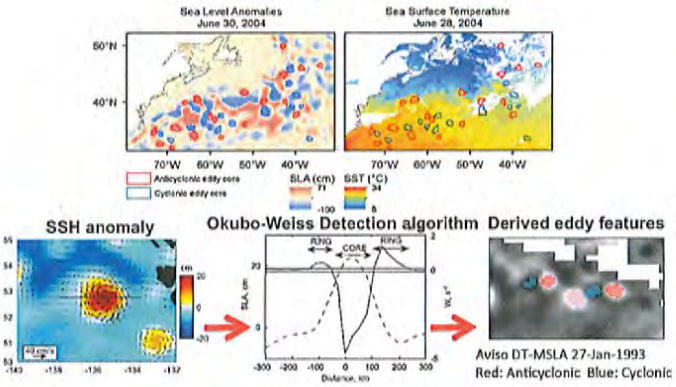
ArcGIS model

Example output



dynamic oceanographic covariates

Detecting sea height anomalies & eddys



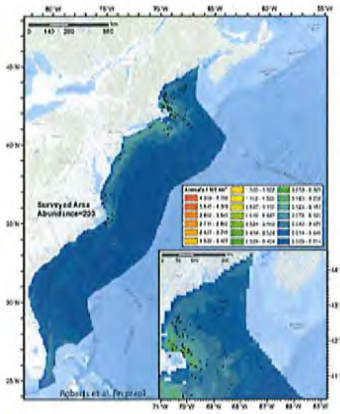
Productivity-related predictors

Predictor	Description
Chl	GSM merged SeaWiFS/Aqua/MERIS/VIIRS 9km daily chl-a concentration, smoothed with 3D Gaussian smoother to reduce data loss to < 10%. Tested two smoothing formulations.
VGPM	Behrenfeld et al. vertically generalized primary prod. model (VGPM) at 8-day, 9km resolution, trilinear-interpolated to daily. Also tested 45, 90, and 180 day running cumulative sums.
PkPP, PkPB	Weekly zooplankton potential production and potential biomass from SEAPODYM model
Epi_Mnk_PP, Epi_Mnk_PB	Weekly epiplelagic micronekton potential production and potential biomass from SEAPODYM model

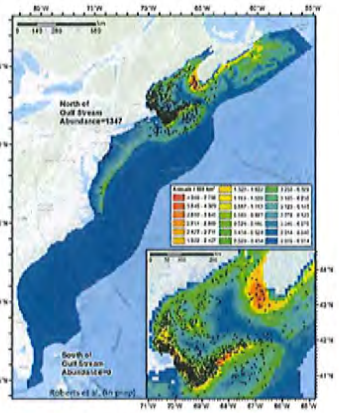
Modeling Methods

- Integrated multiple surveys from ***different platforms*** to fill spatial and temporal gaps, and to accrue enough sightings to model rare species
- Used "***distance sampling***" methodology to model detectability, correct for biases, and standardize survey data
- Modeled density from habitat-based predictors obtained from remote sensing and models, using ***multivariate regression models*** (GAMs)
- Fitted ***separate models*** for the Atlantic and Gulf of Mexico
- When possible and appropriate, fitted seasonal models using ***species-specific seasons*** based on known ecology

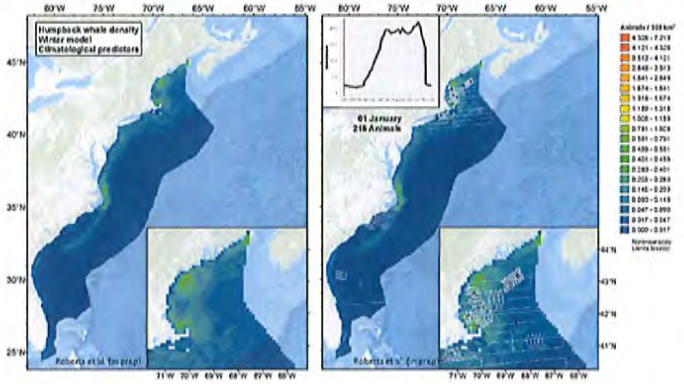
Winter



Summer

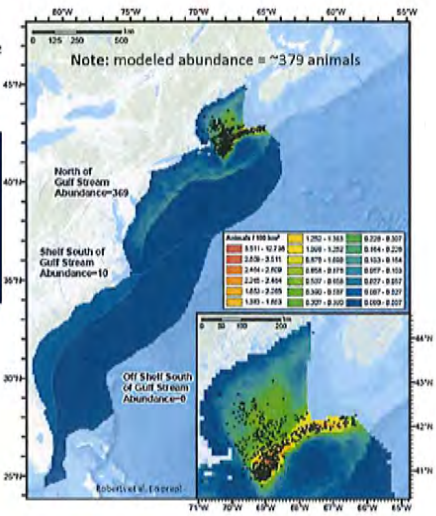


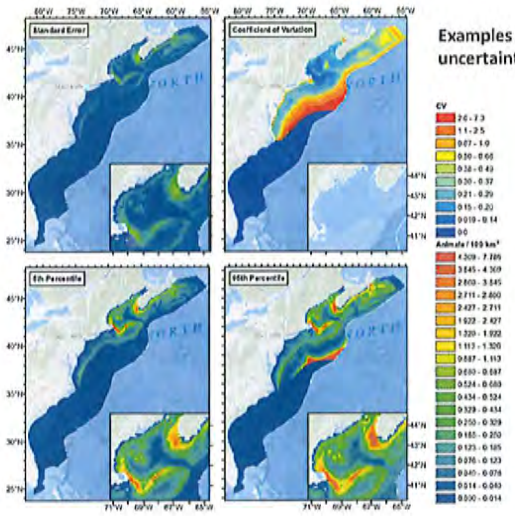
Humpback whales



Example results:
North Atlantic Right Whale
(*Eubalaena glacialis*)

North Atlantic Right Whale
Summer Season





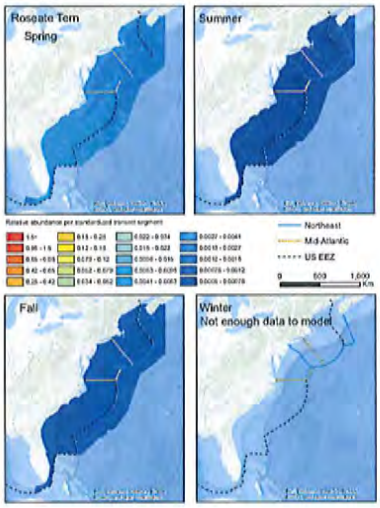
Examples of possible uncertainty products

Overview

- Marine-life data & model updates: ***Avian examples***

Species product updates:

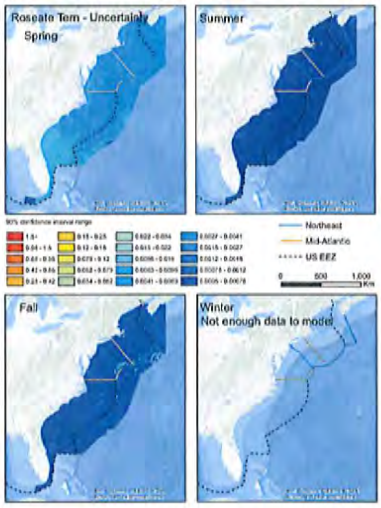
Roseate Tern - abundance



Kinlan et al. 2015, in review

Species product updates:

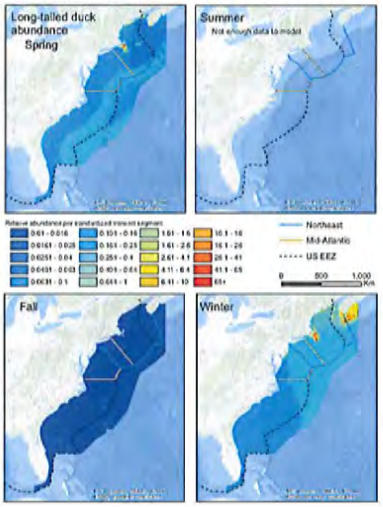
Roseate Tern - uncertainty



Kinlan et al. 2015, in review

Species product updates:

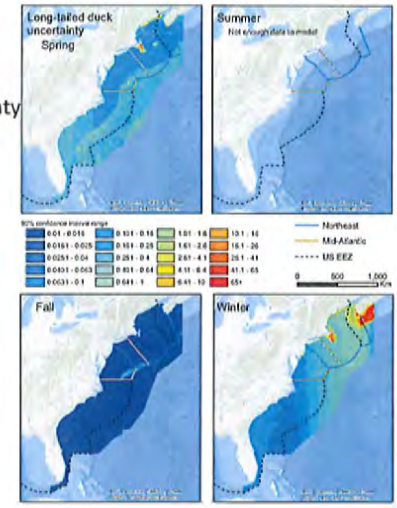
Long-Tailed Duck - abundance



Kinlan et al. 2015, in review

Species product updates:

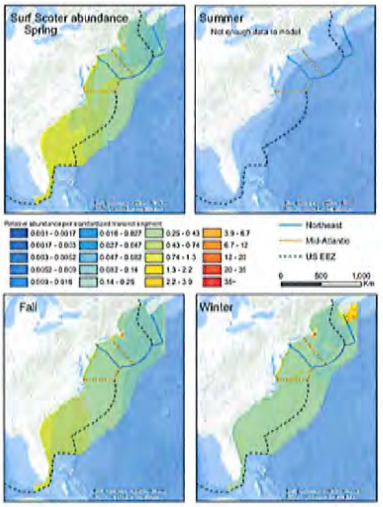
Long-Tailed Duck - uncertainty



Kinlan et al. 2015, in review

Species product updates:

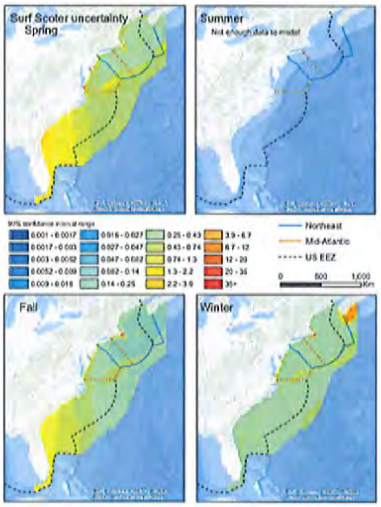
Surf Scoter - abundance



Kinlan et al. 2015, in review

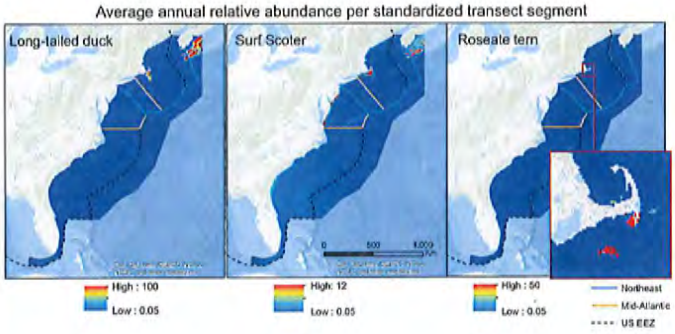
Species product updates:

Surf Scoter – uncertainty



Kinlan et al. 2015, in review

Species product updates: annual



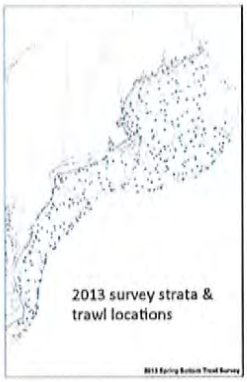
Kinlan et al. 2015, in review

Overview

- Marine-life data & model updates: ***Fish examples***

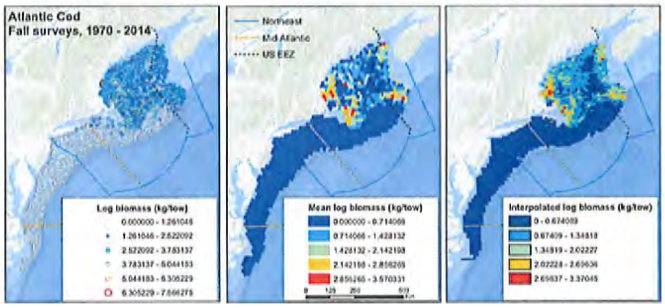
Note: *We will have a workstation set up to allow you to view maps & data products today.*

NEFSC Bottom Trawl surveys



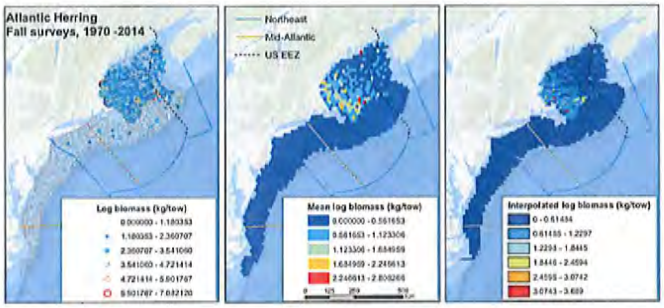
Species product updates:

Atlantic Cod - biomass



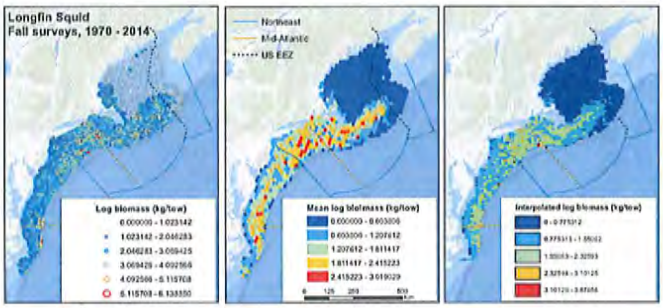
Species product updates:

Atlantic Herring - biomass



Species product updates:

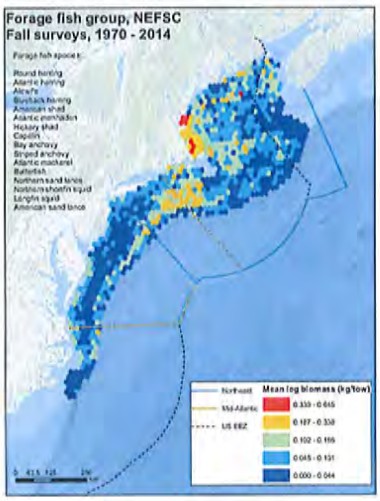
Longfin Squid- biomass



Species product updates:

Forage fish - biomass

Multi-species compilation



Species abundance products:

Marine Mammals:
148 models (29 species or groups modeled annually, seasonally, or monthly) + 4 uncertainty products per model = ***740 data layers***

Avian:
(3 groups * [1 annual average map + 4 seasonal maps] * 2 metrics * 3 products per metric) + (46 species * 2 metrics * 3 annual products per metric)+ (134 species-season maps * 2 metrics * 3 products per metric) = 90 + 276 + 804 + 138 = ***1308 data layers***

Fish:
81 species * 2 time-spans federal * 4 maps + (81 species * 1 time-span state * 3 state surveys * 4 maps) = ***1620 data layers***

Potential for synthesis products
~740 mammal layers, + ~1308 avian layers, + ~1620 fish layers = ~3668

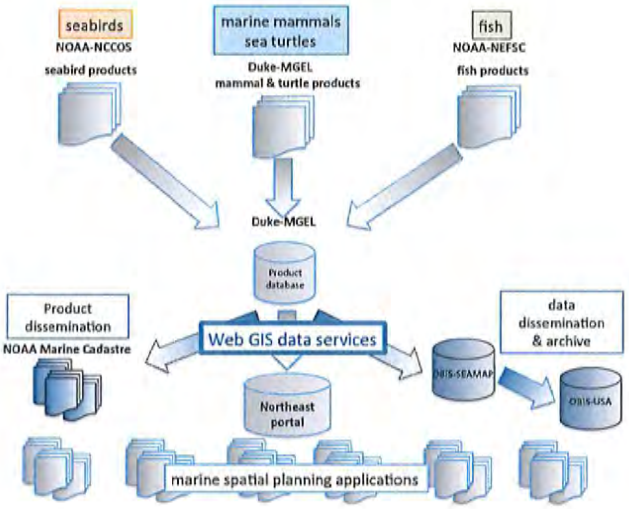
Species abundance products:

Question: *How do you deliver this volume of data to multiple data portals?*

Answer: *through internet web services*

Benefits:

- Portals do not need to store or display all layers;
- Updates are passed to all portals & users





Overview

- Synthetic Products - Important Ecological Areas

Project timeline

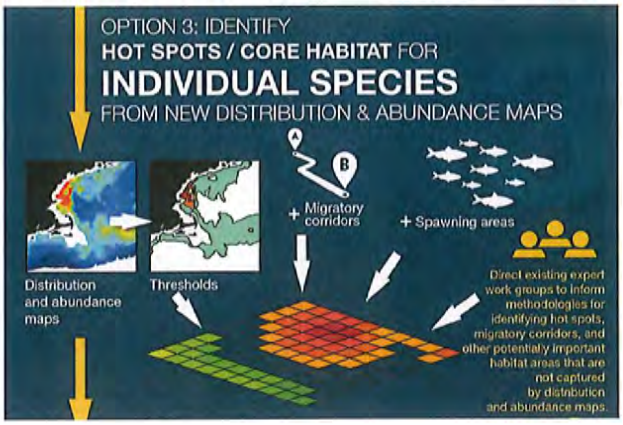
Data & model product development

Final data & model products

R&D and provisional product development

Options-III + IV?

Important Ecological Areas



Important Ecological Areas

Levels of analysis

Distribution
Where are these species found? (data = range maps, habitat models...)

Abundance
How many animals are found in an area? (data = density models...)

Persistent multiple use or critical habitat ar
Where are the critical areas for these species? (data = multi-species use "hotspots", critical feeding/breeding areas, BIAs

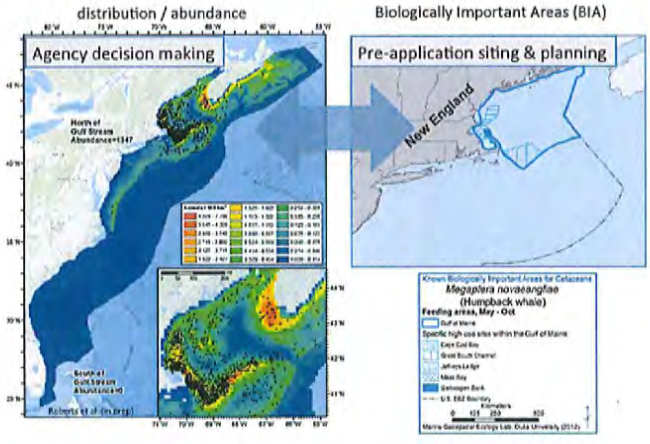
Vulnerability
What are the potential stresses on these areas? (data = current or potential uses, habitat degradation...)

(1) Species areas that inform regulatory needs

(2) Multi-Species areas of high abundance & diversity

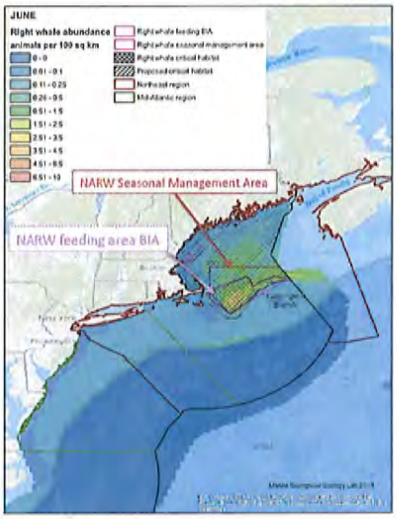
Increasing requirements for long-term data collection, more sophisticated analysis and multi-disciplinary approaches

Ecologically Important Areas: Life History / Usage



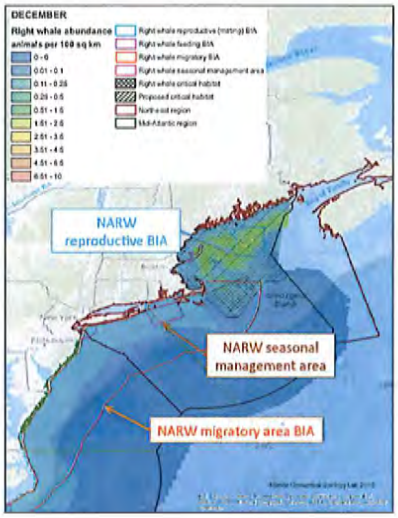
Abundance data for regulatory use:

- What are the abundance thresholds that relate to important areas?
- How do abundance thresholds correspond to identified important areas?



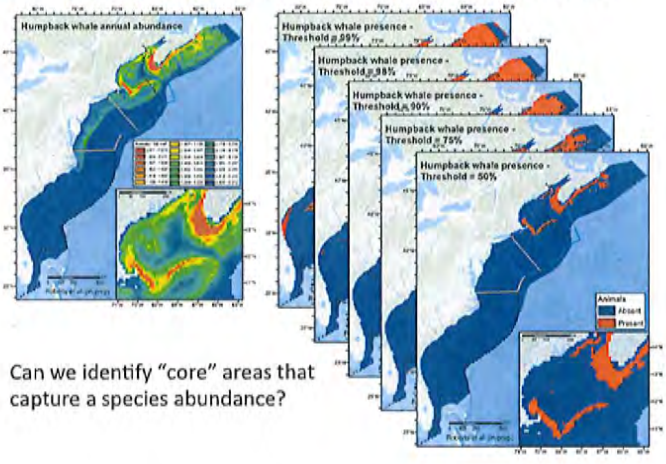
Abundance data for regulatory use:

- What are the seasonal abundance thresholds?



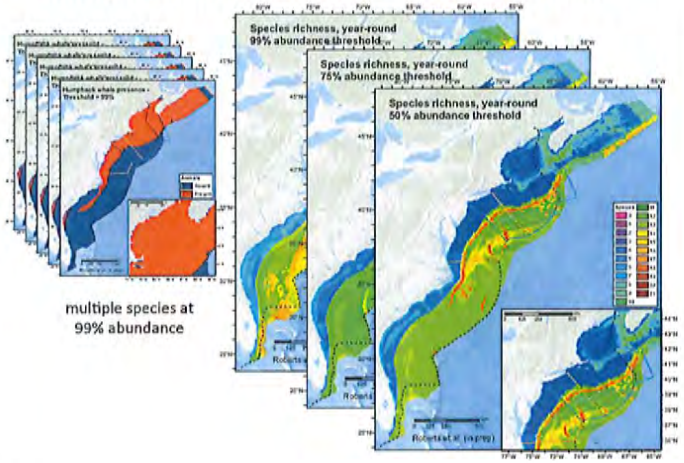
Species abundance:

Ecologically Important Areas: species abundance



Can we identify "core" areas that capture a species abundance?

Ecologically Important Areas: species richness

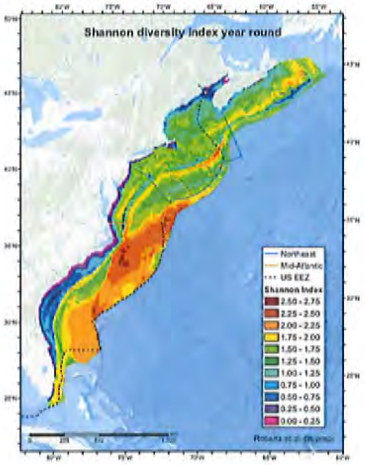


multiple species at 99% abundance

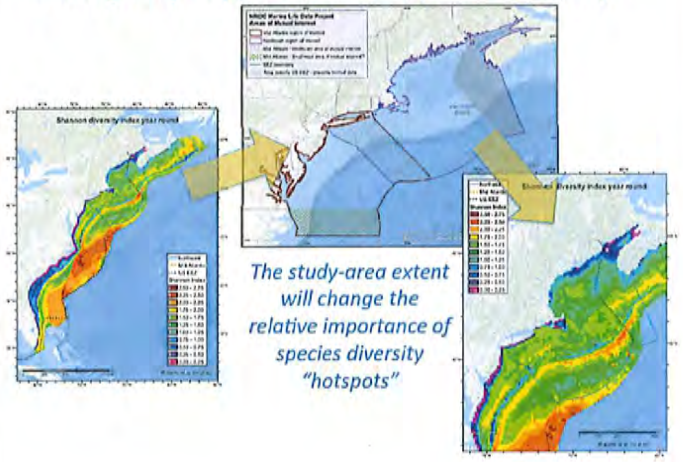
Ecologically Important Areas: species diversity

Shannon Diversity Index

$$H' = -\sum_{i=1}^{R} p_i \ln p_i$$



Ecologically Important Areas: species diversity

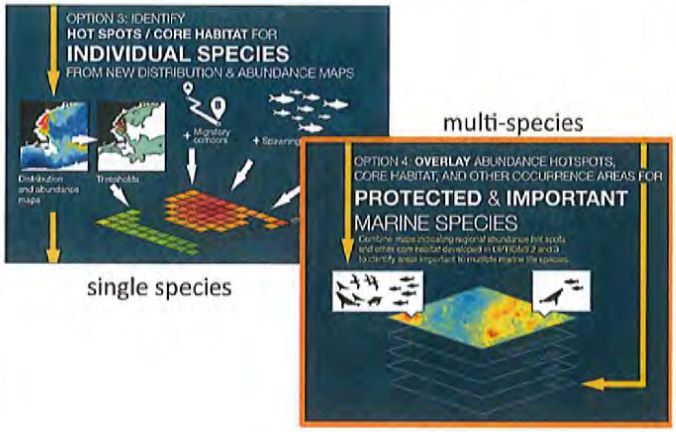


The study-area extent will change the relative importance of species diversity "hotspots"

Overview

- Next Steps

Important Ecological Areas



Next steps:

- ✓ Deliver final species abundance products & web-services;
- ✓ Species products for regulatory agency use;
- ✓ Continue development of single species "hotspots" (option 3)
- ✓ R&D work on multi-species important area "hotspots" (option 4)
- ✓ Planning for draft ocean plan products (maps, figures, text...)

Questions

Contact email:

northeast_marinelife_data@duke.edu

NCCOS

Appendix E
Baseline Assessment for Regional Ocean Planning in the Northeastern United States

Hauke Kite-Powell
Woods Hole Oceanographic Institution

Northeast RPB Meeting, Mystic, CT, 3 June 2015

OCEAN PLANNING IN THE NORTHEAST

Topics

- What is the Baseline Assessment?
- Purposes and objectives
- Scope and content
- Baseline Assessment document outline
- Data availability via Ocean Data Portal
- Project Team
- Next Steps

OCEAN PLANNING IN THE NORTHEAST

What is the Baseline Assessment?

A written document and supporting data sets that provide:

- A description of present status and trends in
  - marine resources and infrastructure,
  - economic activity (broadly defined), and
  - economic and ecosystem value generated in the Northeastern United States

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Purpose and Objectives

- To support the regional ocean planning process
- Summarize what is known about the region's marine resources and value derived from these
- Suggest how this information can be used to consider the effect of planning decisions

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Scope and Content

- Natural resources
- Infrastructure
- Economic activity and value measures
- Ecosystem service value
- Mapping resources & infrastructure to value
- Trends and future considerations

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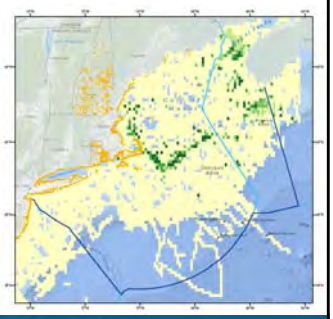
Scope and Content

- Natural resources
  - Biological populations, habitats,

Example:
Humpback Whales

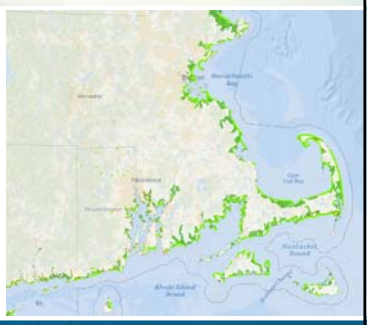


OCEAN PLANNING IN THE NORTHEAST

Scope and Content

- Natural resources
  - Biological populations, habitats, etc.

Example:
Beaches and coastal wetlands



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Scope and Content

- Natural resources
- Infrastructure
  - Ports, marinas, seawalls, etc.

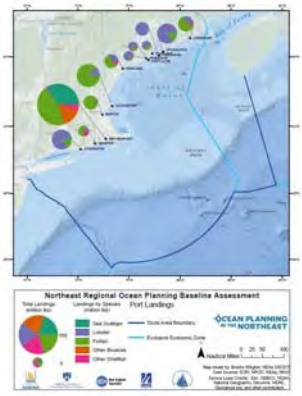
Example:
Seawalls, Massachusetts

OCEAN PLANNING IN THE NORTHEAST

Scope and Content

- Natural resources
- Infrastructure
- Economic activity and value measures
  - Marine industries, recreational activity, etc.
  - Jobs, wages, contribution to GDP

Example:
Commercial fishery landings

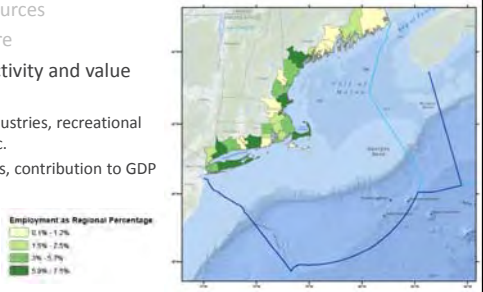


OCEAN PLANNING IN THE NORTHEAST

Scope and Content

- Natural resources
- Infrastructure
- Economic activity and value measures
  - Marine industries, recreational activity, etc.
  - Jobs, wages, contribution to GDP

Example:
Ocean-related employment



OCEAN PLANNING IN THE NORTHEAST

Scope and Content

- Natural resources
- Infrastructure
- Economic activity and value measures
  - Marine industries, recreational activity, etc.
  - Jobs, wages, GDP

Example:
Indirect GDP impact from marine transportation

OCEAN PLANNING IN THE NORTHEAST

Scope and Content

- Natural resources
- Infrastructure
- Economic activity and value
- Ecosystem service value
  - Food production, climate regulation, etc.

Example:
Net value/year from seafood production

OCEAN PLANNING IN THE NORTHEAST

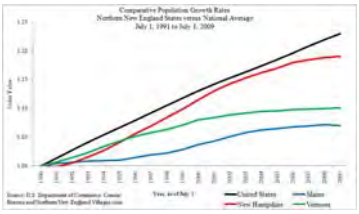
Scope and Content

- Natural resources
- Infrastructure
- Economic activity and value
- Ecosystem service value
- Mapping resources & infrastructure to value

OCEAN PLANNING IN THE NORTHEAST

Scope and Content

- Natural resources
- Infrastructure
- Economic activity and value
- Ecosystem service value
- Mapping resources & infrastructure to value
- Trends and future considerations
  - Demographics, climate, technology
  - Best practices



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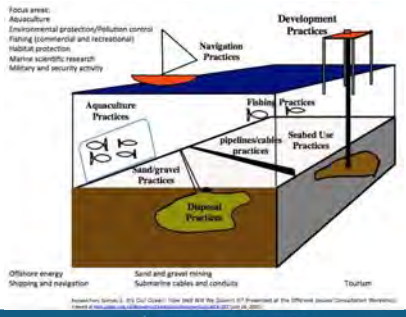
Best Practices (John Duff)



OCEAN PLANNING IN THE NORTHEAST

Document Outline

- **Introduction**
  - Purpose and scope of baseline assessment
  - Resources and economic value generation
  - The role of ocean planning in promoting sustainable economic activity
- **Resources and Infrastructure**
  - Marine and coastal natural resources
  - Marine and coastal cultural resources
  - Marine and coastal infrastructure
  - Human resources
- **Coastal and Marine Economy**
  - Definitions and boundaries
  - Sectors
  - Geographic regions
  - Links to the regional economy
- **Ecosystem Services**
  - Definitions and boundaries
  - Review of non-market value studies
  - Categories
  - Gaps in present knowledge
- **Mapping Resources to Economic Value**
  - Sectors and resources; production functions
  - Opportunities for conflict/role of planning
- **Trends and Future Considerations for Planning**
  - Climate change
  - Socio-economic changes
    - Demographics
    - Macro-economic structure
  - Technological change in marine industries
  - Changes in macro-economic structure
  - Best practices
- **Recommendations – Priorities for Future Research**
  - Resources
  - Economic sectors

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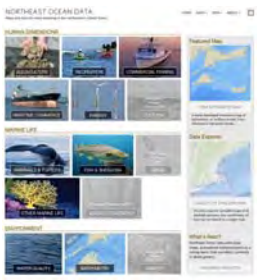
Data Accessibility

Data sets supporting the Baseline Assessment will be made available on the Northeast Ocean Data Portal

http://www.northeastoceandata.org/



OCEAN PLANNING IN THE NORTHEAST

Project Team

- WHOI Marine Policy Center
  - Hauke Kite-Powell, Porter Hoagland, Di Jin
- University of Southern Maine
  - Charles Colgan, Vinton Valentine
- New England Aquarium
  - Brooke Wikgren
- John Duff, Univ. of Mass. (Boston)

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Next Steps

- Frist draft of BA Document end of June 2015
- Final version of BA Document September 2015

- We welcome community input on cultural resources and values, and other information that should be considered for inclusion in the BA document

OCEAN PLANNING IN THE NORTHEAST

Thank you!

Hauke Kite-Powell
Marine Policy Center
Woods Hole Oceanographic Institution
Woods Hole, MA 02543

508-289-2938
hauke@whoi.edu

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Appendix F
Ocean and Coastal Ecosystem Health

Objective 2 Subcommittee Report

Co-Chairs:

USACE - Bill Hubbard and EPA – Ivy Mlsna

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Framework

- **Objective 2.** Identify and Support Existing Non-regulatory Opportunities to Work Toward Conserving, Restoring, and Maintaining Healthy Ecosystems
  - **Action 2-1.** Identify existing and potential programs that are or would be directly related to conservation, restoration and maintaining healthy ocean and coastal ecosystems.

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Objective 2 Successes

- Subcommittee team formed - meeting quarterly
  - Tab 3.2A
- Spreadsheet of federal funding opportunities
  - Not included in briefing package – online
- Project criteria agreed by sub-committee
  - Tab 3.2B
- A New England data layer of projects completed
  - Ocean Data Portal – will demonstrate

M1

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Criteria for Priority Projects

RPB supported project = has potential funding and is a viable, prospective project to improve ocean condition *as indicated by meeting **criteria** identified in tab 3.2B.*

The subcommittee asks the RPB to review and approve these criteria to support restoration and conservation priority projects.

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Options for Including Restoration and Conservation Priorities in NE Ocean Plan

Four options for the RPB to consider (Tab 3.2C):

A - RPB supports set of habitat and/or project types as restoration and conservation priorities for the region – no data layer

B – RPB supports static set of projects published as priority in the regional plan and commits to maintaining a data layer (subcommittee is a RPB entity)

C – RPB supports NROC as the regional entity to maintain and update list and data layer of priority projects (subcommittee is a NROC entity)

D – RPB supports set of projects that will be changed for each updated Plan, while fluid list is maintained on the side by NROC for reference during updates

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Data Portal Demonstration

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Appendix G
Pre-application Consultation Best Practices

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Introduction

- Current practice
- Considerations
- Draft outline
  - Purpose
  - Best practices
  - Contacts

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Current Practice

- Informal process at the discretion of the lead agency
- Informational, not decisional
- Lead federal agency convenes agencies with primary regulatory responsibilities
  - Typically USACE as NEPA and permitting lead
- Participating agencies typically some combination of:
  - NMFS (protected resources and habitat)
  - EPA (habitat and water quality)
  - USF&W (avian/ESA)
  - State agencies (marine fisheries, resource protection, coastal management)
  - USCG (navigation safety)
  - USACE (Public Interest Review, CWA and R+H interests)

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Current Practice

- Proponent presents project plans with varying levels of:
  - Project details
  - Technical and regulatory competence and capacity
  - Resource and human use data
  - Knowledge of local/regional stakeholder interests
  - Knowledge of local conditions
- Agencies provide feedback on potential fatal flaws, key issues, data gaps, field work, permitting and construction timelines, other

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Considerations

- Improve an existing process, not create new process
- Enhance value by integrating use of the data portal and ocean plan
- Enhance opportunities for more informed stakeholder and public participation in environmental and regulatory review

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Section 1: Purpose

- Provide framework of data, guidance, and procedural best practices
- Support understanding of proposed action, key issues, available and needed data, key stakeholders
- Support early and informed stakeholder engagement
- Support coordinated state/federal review

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Section 2: Best Practices

- Overview
- Data and information sources
  - Northeast Regional Data Portal
  - NE Regional Ocean Plan
  - Other data sources
    - Federal, state, regional (e.g.,NERACOOS), NGO (broadly), stakeholders, other
  - Links to existing regulatory guidance

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Section 2: Best Practices for Data

- Guidance for use of Data
  - Consultation focuses on initial siting considerations using aggregated data products
  - Guidance developed by agencies; consultation is 'hands-on' application
- Type and level of detail of information to be discussed
- Expectations for outcomes of consultation

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Section 2: Best Practices for Process

- Notice and participation
  - Private applicant
    - Agencies with key interests/jurisdiction
  - Federal project
    - Early discussion with affected state to determine opportunities and capacity to coordinate NEPA and state review
- Linkages to state pre-application processes
  - ME and RI require consultation and public meeting for certain kinds of projects
- Coordination with Tribes
  - Integrate tribal best practices materials currently under development
- Stakeholder engagement

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Section 2: Best Practices for Engagement

- Best practices will describe why stakeholders should be engaged as part of the pre-application process and options for doing so
  - Nature and level of engagement is at proponent's discretion, but can be addressed through best practices that address:
    - Knowledge of key affected interests as a basic component of project design
    - Guidance on aggregated data products (e.g., spatial designation of activities may require groundtruthing)
    - NEPA and regulatory provisions related to stakeholder interests (NEPA, OCSLA; specific factors considered in permitting under the Clean Water Act and Rivers and Harbors Act, USACE Public Interest Review

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Section 3: Reference Material

- Select reference materials and contact information, including:
  - Federal, state, and tribal agencies with ocean management interests/jurisdiction
  - Stakeholder organizations
    - Industry associations
  - Project-specific opportunities for engagement and public comment
    - Federal (USACE public notice, other)
    - State regulatory programs (typically CZM and state DEP or equivalent)

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Formats

- Potential formats
  - Plan text
  - Summary checklist of Best Practices for inclusion/reference in agency materials
  - Other

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Outcomes

- Outcomes of consultation include:
  - Application of regional ocean plan
  - Enhance state/federal coordination
  - Better information for participation and decision-making
  - Fewer impacts through more effective avoidance, minimization, and mitigation
  - More efficient review and permitting process

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Appendix H
Data Synthesis, Agency Use & Development of Draft Plan Content

NE RPB Meeting - June 3-4, 2015

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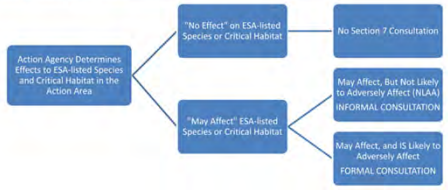
Flow Chart of Section 7 Process:

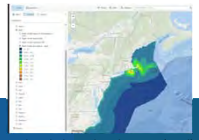


Source: NOAA Fisheries, Greater Atlantic Region, Protected Resources
http://www.greateratlantic.fisheries.noaa.gov/protected/section7/guidance/consultation/index.html

Siting & Planning
(pre-application, initial screening)

Right Whale Critical Habitat

Agency Decision Making
(consultation, biological opinion)



Right Whale Predicted Density (April)

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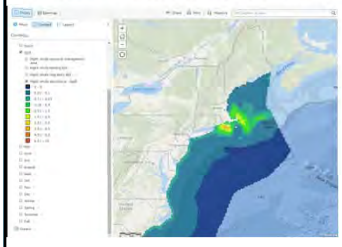
Right Whale Predicted Density, April (Draft)



- Maps of individual species that are generally regulated under one to a few authorities
- Data Portal potentially includes (if possible):
  - Animations (intra or inter annual)
  - Measures of uncertainty
  - Additional info about projected change due to climate
- Products: Summer 2015

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Nearshore Avian Group – Predicted Annual Average Abundance

- Maps of species groups that are generally regulated under one to a few authorities
- Data Portal potentially includes (if possible):
  - Animations (intra or inter annual)
  - Measures of uncertainty
  - Additional info about projected change due to climate
- Products: Summer 2015

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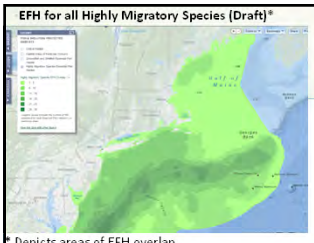
Proposed Right Whale Critical Habitat*

RI SAMP Sea Duck Area Designated for Preservation*

- Maps of core areas for individual species or species groupings that are generally regulated under one to a few authorities
- Data Portal potentially includes (if possible):
  - Information about components used to develop areas
  - Measures of uncertainty
- Work groups :
  - Identify data inputs and methods
  - Consider thresholds for deriving/separating areas

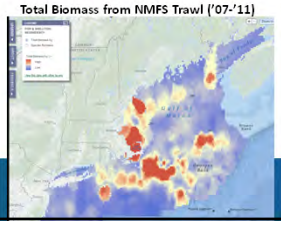
* Examples used to convey concept of deriving a core area; actual analysis using MDAT products and possibly incorporating additional habitat characteristics would need to be conducted

EFH for all Highly Migratory Species (Draft)*



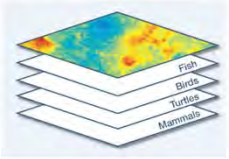
* Depicts areas of EFH overlap

Total Biomass from NMFS Trawl ('07-'11)



- Maps overlaying many/all species within a taxonomic group that are all generally regulated under one to a few authorities
- Data Portal potentially includes (if possible):
  - Information about components used to develop hot spots
  - Measures of uncertainty
- Work groups :
  - Develop methodology
  - Consider thresholds for deriving/separating areas

Concept for multiple taxa hot spots*



* Could include density hot spots, biomass, species richness, and/or other products. Inputs could include additional habitat and ecological process considerations.

- Maps overlaying multiple taxa that are generally regulated under multiple authorities
- Data Portal potentially includes (if possible):
  - Each pixel can be queried to identify species and related authorities
  - User can drill down into constituent layers
- Work groups :
  - Develop methodology
  - Consider thresholds

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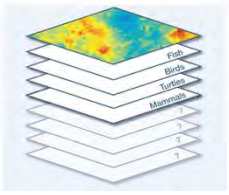
Additional EBM considerations (some longer-term?)



- Data Inputs:
  - Ecosystem process (forage fish, productivity, etc.)
  - Benthic & pelagic habitat (habitat classification, oceanographic hindcast)
  - Ecosystem service production & value
- Models & Indicators:
  - Vulnerability; impacts
  - Indicators based on specific ocean health goals & values
  - Scenarios

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Marine Transportation and Safety

The PORTS AND WATERWAYS SAFETY ACT (PWSA) requires the Coast Guard to conduct studies to provide safe access routes for vessels traffic in the waters under U.S. jurisdiction. In doing so, the Coast Guard considers all waterway uses to reconcile the need for safe access routes.

PORTS AND WATERWAYS SAFETY ASSESSMENT
Large scale risk assessment for a port, port approaches, or region of significance

WATERWAYS ANALYSIS MANAGEMENT SYSTEM
Assess navigational safety for specific federally designated waterways on approximate 5-year rotation

NAVIGATIONAL RISK ASSESSMENT
Assess navigational impacts of a specific project

Increasing context-specific detail

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2012 Traffic for Towing Vessels (> 200m line)

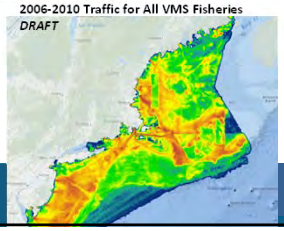
2006-2010 Traffic for Scallop Boats

- Maps of traffic for specific activities or vessel types
- Additional information could include economic analyses, future trends, guidelines, & best practices
- *Maps will not replace need for more detailed and specific siting level data on a project basis*

2012 Traffic for All Tug/Tow Vessels

2006-2010 Traffic for All VMS Fisheries

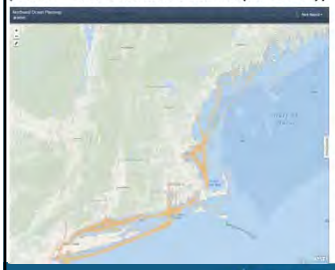
DRAFT



- Aggregated traffic maps for specific maritime industries
- Additional information could include economic analyses, future trends, guidelines, & best practices

2012 Core Routes for Tug/Tow Vessels

(DRAFT – For Demonstration Purposes Only)

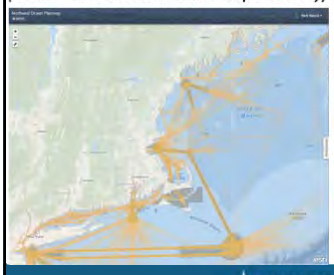


- Maps could include core routes/areas for each industry derived from AIS, VMS, and other data
- USCG will need to determine appropriate analyses and thresholds to identify core routes/areas
- Maps could include consideration of future trends, best practices, USCG marine planning guidelines, and industry standards

OCEAN PLANNING IN THE NORTHEAST

2012 Core Shipping Areas and Routes

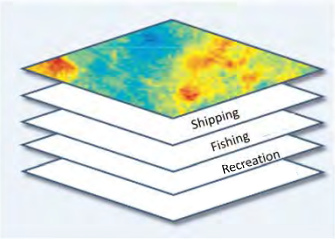
(DRAFT – For Demonstration Purposes Only)



- Maps could include core routes and operational areas for each maritime sector (shipping, fishing, recreation) aggregated from each industry/activity within the sector
- Maps could include consideration of future trends, best practices, USCG marine planning guidelines, and industry standards

OCEAN PLANNING IN THE NORTHEAST

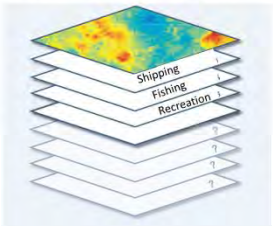
Marine Transportation & Safety Areas



- Consider merging shipping, fishing, and recreation areas to generally identify areas important for marine transportation and safety
- Note that maps and data from different shipping, fishing and recreational activities *vary significantly*
- Will need to consider future trends for each activity

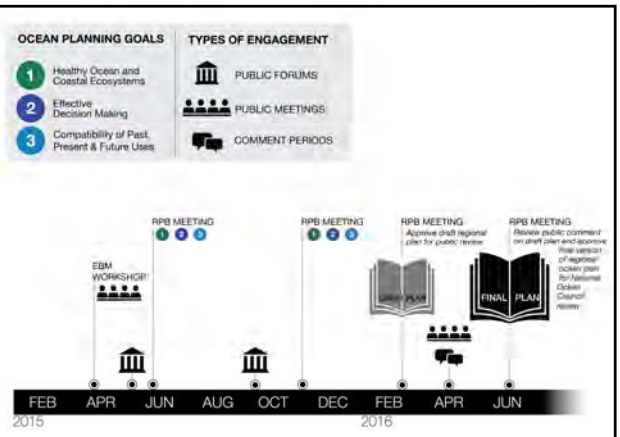
OCEAN PLANNING IN THE NORTHEAST

Additional human use and other (some long term) considerations



- Potential to consider other human uses (near term)
  - Energy infrastructure & planning areas
  - Aquaculture
  - Telecommunications cables
  - Dredging and disposal sites
- Potential for cumulative use analysis
- Potential to consider cumulative impacts and ecosystem service production and values (in addition to input/output economic generation)

OCEAN PLANNING IN THE NORTHEAST



Section 2: Management Application of Ocean Plan Information

This section will describe the analysis and management application of plan information introduced in Section 1, with a specific focus on spatial data products and associated written and graphical content. Specific sections could include:

A. *Marine mammals*
B. *Sea turtles*
C. *Birds*
D. *Fish*
E. *Submerged aquatic vegetation*
F. *Restoration*
G. *Historic and cultural resources*
H. *Marine transportation system*
I. *Commercial fishing*
J. *Recreational fishing*
K. *Recreation*
L. *Energy and infrastructure*
M. *Aquaculture*
N. *Sand and gravel*
O. *Important ecological and/or human use areas*

Each section (A through O) could include the following specific elements:

i. *Aggregate map(s) depicting important areas or the extent of existing uses and resources, a description of the analysis and synthesis of the underlying data, and potential interpretations (including limitations and caveats)*
ii. *A brief reference to relevant legal authorities and responsible agencies*
iii. *A description of how the referenced agencies intend to use ocean plan maps and information in existing regulatory programs and practices*
iv. *References to additional information, including base data products, economic data, trends, best management practices, and existing guidelines available via the NE Ocean Data Portal, the Baseline Assessment, and/or other information sources that will be used by the agencies*
v. *Reference to location where draft agency guidance using content from this section of the plan will be hosted (e.g. agency website)*

Work Plan for Section 2 of NE Ocean Plan

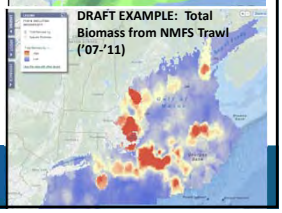
1. Important areas for marine mammals, sea turtles, birds & fish for use under specific authorities

- Maps and other plan information
- Agency guidance
- Long term maintenance
- Science and research priorities

Core Team: *NOAA Fisheries, USFWS, Staff, MDAT*

Also: *Other Federal Agencies and States through Regulatory Work Group, Tribes, Work Groups*

DRAFT EXAMPLE: EFH for all Highly Migratory Species



DRAFT EXAMPLE: Total Biomass from NMFS Trawl ('07-'11)

Work Plan for Section 2 of NE Ocean Plan

Resources	Primary Authorities	Agency
Cetaceans, sea turtles, and fish	ESA, MMPA	NOAA-NMFS Protected Resources Division
Birds	MBTA, ESA, FWCA	USFWS
Fish habitat	Magnuson, FWCA	NOAA-NMFS Habitat Conservation Division
Fishery resources	Magnuson, FWCA	NOAA-NMFS Habitat Conservation Division & NOAA-NEFSC

OCEAN PLANNING IN THE NORTHEAST

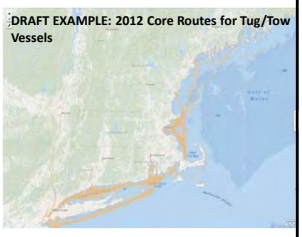
Work Plan for Section 2 of NE Ocean Plan

2. Important management and use areas for commercial fishing, recreation, and the marine transportation system

- Maps and other plan information
- Agency guidance
- Long term maintenance
- Science and research priorities

Core Team: *USCG, NOAA, USDOT (MARAD), Staff, Contractors*

Also: *Other Federal Agencies and States through Regulatory Work Group*



OCEAN PLANNING IN THE NORTHEAST

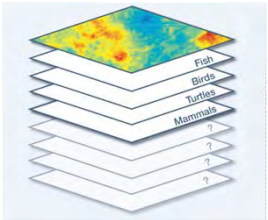
Work Plan for Section 2 of NE Ocean Plan

3. Advance a new methodology to identify important ecological areas and establish a new EBM Science Work Group

- Advance regional habitat layers
- Review data inputs
- Research & prototype methodologies
- Identify science and research priorities

Core Team: *Staff, MDAT, EBM Science Work Group*

Also: *Federal Agencies, States, and Tribes, NROC HCOM*



OCEAN PLANNING IN THE NORTHEAST

Work Plan for Section 2 of NE Ocean Plan

4. Advance other components of Section 2

- Restoration and Conservation Subcommittee *(USACE, EPA, NOAA, States, Tribes)*
- Aquaculture Work Group *(USACE, NOAA, EPA, BOEM)*
- Sand and Gravel Work Group *(USACE, BOEM, NOAA, States, NROC)*
- Energy and Infrastructure *(BOEM, USACE, FERC)*
- Submerged aquatic vegetation *(EPA, USACE, NOAA, States)*
- Historic and cultural resources *(Tribes, States, NPS)*

OCEAN PLANNING IN THE NORTHEAST

Section 3: Ocean Plan Implementation

This section will describe how the RPB intends to implement the ocean plan, including enhancements to agency practices, agency commitments, long-term administration, and plan evaluation. Specific sections could include:

A. *Best practices for pre-application, including best practices for tribal consultation and identification of potentially affected stakeholders*
B. *Agency commitments related to formalizing plan implementation, including:*
   - *Continued development of agency guidance related to the use of plan information under specific authorities (referenced in Section2)*
   - *Coordination through the Coastal Zone Management Act*
   - *Adoption of the plan*
C. *Administration of priority components of the Northeast Ocean Plan, including maintenance of the Northeast Ocean Data Portal, updates to specific data products, and identification of additional analyses to be further detailed in Section 4*
D. *Monitoring and evaluation, including the assessment of plan performance and use of indicators of ocean health*
E. *Process for plan updates, revisions, and continued public input*
F. *Roles of RPB, NROC, individual agencies, and the National Ocean Council*

Section 4: Science and Research Priorities

This section will describe priority data, research, and science necessary to update and advance ocean plan information and analyses. Specific sections could include:

A. *Additional studies and primary research to increase understanding of natural and human systems*
B. *Updates to specific natural resource, cultural resource, and human use data products*
C. *Continued analysis and integration of Ecosystem Based Management considerations, potentially including:*
   - *Important ecological areas and human use areas*
   - *Habitat mapping and classification*
   - *Changing conditions related to climate or other factors*
   - *Vulnerability, risk and impacts of changing conditions and potential new uses to existing human uses and resources*
   - *Ecosystem service production and valuation*
D. *Reference to existing programs and efforts to be leveraged*

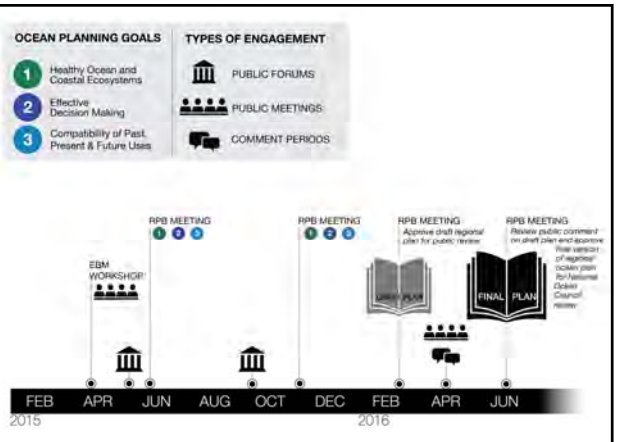
Work Plan for Sections 3 & 4 of NE Ocean Plan

5. **Agency guidance and best practices for pre-application, including tribal consultation and identification of potentially affected stakeholders**
   - *Internal/external guidance about agency use of plan information*
   - *Pre-application best practices including use of plan information, guidance, coordination with tribes, and stakeholder engagement*

6. **Options or a specific proposal for plan monitoring and evaluation, including use of indicators**
   - *Informed by NROC, OHI, GOMC, EBM Science Work Group, and previous and future public input*

7. **Science and Research Priorities**
   - *Informed by MDAT, Work Groups, Agencies via work in Section 2, EBM Science Work Group, and previous and future public input*

OCEAN PLANNING IN THE NORTHEAST



Timeline

July:

1. Marine life: review progress on initial maps of important areas and agency guidance template
   - NOAA Fisheries - Cetaceans, sea turtles
   - USFWS – Birds
   - NOAA Fisheries – Fish

2. Human uses: review progress on initial maps of important areas and agency guidance template (commercial fishing, recreation, marine transportation system)
   - USCG, NOAA Fisheries, USDOT

Timeline

August and September:

1. Marine life: review progress on initial maps of important areas and agency guidance template
   - All federal agencies and states through the Regulatory Work Group

2. Human uses: review progress on initial maps of important areas and agency guidance template (commercial fishing, recreation, marine transportation system)
   - All federal agencies and states through Regulatory Work Group

Timeline

October:
Stakeholder forum to review:

- Baseline assessment
- Marine life
- Human use
- EBM Science Work Group progress

November:
RPB Meeting