OCEAN PLANNING IN THE NORTHEAST

Northeast Regional Planning Body

Meeting Materials

New Castle, New Hampshire

November 13-14, 2014

OCEAN PLANNING IN THE NORTHEAST

Northeast Regional Ocean Planning Materials

Northeast Regional Planning Body Meeting | November 13-14, 2014

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Meeting Agenda

OCEAN PLANNING IN THE NORTHEAST

Northeast Regional Planning Body Meeting

Date November 13-14, 2014

Location Wentworth by the Sea, 88 Wentworth Road, New Castle, New Hampshire

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Meeting Agenda

Meeting Objectives

- Discuss updates on Northeast Regional Planning Body (NE RPB) activities since the last in-person meeting in June 2014.
- Review options and make decisions about next steps related to *Healthy Ocean and Coastal Ecosystems* and *Effective Decision Making* goals.
- Provide opportunities for public input about the topics being considered by the NE RPB and informal discussion of ideas with NE RPB members.

Thursday, November 13, 2014

9:00 am **Public registration**

9:30 am **Tribal blessing**

Richard Getchell, All Nations Consulting; and Former Tribal Chief, Aroostook Band of Micmacs and NE RPB Tribal Co-Lead

9:35 am **Introductions and agenda review**

Laura Cantral, Meridian Institute

9:45 am **Opening remarks and overview of NE RPB progress**

NE RPB Co-Leads will provide brief opening remarks, present important updates about progress since the last public NE RPB meeting, and review the NE RPB timeline.

- *Grover Fugate, Rhode Island Coastal Resource Management Council and NE RPB State Co-Lead*
- *Richard Getchell, All Nations Consulting; and Former Tribal Chief, Aroostook Band of Micmacs and NE RPB Tribal Co-Lead*
- *Betsy Nicholson, National Oceanic and Atmospheric Administration and NE RPB Federal Co-Lead*

10:15 am **Tying together efforts under the Northeast Regional Ocean Planning Framework goals: a preliminary draft outline of a Northeast Ocean Plan**

Betsy Nicholson, National Oceanic and Atmospheric Administration and NE RPB Federal Co-Lead

During this session, the NE RPB will review a preliminary draft outline of an ocean plan that would connect the many work streams currently underway by the NE RPB. The objective of this session is to discuss initial, high-level NE RPB input on the draft outline, recognizing that the outline will evolve with the work and be refined over time.

10:45 am **Updates on Northeast ocean planning projects related to the *Healthy Ocean and Coastal Ecosystems* goal**

John Weber, Northeast Regional Ocean Council

During this session, teams working on projects related to the *Healthy Ocean and Coastal Ecosystems* goal will provide brief updates on their work, followed by brief discussion and an opportunity for informal NE RPB and public engagement with the project teams:

- Regional restoration priorities
  William Hubbard, U.S. Army Corps of Engineers
- Marine life characterization
  Pat Halpin, Duke University
- Fisheries characterization
  George LaPointe, George LaPointe Consulting
- Baseline assessment
  Hauke Kite-Powell, Woods Hole Oceanographic Institution Marine Policy Center
- Recreational characterization
  Andy Lipsky, SeaPlan
- NE RPB project discussion

12:10 pm **Informal NE RPB and public discussion about projects**

Public and NE RPB will have an opportunity to discuss and ask questions of specific project teams during a world café style session.

12:40 pm **Lunch (and optional continued discussion about projects)**

Those interested in continuing discussion with project teams are welcome to do so during the lunch break.

1:20 pm **Discussion about Northeast ocean planning options for next steps related to *Healthy Ocean and Coastal Ecosystems* goal**

Nick Napoli, Northeast Regional Ocean Council

Staff will provide brief descriptions of the options related to the *Healthy Ocean and Coastal Ecosystems* goal, followed by NE RPB discussion. This will include reflection on public input to date about those options.

2:45 pm **Public comment**

Interested individuals will be provided the opportunity to offer formal public comment and encouraged to provide input on the topics currently being discussed by the NE RPB. Depending on how many individuals would like to comment, the time limit will be between 2-3 minutes. A sign-up list and guidelines will be available at the meeting registration table.

3:30 pm **Break**

3:45 PM **Make decisions about next steps related to *Healthy Ocean and Coastal Ecosystems* goal**

The NE RPB will reflect on public comment and make decisions about next steps related to the *Healthy Ocean and Coastal Ecosystems* goal.

4:00 pm **Updates on Northeast ocean planning projects and options related to the *Effective Decision Making* goal**

- *All Nations Consulting; and Former Tribal Chief, Aroostook Band of Micmacs and NE RPB Tribal Co-Lead*
- *Deerin Babb-Brott, SeaPlan*

The NE RPB will hear updates and description of two sets of activities under the *Effective Decision Making* goal: related to (1) best practices for tribal consultation and (2) options related to the following objectives:

- Objective 1. Enhance Inter-Agency Coordination
- Objective 2. Implement Specific Actions to Enhance Informed Public Input in Decision-making
- Objective 3. Incorporate Maps and Other Products into Existing Agency Decision-making Processes

5:00 pm **Public comment**

Interested individuals will be provided the opportunity to offer formal public comment and encouraged to provide input on the topics currently being discussed by the NE RPB. Depending on how many individuals would like to comment, the time limit will be between 2-3 minutes. A sign-up list and guidelines will be

available at the meeting registration table.

5:45 pm **Summary of Day 1**

Laura Cantral, Meridian Institute

6:00 pm **Adjourn**

Friday, November 14, 2014

8:00 am **Public registration**

8:30 am **Welcome back, review of Day 1 outcomes, and review of Day 2 agenda**

Laura Cantral, Meridian Institute

9:00 am **Discussion about Northeast ocean planning projects and options for next steps related to the *Effective Decision Making* goal (continued)**

The NE RPB will continue discussion of options under the *Effective Decision Making* goal.

11:00 am **Public comment**

Interested individuals will be provided the opportunity to offer formal public comment and encouraged to provide input on the topics currently being discussed by the NE RPB. Depending on how many individuals would like to comment, the time limit will be between 2-3 minutes. A sign-up list and guidelines will be available at the meeting registration table.

12:00 pm **Lunch**

1:00 pm **Make decisions about next steps related to the *Effective Decision Making* goal**

The NE RPB will reflect on public comment and make decisions about next steps related to the *Effective Decision Making* goal.

1:45 pm **Break**

2:00 pm **Review next steps for the three Northeast Regional Ocean Planning Framework goals**

John Weber, Northeast Regional Ocean Council

Staff will review immediate next steps, in light of decisions made during the meeting, followed by NE RPB discussion. This will include next steps related to the three Northeast Regional Ocean Planning Framework goals of *Healthy Ocean and Coastal Ecosystems*, *Effective Decision Making*, and *Compatibility Among Past, Current and Future Ocean Uses.*

3:00 pm **Closing remarks**

- *Grover Fugate, Rhode Island Coastal Resource Management Council; NE RPB State Co-Lead*
- *Richard Getchell, All Nations Consulting; and Former Tribal Chief, Aroostook Band of Micmacs and NE RPB Tribal Co-Lead*
- *Betsy Nicholson, National Oceanic and Atmospheric Administration and NE RPB Federal Co-Lead*

3:15 pm **Summary and next steps**

Laura Cantral, Meridian Institute

3:30 pm **Adjourn**

Document 2.1
Membership Roster

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Northeast Regional Planning Body Membership Roster

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Passamaquoddy Tribe - Indian Township Reservation

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Document 2.2
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OCEAN PLANNING IN THE NORTHEAST

Northeast Regional Planning Body Meeting Participant List

November 13-14, 2014 • Wentworth by the Sea, New Castle, New Hampshire

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Document 3.1
Preliminary Draft Outline of a Northeast Ocean Plan

Preliminary Draft Outline of a Northeast Ocean Plan

Below is proposed content for a Northeast ocean plan with text explaining the topics that would be included in each section. While this document provides initial high level framing, a more detailed outline for each section will be developed in the future. For example, Section 2 needs further organization topically, and this outline is not intended to suggest that the baseline assessment would be a stand-alone piece.

Section 1: Introduction

A high-level overview focusing on the Northeast ocean planning process, operations, relationship to NOP, RPB role/charter, Framework overview including brief description of process, goals and outcomes

Section 2: Planning area characterization

Sub-sections would describe human uses and natural resources, species, habitats, etc. Outline details for this section need to be further developed. In general, this section would draw on various projects developing information, including:

- Baseline assessment (including trends where available)
- Other non-spatial information, such as white papers for specific industries, information developed as part of compatibility goal, potential measures assessing ocean health (pending further RPB discussion)
- Spatial information:
    - Marine life characterization work, including results stemming from decisions on options for identifying ecologically important areas under consideration at November 13-14 RPB meeting.
    - Characterization of human uses (commercial fishing, shipping, recreation, aquaculture, energy, historic/cultural uses)
    - Jurisdictions

Section 3: Plan Implementation

Organize by Goals and Outcomes and include the following (future decisions will affect these details):

- Agency commitments, including decisions on Effective Decision-Making options Nov 13-14
    1. Pre-application practices
    2. Use of Plan data (guidance and more formal commitments)
    3. Inter-agency coordination through NEPA and/or other regulatory programs
    4. State CZMA-related commitments
    5. Tribal consultation
    6. Interagency coordination on specific issues (e.g., aquaculture and/or sand/gravel extraction for beach nourishment)
- Public/community input enhancement measures (related to objectives under Effective Decision Making Goal)
- Commitments related to other objectives (e.g. USACE work on Objective 2) under the Healthy Oceans and Coasts goal
- Long-term administration of data and tools such as the Northeast Ocean Data Portal

- Process for plan updates and continued progress
- Monitoring and effectiveness evaluation

Section 4: Science Plan

- Future science priorities to address key management issues, emerging topics and concerns; thus would be following a prioritization effort (beyond a laundry list approach). Examples could include issues related to further enhancing the understanding of the ecosystem, baseline data collection for specific species or habitats, topics such as shifts related to climate change and other environmental changes, and ocean acidification. Socio-economic science needs should be considered as well.
- Build on and leverage, where appropriate, existing scientific and data collection investigations underway
- Include specific approaches to addressing those priorities

Appendix A: Process details (engagement, communications strategy, etc.)
Appendix B: Regulatory context (description of how ocean planning intersects with agency authorities to support agency commitments in Section 3)

Document 3.2
Summary of Goal Options

Options for the Northeast Regional Ocean Plan
September 29, 2014

The Northeast Regional Planning Body (RPB) is responsible for developing the Northeast Ocean Plan (ocean plan), as called for in the National Ocean Policy, which President Obama established by Executive Order in 2010. The RPB has established three goals for the ocean plan: 1) Healthy Oceans and Coastal Ecosystems; 2) Effective Decision Making; and 3) Compatibility Among Past, Current, and Future ocean uses.

At its November 13-14, 2014 meeting, the RPB will discuss and decide on options for proceeding with further work under the Healthy Ocean and Coastal Ecosystems Goal and the Effective Decision Making Goal. This document summarizes these options, which are based on public comments and discussions with federal and state agencies and tribes to date.

The RPB's decisions related to these options will help determine the ocean plan's content, as briefly described for each of the options below. The RPB is requesting public comment on these options to inform its decision in November. Public comment can be provided at public meetings, a day-long public forum in Durham, New Hampshire on October 21, or through the Northeast Ocean Plan web site. See www.neoceanplanning.org for more information.

I. Healthy Ocean and Coastal Ecosystems Goal

This section summarizes options for advancing work under *Objective 1. Characterize the Region's Ecosystem, Economy and Cultural Resources*, that focus on potential approaches to identifying "areas of ecological importance" and measuring ocean health. A practical consideration for each of these options is determining whether and how regulatory and resource management agencies will develop and use information developed under these options.

Issue: Resource managers and members of the public have expressed the need for better understanding of species, habitats, and other ecological factors to help ensure healthy ocean and coastal ecosystems. Key considerations include:

- Establishment of a panel with pertinent expertise may be needed to ensure that methods are scientifically and technically sound and achievable in light of anticipated funding and technical capacity-related constraints.
- Agencies need to identify how to implement options under existing regulatory and resource management authorities and programs
- Ocean and coastal environments, and thus species and habitats, appear to be changing in many ways (warming water temperatures in certain areas and trends in increasing ocean acidification for example), which need to be considered as such changes will affect species habitats, behaviors, and abundance.

Options to identify "areas of ecological importance":

1. Summarize management areas currently designated under existing authorities, such as Critical areas under the Endangered Species Act and Essential Fish Habitat under the Magnuson-Stevens Act (partially underway)

Outcome: Ocean plan includes maps and other information on areas currently designated for specific management purposes

Practical considerations: Areas are often designated for different management purposes

2. Develop distribution and abundance maps for marine life species (partially underway)

Outcome: Ocean plan includes information on species distribution and abundance and likely habitat areas

Practical considerations: Application in regulatory decisions- use of data and maps; a significant effort needed to integrate available science and disparate data sets in the coming year

3. Identify abundance "hot spots" and other core habitat and occurrences (migratory corridors, spawning areas, etc.) for individual species

Outcome: Ocean plan identifies hot spots for protected, socio-economically and culturally important species

Practical considerations: Need to complete Option 2 first; need for an RPB-approved methodology for identifying "hot spots" and other key habitat areas; need agency agreement to incorporate outcomes into regulatory processes

4. Overlay abundance "hot spots", core habitats and other occurrence areas

Outcome: Ocean plan includes maps that identify areas important to multiple species

Practical considerations: Need methodology for combining maps of "hot spots" and other habitats for multiple species; need to identify potential application(s) in regulatory processes.

5. Explore options for an ecosystem-based approach to identifying important ecological areas

Outcome: Important ecological areas are defined in terms of the different ecological components beyond species distribution, abundance and core habitat; technical approaches to measuring the different components are identified; existing regulatory authorities are researched for potential implementation opportunities

Practical considerations: Agreement on scientific definition and approaches will be challenging; will require extensive effort to conduct and implement analyses; need to complete option 2 and possibly option 3 first.

Options to conduct other types of assessments:

1. Coordinate with existing regional efforts to measure ocean health, such as the Northeast Regional Ocean Council's Sentinel Monitoring for Climate Change, the Gulf of Maine Council's Ecosystem Indicator Partnership, and others

Outcome: Ocean plan includes indicators from existing programs to inform regional baseline of ecosystem health

Practical consideration: Existing indicators were developed for different purposes; funding and technical capacity needs; RPB will need to define the purpose and use

2. Consider customizing the Ocean Health Index (www.oceanhealthindex.org) for ocean waters in the Northeast

> *Outcome*: Ocean plan includes indicators of ocean health specific to the Northeast region's ocean planning goals and a baseline is developed to measure future progress
>
> *Practical consideration*: Funding and technical capacity needs; RPB will need to define the purpose and use

3. Revisit the topic of "tradeoff analyses" (i.e., attempting to simultaneously determine multiple effects of making a decision: for example, effects on existing human activities and natural resources from siting a new activity). Consider this topic after developing reference data on human activities and natural resources, deciding on whether and how to identify ecological areas or measure ocean health, and determining the uses of ocean plan data and information under existing authorities.

II. Effective Decision Making Goal

This section summarizes options for advancing work under the following three objectives:

- *Objective 1. Enhance Inter-Agency Coordination*
- *Objective 2. Implement Specific Actions to Enhance Informed Public Input in Decision-making*
- *Objective 3. Incorporate Maps and Other Products into Existing Agency Decision-making Processes*

The options for these three objectives are presented in two general categories intended to demonstrate (1) the range of potential alternatives for using data to inform permitting and leasing decisions, including the protection of sensitive resources; and (2) the range of alternatives for agencies to enhance the agency coordination and predictability of regulatory processes, including public participation and the use of data and information in regulatory decisions.

Incorporate plan data and information into existing permitting and leasing decisions (primarily addresses Objective 3)

Issue: When an ocean-based project is proposed, better, readily available public information is needed to:

- Provide context: "What do we know about the proposed site: existing uses, natural resources?"
- Understand potential for impacts: "What are the issues?"
- Address potential conflicts: "Whom do we need to talk to?"

The regional scale of this effort and dynamic nature of the ocean environment leads to:

- Focus on information needs of early stages of development review
- Need to maintain and update data

Agency commitments are needed to implement solutions.

1. Using existing map-based data in the ocean plan, improve the efficiency and effectiveness of review of and decisions on permit and lease applications for ocean-based activities by:

   A. Identifying the best available information that characterizes human activities (shipping, fishing, etc.) and natural and cultural resources for use in the early stages of the NEPA process, including selection of alternatives to be analyzed and issues and potential impacts to be assessed (scoping), and also for use in initial review of applications for related regulatory approvals (e.g.., U.S. Army Corps of Engineers permitting).

   Outcome: Ocean plan contains data representing best available science; enhanced efficiency and transparency through public availability of such information

   Practical considerations: potentially extensive effort to agree on methods and approve final data, maps, and other ocean plan information.

   B. Creating ocean plan content (for example, maps, other non-spatial information, data regarding temporal trends) to facilitate and support statutorily-required consultations with federal resources agencies. Examples include the United States Fish and Wildlife Service or National Marine Fisheries Service (NMFS) under the Endangered Species Act (ESA) regarding threatened and endangered species and NMFS under the Magnuson-Stevens Fisheries Management Act regarding "essential fish habitat."

   Outcome: Ocean plan contains information that supports such consultations (e.g., life history descriptions of particular species)

   Practical considerations: agency effort to agree on ocean plan content; need to identify appropriate responsibilities for developing and approving materials

2. Develop "compatibility analyses" for potential development activities and related guidance for cumulative impact and other assessments under NEPA, and other laws as applicable

   Outcome: Ocean plan improves understanding of interactions and related natural resource impacts

   Practical considerations: Recognizing the need to build on results of Option 1 above; is there sufficient data and information to successfully complete such analyses for each of the potential interactions?

3. Institutionalize use of the ocean plan's data and guidance through existing regulatory review and guidance documents. Possible examples include the U.S. Army Corps of Engineers' New England Programmatic General Permit and BOEM guidance on studies needed for proposed wind energy development.

   Outcome: Ocean plan identifies specific agency documentation where such linkages will be made

   Practical consideration: agency effort to agree on linkage; requires long-term support for ocean plan data and information (and tools such as the Northeast Ocean Data Portal)

Enhance agency coordination and predictability of regulatory processes (primarily addresses objectives 1 and 2)

Issue: Need for improved agency coordination and clarification of agency review processes, including those involving use of ocean plan data

- Must operate within existing regulatory programs.
- Ocean plan will provide public information on natural resources and human uses.
- Need agency commitments to implement solutions.

Options to address the issue:

1. Enhance pre-application procedures by developing standardized information about the process and use of ocean plan data and information for initial review of proposed projects

   Outcome: Applicants, agencies, and interested parties understand the regulatory process and related use of ocean plan data andinformation

   Practical consideration: balancing need for flexibility with commitment to standardizing procedures

2. Develop guidance for the public that explains how agencies will work together to use information in the ocean plan for environmental review under NEPA and other laws

   Outcome: Understanding of how the ocean plan informs decisions; ocean plan contains guidance language

   Practical consideration: Opportunity to do more than provide "guidance?"

3. Institutionalize use of ocean plan data (in NEPA reviews and related permitting and leasing processes) through Memoranda of Agreement or comparable expressions of agencies' commitments, development of a regionally standard inter-agency agreement to facilitate collaboration and cooperation in NEPA reviews, and implementation of "programmatic approaches" (general agency agreements to work collectively to address specific issues, not specific to individual development proposals). These options could focus on ESA, "essential fish habitat" and other statutorily-required interagency consultations. See Option 1(B) under Healthy Ocean and Coastal Ecosystems goal, above.

   Outcome: Formal agency commitments to use ocean plan data to inform decisions; ocean plan describes commitments

   Practical consideration: Need to consider agencies' level of effort (and comfort) to implement; agencies ultimately responsible for developing and implementing commitment

4. Identify opportunities for enhancing the efficiency and effectiveness of the CZMA consistency review process, such as :

   - Identifying and using CZMA consistency review options designed for minor, routine federal agency activities thatare are compatible with state and federal CZMA policy interests .
   - Improving how state CZM programs receive notice of federal actions

- Developing and using plan data and information to enhance understanding of projects' potential effects on specific state interests.

Outcome: "Ocean plan facilitates consistency with state enforceable policies that relate to management of ocean and coastal resources and activities; use of general consistency provisions, plan information and data to support projects' consistency with state enforceable policies

Practical consideration: State-by-state differences in program structures and policies; need to ensure states are involved with development and use of ocean plan data, maps, and non-spatial information

5. Establish interagency groups to address policy and management issues regarding offshore, deep-water aquaculture and sand and gravel extraction for beach nourishment as new, emerging issues in the ocean environment. For example, the interagency group could develop pre-application and siting guidance.

   Outcome: Increased clarity in regulatory processes for emerging activities in federal waters
   Practical considerations: Focus on certain aquaculture species, considering technologies, markets, and other issues, and specific areas that have potential need for sand and gravel.

Document 4.1
Northeast Ocean Plan: Options for Effective Decision Making

NORTHEAST REGIONAL OCEAN PLAN: OPTIONS FOR EFFECTIVE DECISION MAKING

Report prepared for the
Northeast Regional Planning Body

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Prepared by SeaPlan with support from the ESS Group, CoastalVision, Anderson & Kreiger, and the Roger Williams University School of Law

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INTRODUCTION

The Northeast Regional Planning Body (RPB) is responsible for developing an ocean plan for Northeast ocean waters, pursuant to the National Ocean Policy. As described in the Framework for Ocean Planning in the Northeast United States, the RPB has established three overarching goals for the ocean plan: 1) healthy ocean ecosystems; 2) effective decision making; and 3) compatibility among past, current, and future ocean uses.[1] The goals address distinct but interrelated interests and are based on a common foundation of data and information about the marine ecosystem and human activities – the development of which is a major aspect of the planning process (see the Northeast Ocean Data Portal at www.northeastoceandata.org). This paper presents options to advance the effective decision making goal, with a focus on enhanced agency coordination and on how data and information in the ocean plan can be used by federal, state, and tribal governments to more effectively achieve the objectives of their existing management authorities.

To help guide this work, the RPB established a work group that includes federal and state agency representatives. Because the National Ocean Policy directs that any regional ocean plan will be implemented through existing federal law, the work group is focusing on the implementation of existing authorities under: 1) the National Environmental Policy Act (NEPA), which provides for the public review and evaluation of potential effects of proposed activities in the ocean; 2) the U.S. Army Corps of Engineers (USACE) permitting process, by which proposed activities are reviewed for their potential impacts to the marine environment and existing human activities; and 3) the Outer Continental Shelf Lands Act (OCSLA), which authorizes the federal government to lease the seabed under federal waters for energy and marine minerals activities.[2] Additional federal and state ocean resource and management authorities are discussed in this paper as well, but these three federal statutes and programs are core authorities for management of uses of the ocean's public resources and space.

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[1] See Framework for Ocean Planning in the Northeast United States, Northeast Regional Planning Body, for background information on the RPB, the planning process, and discussion of the goals, objectives, and actions related to the regional marine planning process, available at www.neoceanplanning.org.

[2] Here and throughout the paper, descriptions of statutes and regulations are intended to generally characterize the subject matter. For detailed and authoritative materials, please follow the links, or see Additional Information, below.

The RPB also includes representatives from federally-recognized tribes. Tribal discussions of topics related to the Effective Decision-Making goal are proceeding and are the subject of a separate, parallel effort.

NEPA review and the USACE permitting process address the broad range of issues related to the effects of ocean development and provide substantial opportunities for public review and comment. In federal waters (generally, more than three miles offshore) OCSLA directs the review of development of offshore wind energy, and marine sand and gravel resources. There is currently substantial interest in the Northeast region to develop offshore wind energy, and growing interest in sand and marine resources for state and federal beach nourishment.

The ocean plan is not a regulatory document; consequently, the work group's charge is to develop options to improve agency decision making under existing authorities through the use of data and other baseline information, interagency coordination, and enhanced public and stakeholder participation.

The options provide process efficiencies based on the use of new data and information, advance the ability of agencies to use new knowledge to accomplish their missions, and enhance transparency and access to information and future decision making based on information developed through the public planning process.

The options presented here were developed based on discussions with federal and state agencies and regulatory professionals from marine industry and public interest organizations. They will be presented for public review and comment and for consideration by the RPB, who will decide on preferred options to pursue as the ocean plan is developed. The report presents options for the following three topic areas:

- Develop coordination measures and agency guidance to address NEPA and regulatory processes and actions;
- Use ocean plan data and information, including the Northeast Ocean Data Portal, to inform review and permitting processes; and
- Develop federal consistency review efficiencies to support state and federal objectives under the Coastal Zone Management Act (CZMA).

To enhance the implementation of existing authorities for ocean activities, the RPB is seeking to improve the connection between the data (information) and decision-making (process) components of managing ocean development activities. The options discussed here, and the ability to consider any kind of enhanced management capacity in the ocean plan, are possible because of a significant investment in developing and

providing access to new data and new data products, and the commitment by the RPB to improve the use of the information.

Finally, there are aspects of environmental review that also require consultation with tribes through Section 106 of the National Historic Preservation Act. This topic is the subject of a separate effort that is underway by the RPB to develop best practices for such consultation. As a result, this topic is not the focus of this paper, although there are references to tribal coordination and information where appropriate.

SUMMARY OF KEY THEMES FROM INITIAL MEETINGS

The RPB hired a team led by SeaPlan to assist in further developing options under the "Effective Decision Making" goal. The agency work group then held a preliminary discussion to further frame the subject matter. High-level themes that emerged from this discussion included:

- The value of high-quality spatial data at a regional scale to agencies, project applicants, and stakeholders early in the review process to identify further details associated with siting, scoping of the need for further information and data;
- Recognition that the effectiveness of existing coordination mechanisms can be improved, in part based on the availability and analysis of better data;
- The importance of working within existing authorities and leveraging existing coordination mechanisms as much as possible; and
- Recognition that a 'one size fits all' approach will not be possible; different kinds of projects and programs have different data and coordination needs and may be at different levels of maturity in New England. (The Northeast has limited experience with ocean energy, aquaculture in federal waters, and sand and gravel extraction in federal waters, and no experience with carbon sequestration.)

RPB planning staff then met with federal and state agencies to discuss in detail how spatial data and agency coordination could support their specific missions and interests. In addition to specific comments and recommendations reflected in the options below, discussions reflected the region's on-the-ground reality of carrying out existing mandates. Additional broad planning-related issues from these discussions with federal and state agencies included:

- Under existing management and regulatory framework (in the absence of an ocean plan), 'broad and shallow' data is more useful at a regional scale than 'narrow and deep' data;
- There are substantial efficiencies to be gained (using an ocean plan as the vehicle) from using new data products to develop and implement authoritative materials

to support management and regulatory processes, including specific data sets, baseline reference materials, and programmatic regulatory consultations;
- States have a strong interest in the management of activities in waters that are used by their constituencies. This interest includes activities in federal ocean waters (described by one state as "more like 0-30 miles than 30-200 miles"); and
- Strong interest in better identifying and coordinating with ocean users in both on-going management activities and project-specific reviews.

In parallel meetings with regulatory professionals from marine industry and public interest organizations to learn their perspectives, discussion addressed issues that included:

- Strong interest in using data and information to evaluate existing activities and resources in a comprehensive manner to inform project development and review decisions;
- The need for clarity and predictability in planning and regulatory process and outcomes, for example by developing a pre-application process that incorporates high-quality baseline data, provides access to agency and stakeholder expertise, and results in clear direction for project proponents and agencies alike, but that allows for project-specific flexibility in how the process is managed;
- The importance of using data and information to identify and protect important areas of existing human activities (such as commercial fishing and shipping, recreation) and important ecological areas;
- The value of identifying and consulting with affected stakeholders early in any development process; and
- An emphasis from industry that the primary values associated with the ocean plan are access to new data and information, and clarity and predictability under existing authorities.

In summary, the options described below reflect the strong and consistent expression (made collectively and in individual discussions) that the outcome of actions under the effective decision making goal should be to:

- Help agencies do their jobs better;
- Make the regulatory process clear and predictable; and
- Identify and protect important areas of existing activities and important ecological areas.

SUMMARY OF AUTHORITIES AND DATA USE

All development activities in the region, including energy infrastructure, sand and gravel extraction, aquaculture in federal waters, and carbon sequestration, are subject to

NEPA compliance and similar regulatory review and data requirements under USACE permitting. At a minimum, distribution and abundance data at a regional scale for whales, turtles, fish, and birds as well as for other human activities—all of which is underway as part of the regional ocean planning process—will provide a baseline context for each of the authorities. Further, as outlined in the options below, specific data products and management tools based on distribution and abundance data (best available data sets, baseline reference material, and regulatory consultations) can do more to enhance existing review and permitting. For example, distribution and abundance data will help identify spatial concentrations of jurisdictional resources (and human activities) that will help the NEPA review and regulatory processes avoid, minimize, and mitigate potential impacts.[3]

The NEPA review and USACE permitting processes for marine development activities involve the following:

- NEPA review, which includes consultations with resource agencies with subject matter jurisdiction; permitting cannot occur until NEPA review has been completed;
- State review under the CZMA; and
- USACE permitting under the Clean Water Act and/or the Rivers and Harbors Act.

In summary form, the core authorities include:[4]

- The **National Environmental Policy Act** requires "federal agencies… to determine if their proposed actions have significant environmental effects and to consider the environmental and related social and economic effects of their proposed actions."[5] NEPA applies in state and federal waters, as well as to terrestrial activities, to federal actions such as leasing of public lands (e.g. through OCSLA) and permitting development proposals (including USACE permitting), adoption of fishery management plans, and other federal activities. The NEPA process generally is the first process that federal agencies implement in permitting and leasing actions (in some cases, NEPA and permit processes run concurrently). The NEPA process uses data and information from agency and public participation to identify the potential impacts of a proposed action on the environment, evaluates potential alternatives that could have less impact, and identifies means by which

[3] While beyond the scope of this paper, this provides the foundation for work under the RPB's Healthy Oceans and Coastal Ecosystems goal to evaluate potential options for identifying important ecological areas.

[4] Numerous other authorities may apply depending on the type of activity.

[5] *A Citizen's Guide to the NEPA*, Council on Environmental Quality, December 2007

unavoidable impacts can be minimized and mitigated. The lead federal agency is responsible for implementing the NEPA process and will engage the public, other federal agencies (sometimes formally designated as cooperating agencies to establish a formal coordinating relationship among agencies), and outside parties. If the extent and magnitude of impacts to the environment are unknown, the agency prepares an Environmental Assessment (EA). If the lead agency initially or through the EA process determines that there are likely to be significant impacts, the agency must prepare an Environmental Impact Statement (EIS) to evaluate project alternatives and identify measures to avoid, minimize, and mitigate impacts.

Use of data

NEPA provides administrative flexibility in how lead federal agencies implement review, and each agency has established procedures (including guidance and regulation) to guide the process. Regardless of the administrative process, regional ocean plan data can provide a consistent informational framework for the review of proposed development projects. Plan data could inform key elements of NEPA review, including scoping (which identifies key stakeholders, issues, information gaps and needs, and other consultations that need to occur), identification of project alternatives, evaluation of environmental effects, description of the affected environment, and development of mitigation measures. For example, see here for an illustration of how the Department of the Interior's Bureau of Ocean Energy Management (BOEM) administers NEPA and other reviews over the course of the leasing process.

- The **Rivers and Harbors Act, section 10,** administered by the USACE, provides for the review of work and structures below the mean high water line of waters of the United States out to the 3 mile limit, and of fixed structures beyond the 3 mile limit.

Use of data

As a component of permitting under both the Rivers and Harbors Act and the Clean Water Act, the USACE conducts a "public interest review" to evaluate "the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest."[6] The review addresses a wide range of natural, cultural, social, economic, and other issues, including, generally, "the needs and welfare of the people."[7] Plan data could provide

[6] 33 C.F.R. §320.4

[7] Ibid.

strong support for the USACE review. Plan data should provide relevant information for existing and/or potential human activities, including commercial shipping, recreational fishing and other activities, commercial fishing, existing infrastructure including cables and pipelines, and others.

- The **Clean Water Act, section 404,** administered primarily by the USACE, in consultation with the EPA (which has a formal jurisdictional role), provides for the review and authorization of impacts of dredged or fill material on the marine ecosystem below the high tide line of waters of the United States out to the 3 mile limit, in consultation with federal resource agencies which have subject-matter jurisdiction to evaluate potential impacts to jurisdictional resources.

  Use of data
  The Clean Water Act section 404(b)(1) Guidelines identify the information and analysis used to determine whether a proposed activity will have a significant adverse impact to the aquatic environment. The review addresses potential impacts to, among other things, the seabed, water quality, currents and circulation, endangered and threatened species, fish and other aquatic organisms, and other wildlife. In addition, the review addresses potential impacts to commercial and recreational fishing, water related recreation, aesthetics, and sanctuaries, refuges, and similar preserves.

  The Guidelines identify a category of resources called Special Aquatic Sites, which are subject to a regulatory presumption that a proposed activity will have less significant impact to the aquatic environment if it is not located in the Special Aquatic Site. Such areas relevant to the ocean plan include wetlands (saltmarsh), vegetated shallows (sea grasses), mudflats, and coral reefs. Plan data can support spatial definition of Special Aquatic Sites and provide baseline information to inform the review process.

Federal consultations required under the following federal laws inform NEPA review and Clean Water Act and Rivers and Harbors Act permitting:[8]

- The **Endangered Species Act (ESA),** administered by the Department of the Interior's U.S. Fish and Wildlife Service (USFWS) for terrestrial species and the National Oceanic and Atmospheric Administration's (NOAA's) National Marine Fisheries Service (NMFS);

[8] Other authorities may apply depending on the type of activity. These represent the core resource consultations that typically apply.

- The **Magnuson-Stevens Act Essential Fish Habitat (EFH)** provisions, administered by NOAA/NMFS provide for the review of potential impacts to essential fish habitat for species managed, in the Northeast, by the Northeast Fisheries Management Council (and in Southern New England by the Mid-Atlantic Fishery Management Council);
- The **Marine Mammal Protection Act (MMPA),** administered by NOAA/NMFS, provides for the review of potential impacts to marine mammals and turtles;
- The **Migratory Bird Treaty Act (MBTA)**, administered by the USFWS, requires federal agencies to consult the Service about potential impacts to migratory bird species;
- The **National Historic Preservation Act, section 106 (NHPA),** administered by the Advisory Council on Historic Preservation, state historic preservation officers, and tribal preservation officers, provides for the review of potential impacts to cultural and historic resources;
- **Executive Order 13175, Consultation and Coordination with Indian Tribal Governments**, contains additional direction for federal agency consultation with tribes; and
- **Tribes may (or may not) have treaty rights that also apply.**

Use of data

Distribution and abundance data being developed for whales, turtles, fish, and birds could support better informed and more efficient ESA, EFH, MMPA, and MBTA consultations. The data also provide opportunities described in the options below to enhance these consultations by developing authoritative regional characterizations of resources and uses, reference data, and programmatic consultations. Baseline historic and cultural data developed to support consultation under the NHPA may be used to identify specific areas to avoid or flag as potentially sensitive (such as drawing upon the examples contained in the Rhode Island Ocean Special Area Management Plan to identify areas of potential tribal significance). Some data will not be represented due to sensitivity and/or confidentiality.

- The Coastal Zone Management Act, administered by NOAA's Office of Ocean and Coastal Resource Management/Coastal Services Center and state coastal management programs, authorizes states to review federal actions that have reasonably foreseeable effects to resources and uses of the state's coastal zone under the state's enforceable policies.

Use of Data

All data being developed through the ocean plan will support both state and federal interests under the CZMA. The ocean plan will be based on federal, state and tribal data and will enhance the use of existing state data by providing greater regional context for data and resource issues in state waters. It will also support more informed application of the "effects test" used to determine whether federal actions will affect uses or resources of a state coastal zone.

As described in the options, new data and information also provide opportunities to achieve management efficiencies such as regionally consistent state standards for activities such as deep water aquaculture in federal waters otherwise subject to individual state standards or regionally consistent approvals for particular federal actions. For example, under the CZMA section 307 federal consistency provision and NOAA's CZMA regulations (15 C.F.R. part 930), the ocean plan could support a regional general consistency determination for federal agency activities such as military training exercises, or for activities requiring a federal license of permit, such as meteorological towers associated with wind energy development.

SUMMARY OF USES

The purpose of this section is to provide a summary of key characteristics and issues associated with the major development activities that have been proposed and/or constructed in the Northeast. This summary is intended to provide additional background information for consideration when reviewing the options below.

ENERGY INFRASTRUCTURE

- Marine energy infrastructure (existing and proposed) in the Northeast is typically associated with natural gas terminals and pipelines, sub-sea electric cables, hydrokinetic (wave and tidal energy) demonstration projects, and as an emerging industrial-scale technology, wind energy facilities.
- BOEM manages the development of wind energy facilities in federal waters through an OCSLA leasing process and site development process administered by the Renewable Energy Program, which is conducting siting, environmental review, and leasing activities in the northeast region. BOEM has developed a range of data collection guidance to assist proponents in characterizing site conditions.
- The Federal Energy Regulatory Commission manages the development of hydrokinetic facilities (primarily associated with tidal current in the Northeast); one pilot project is in operation in the region and another is under review.

- The discussion of options below focuses on wind energy, but data and coordination mechanisms developed in the ocean plan will support all energy infrastructure siting and permitting processes.
- USACE issues Clean Water Act section 404 and Rivers and Harbors Act section 10 permits for construction. Section 404 does not apply in federal waters beyond the 3 mile limit.
- States have a planning role through BOEM process, and a review and concurrence role under CZMA for construction in federal waters. States often have both regulatory and proprietary (leasing) roles for electric cable connections and other infrastructure that cross state waters and state-owned submerged lands. Key issues involve differing perspectives about the balance of conservation and development and potential impacts of new infrastructure on resources and existing uses and activities in the marine environment.
- Primary regulatory interests include potential adverse impacts to seafloor habitat, avian resources, marine mammals and turtles, commercial fishing, and historic resources and cultural interests (including tribal issues and subsistence/sustenance fishing).

SAND AND GRAVEL EXTRACTION

- BOEM manages access to sand and gravel resources in federal waters through an OCSLA leasing process administered by the Marine Minerals Program.
- The location of suitable sand and gravel resources for coastal restoration and resilience projects is not well defined in the Northeast; BOEM is currently conducting an inventory of the resource in Atlantic coast federal waters.
- Sand and gravel extraction is fairly common in the Mid- and South Atlantic regions but not in the Northeast region, where regulators do not have experience with the activity.
- USACE issues Clean Water Act section 404 and Rivers and Harbors Act section 10 permits for construction. Section 404 does not apply in federal waters beyond the 3 mile limit.
- States have a planning role through BOEM process and a review and concurrence role under CZMA for sand and gravel extraction activity in federal waters. States are fully engaged in permitting and leasing (for activities on state-owned submerged lands) the use of the material on state lands and waters.
- Key issues include potential conflicts with commercial and recreational fishing and the process of allocating rights to extract a limited public resource.
- Primary regulatory interests include potential adverse impacts to seafloor habitat, protected resources (such as marine mammals and turtles), historic and cultural

resources including tribal issues and subsistence/sustenance fishing), and commercial fishing.

AQUACULTURE IN FEDERAL WATERS

- Deep water aquaculture refers generally to the culture of shellfish, finfish, or marine plants such as kelp that occurs in federal waters; current interest is focused on deep water, long line shellfish (mussel) aquaculture.
- The development of a functioning management framework needed to support a deep water aquaculture industry faces substantial policy and political challenges, but there is an opportunity to key issues, cited below, in the region.
- Deepwater aquaculture is regulated by the USACE under section 10 of the Rivers and Harbors Act, in consultation with NMFS.
- States have strong planning interest in siting determinations to minimize impacts to existing fisheries and a review and concurrence role under CZMA for construction in federal waters.
- USACE issues Clean Water Act section 404 and Rivers and Harbors Act section 10 permits for construction. Section 404 does not apply in federal waters beyond the 3 mile limit.
- Key issues include the need for ocean space to achieve an economically viable scale of operation, lack of authority for a process by which a developer may secure a lease and resulting site control, and the need for further development a clear and predictable regulatory process.
- Primary regulatory interests include potential adverse impacts to protected marine mammals and turtles and potential conflicts with existing human activities (particularly commercial fishing).

CARBON SEQUESTRATION

- Carbon sequestration has been identified as an example of an emerging technology that may be proposed within the regional planning area in the future; no projects are currently proposed.
- The technology immediately relevant to the ocean plan is carbon capture and injection and storage under the seabed, which is regulated by the USEPA under section 103 of the Marine Protection, Research, and Sanctuaries Act (Ocean Dumping Act).
- At least one project involving sub-seafloor sequestration of carbon has been considered on the east coast of the US, in association with an electricity- generating

facility. The project was discontinued, but provides one example to draw from regarding potential planning considerations.[9]

- Key issues will include science and risk analyses associated with this new technology.
- Primary regulatory interests for seabed injection are expected to concern potential adverse impacts to seafloor habitat and existing human uses. A question that has not been resolved is which agency would serve as the lead agency for NEPA review.
- The ocean plan can support agency participation in the Blue Carbon project through efforts to characterize and enhance natural carbon sequestration services provided by saltmarshes and sea grasses in the region.

DISCUSSION OF OPTIONS AND POTENTIAL ACTIONS

The options and potential actions have been developed as opportunities to improve the effectiveness of decision making through existing processes, primarily NEPA and USACE permitting.

The potential actions presented process efficiencies based on the use of new data and information developed through the ocean planning process (data products include scientific and stakeholder review and discussion); advance the ability of agencies to use new knowledge to accomplish their missions; and enhance transparency and access to information and future decision making based on information developed through the public ocean planning process.

The discussion is organized to present the topic area, specific potential actions, context for the action, and products that could be developed to implement the action.

ENHANCE COORDINATION AND GUIDANCE

1. **Develop a best-practices template to inform pre-application consultation for NEPA review and permitting actions, that could include:**

[9] As described by ESS Group, the project consultant, the permitting issues associated with the proposed project (which entailed sea floor drilling and placement of an injection pipe to reach an existing sub-sea reservoir to contain the carbon dioxide) were relatively straight-forward under the Clean Water Act section 404 and Rivers and Harbors Act section 10. Both New York and New Jersey sought standing to review the project under the CZMA to ensure state review of potential impacts to resources and uses of their coastal waters if the system were compromised. Chris Rein, ESS Group, personal communication, August 4, 2014.

a. A general characterization of the planning and regulatory context, general description of key issues typically associated with particular types of development activities, and a description of the consultation process;
b. A list of agencies and tribes which have a jurisdictional or informational interest, and stakeholders which have a professional interest, in the type of proposed action;
c. Guidance to proponents about the kind of information and level of detail that can best support initial discussion (by project type, applicable authorities, and key data available through the data portal); and
d. Commitment by agencies to standardize the practice of pre-application consultations as a normal course of doing business.

Pre-application consultation is an informal information-gathering and consultation process between a project proponent and the regulatory agencies that occurs before formal regulatory action begins. The purpose of pre-application review is to help all parties understand the what, where, when, how, and why questions related to the proposed action. Additionally, pre-application consultations clarify applicable authorities and required information, identify potentially significant impacts to jurisdictional resources and existing human activities, identify what data is available and what is missing and needed, identify potentially affected stakeholders to be consulted, and provide an opportunity to modify the action in response to agency concerns.

Agencies expressed strong support for an enhanced and informed pre-application process constructed in part to take maximum advantage of the regional informational context that the ocean plan will provide. Additional key benefits identified by the agencies are that pre-application review educates proponents and agencies about the proposed activity, the physical environment in which it will occur, and the regulatory process by which the project will be reviewed; identifies potential issues early in the process; provides clear guidance to project proponents; and leads to more predictable project outcomes. Non-governmental representatives similarly supported an enhanced pre-application process that provides high-quality baseline data, access to agency and stakeholder expertise, and clear direction, but that allows for project-specific flexibility in how the process is managed. A key benefit of this option, identified by both agencies and marine industries, is the value of identifying potentially interested and/or affected agencies and stakeholders early in the review process.

The purpose of the pre-application template would be to help a project proponent bring a more informed proposal to the process, and to provide a level of consistency and predictability for proponents, stakeholders, and agencies. Such a template would not

result in additional formal obligations for the proponent or an agency, and the lead agency could tailor such a template to its own practices.

2. **For projects that require an Environmental Impact Statement (EIS), develop a memorandum that outlines mutual expectations and best practices for lead and cooperating agencies**

This option provides an opportunity to advance state and federal coordination in the conduct of NEPA EIS reviews. Agencies could develop a memorandum that reflects agreements about state and federal agency coordination, participation in public pre-application and scoping meetings, the early identification of review and approval requirements and their associated schedules, and other issues. To address agencies' potential concerns about the level and nature of their involvement in the review process due to time and resource constraints the agreement could be developed and employed in the manner of a pilot project for a particular category of ocean use.

3. **Develop guidance within the plan that describes how the practices that are developed in the plan (planning decisions that guide data use and agency coordination) could be used in NEPA review, Clean Water Act and Rivers and Harbors Act permitting, and regulatory consultations**

In developing the ocean plan, the RPB will make a number of decisions that will affect how the plan will be constructed, the data and information it will contain and how it can be used, and how the plan will be implemented through the operation of agencies' existing authorities. Federal agencies (perhaps with EPA support, in concert with its responsibility to review all agency Environmental Impact Statements) could develop guidance that reflects decisions made through the planning process about how, and with what level of authority, different kinds of data can be used or further developed to characterize resources and human activities under the NEPA and permitting review processes.10 Similarly, agencies with lead jurisdiction related to regulatory consultations could develop guidance that describes how those consultations will make use of plan data and information. Last, guidance could also clarify that where the ocean plan provides mechanisms to achieve more efficient decision making as described above (and below, under the CZMA), regulatory agencies will need to make their decisions based on the details of individual proposed activities and related new information. Thus, there could be guidance in the ocean plan that describes how plan elements (data and information and process elements) can be incorporated into specific

[10] These uses of data could relate to scoping alternatives analyses, describing the affected environment, identifying issues needing further evaluation and study (such as those high priority uses and resources that are likely affected), evaluating cumulative impacts, and mitigating project impacts.

decisions, accompanied by language stating that in any specific case a state, tribal, or federal agency may have additional data or process requirements, pursuant to existing authorities.

4. **Develop federal agency external guidance that describes how agencies will engage in ocean plan implementation**

5. **Develop memoranda that memorialize agreement among agencies, parallel to but based on existing authority and independent of the ocean plan, about practices that are developed in the plan**

External guidance for stakeholders and the public that describes how the individual agencies will implement the ocean plan is important to clarify the legal and practical relationship of the ocean plan to existing authorities and the National Ocean policy, and will provide transparency and predictability to the operation of the ocean plan. Because the planning process is based on consensus, the final plan will represent agency agreement about the information and procedures it contains, and agreement that, after the National Ocean Council concurs with the plan, federal agencies will comply with the ocean plan to the fullest extent consistent with applicable law, pursuant to Executive Order 13547.[11]

The ocean plan will reflect agency consensus about a new generation of data, information, and best practices. However, the authority to use and implement those materials, and the assurance that they will continue to be applied over time, rests in the transitory authority of the Executive Order. Developing memorandums of agreement or other materials that memorialize practices developed in the ocean plan but derived from existing statutory authority would provide predictability and greater assurance that the foundational benefits of the ocean plan will be carried forward over time.

6. **Frame principles to guide external discussions regarding allocation policy for regional sand and gravel resources**

The federal government, through BOEM, is investing significant resources to identify sand and gravel resources along the Atlantic coast, including the Northeast, as sources of material for beach nourishment and habitat restoration. The inventory of potential sand and gravel resources is the first step in developing information that will inform BOEM's Marine Mineral Program as it provides access to Outer Continental Shelf (OCS) mineral resources. BOEM is coordinating its actions with

[11] Executive Order 13547 -- Stewardship of the Ocean, Our Coasts, and the Great Lakes, Sec.6.(a)(ii).

stakeholders in the regions and states, and has established working partnerships with states to help frame and support the process at the state level. A key challenge will be developing policy that provides equitable access among the states to a national resource for which demand is likely to exceed supply in some regions. The informational context of the planning process provides an opportunity to help frame a regional perspective that could help guide regional or state policy making, perhaps through the Northeast Regional Ocean Council.

7. **Establish a regional interagency group to address management issues and develop pre-application, siting, and regulatory guidance for deep water aquaculture of unmanaged species**

Deep water aquaculture is an emerging activity in the Northeast state waters, and there is significant interest in developing the activity in federal waters. Two projects have been proposed in federal waters off the coast of Massachusetts, one of which has been permitted, that would grow blue mussels on lines suspended vertically in water column. The planning team's discussions with managers, regulators, and members of the industry have therefore focused on deep water, long line shellfish aquaculture, which illustrates four issues common to all types of deep water aquaculture: 1) the need for access to ocean space that is large enough to achieve an economically viable scale of operation; 2) the need to avoid conflicts with existing human activities (particularly commercial fishing) and protected resources (such as marine mammals and turtles; 3) the current lack of legal mechanism to give a developer a lease or other legal interest to address site control-related matters; and 4) the need to address these issues in clear and predictable regulatory processes.

At a general level, areas suitable for long line aquaculture can be readily delineated by the operational requirements of the technology and the environmental and site characteristics necessary for successful animal or plant growth, including areas that lie within the depth range needed to provide sufficient clearance from and proximity to the seabed, appropriate hydrodynamics, accessibility from a shore-side facility, and other factors. These areas can then be screened using existing spatial data and professional knowledge for potential conflicts with existing uses and natural resources, including marine mammals and turtles. It is more challenging for regulators to approve the specific location and operation of these facilities because existing data may not adequately represent resources at a project-specific scale, and there is scant experience evaluating the ability to mitigate potential impacts to species of concern.

- An interagency working group comprised of the USACE, NMFS, BOEM, U.S. Coast Guard, and others as appropriate could be established to develop clear regulatory guidance for siting and permitting unmanaged species. Lessons learned from the two ongoing deep water aquaculture pilot projects, led by the Woods Hole Oceanographic Institute and Salem State College, respectively, could inform the interagency work.

USE OCEAN PLAN DATA TO INFORM REVIEW AND PERMITTING

1. **Develop select data products (related to natural resources and human activities) that represent best available science; develop baseline reference data for use in NEPA and regulatory documents.**

Data and information that have been developed with stakeholder input and determined through agency review to accurately represent a component of the marine ecosystem or a particular human activity provide significant informational and procedural benefits to agencies, proponents, and the public. Documents that agencies determine are scientifically valid and compile all known relevant data and information about a component of the marine ecosystem or human activity have similar value. In both of these cases, once the material has been developed, the subject matter can be incorporated by reference or otherwise used as needed in any subsequent management, NEPA, or regulatory action.

Agencies could collaborate through the planning process to identify data that are feasible to characterize as representing best available science, and can be incorporated into the Northeast ocean data portal. These data could include distribution and abundance maps, 'hot spot' maps, or other representations of natural resources and human activities. Data under development for the ocean plan that may be appropriate for consideration include:

- Navigation
- Commercial Fishing
- Recreation
- Marine mammals
- Fish and shellfish
- Turtles
- Birds
- Coastal wetlands
- Sea grasses

In addition the ocean plan could develop key baseline reference data that could be consistently used in subsequent NEPA review and regulatory consultations for all types of activities. These include but are not limited to:

- Environmental, economic, and human use characterizations
- Endangered Species Act (ESA) flora and fauna

- Descriptions of life histories and other habitat information for special status species

In addition, agencies could agree to use data representing best available science, and baseline reference data, as the applicable regional standard for project review and permitting purposes. Once developed and incorporated in the ocean plan, these sources of authoritative information would provide consistent and predicable information to support each of the three overarching goals for the ocean plan.

2. Identify opportunities for agencies to develop materials that support consultations for EFH, ESA, MMPA, and the NHPA

Federal agencies undertaking or authorizing actions that may affect essential fish habitat, endangered species, marine mammals, protected birds, and cultural and historic resources are required to consult with the agencies with jurisdiction over those resources. These consultations are nested within and make use of NEPA review and permitting processes to identify and develop the information and analyses required to evaluate the potential impacts of the proposed action. For example, NMFS is currently involved in developing a programmatic approach to consultation with the Federal Highways Administration to evaluate process, develop technical impact assessment guidance, and consider programmatic consultations. In addition to project-specific evaluations, consultations may be developed programmatically to apply to a class of activity that is likely to be repeated over time within a discrete geography. Depending on the scope and size of the activity, these programmatic consultations can be an efficient up-front investment of agency time, but they require access to data and information relevant to the resources of interest at a sufficient level of detail to allow the resource agency to determine potential impacts. The greater the importance or vulnerability of the resource or the more significant the potential impacts, the more data and information is needed. In addition, agency experience with the type of activity in the Northeast region is an important factor, as best professional judgment is a component of decision making. Based on discussions with federal agencies, uses that have potentially significant impacts to resources for which data is lacking (such as sand and gravel extraction and habitat data), and for which the technology (and thus potential for impacts) is not defined (carbon sequestration) may not be good initial candidates for consideration of developing programmatic consultations.

Agencies could review opportunities and constraints associated with developing products that provide baseline, region- or sub region-wide resource characterizations, and identify specific products to develop in parallel with the planning process. Potential actions identified by the agencies include:

- Consider programmatic approaches for ESA and EFH for specific phases of wind energy leasing/review process;
- Consider programmatic approaches for ESA and EFH for sand and gravel extraction, building on NMFS and BOEM work in the Mid Atlantic, South Atlantic, and Gulf of Mexico. In the absence of high resolution benthic habitat data to support analysis of the impacts of sand and gravel extraction, develop data to represent: geological setting, sediment type, sediment source, geologic feature identification and range;
- Consider programmatic approaches for ESA and EFH for particular deep water aquaculture species (blue mussels); and
- Develop approach to mapping NHPA resources as basis for developing a programmatic consultation

3. **Use plan-developed data and information for a compatibility analysis of the four uses to support USACE public interest review**

A compatibility analysis is an assessment of whether and how an activity impacts natural resources and existing human activities. It can be developed at varying levels of detail, and provide valuable information about the interaction among and between activities and resources that can be used to inform planning, environmental review, and the permitting process. Compatibility analyses can range from reference documents that describe and catalogue potential interactions with other resources and activities, to the spatial representation of areas that are more suitable or less suitable for specific activities based on potential interactions and impacts associated with natural resources and existing activities.

For permitting, a compatibility analysis can serve as a tool to help the USACE conduct the required public interest review, by which it evaluates whether a proposed activity, after considering a range of environmental, social, economic, cultural and other factors, is in the public interest. To guide development of a regional compatibility analysis:

- Agencies could scope the need for, and the level of detail and content of, a compatibility analysis. One of several considerations would be an assessment of the ability to quantify impacts associated with emerging uses such as wind and hydrokinetic energy.

4. **Develop guidance within the plan for the analysis of cumulative multi-sector impacts at a regional scale, with focus on migratory species**

Agencies identified the assessment of cumulative impacts generally, and as they relate to migratory species as a particular example, as an issue that the plan could advance. The assessment of cumulative impacts – the combined, incremental effects of human

activities – is required under NEPA and other statutes. NEPA and related guidance developed by individual agencies provide extensive criteria and guidance on the assessment of cumulative impacts. Generally, the permitting process addresses the impacts of an individual action in a specific area. A cumulative impact assessment, by contrast, addresses "the total effects on a resource, ecosystem, or human community of that action and all other activities affecting that resource…."[12]

While there was agreement that the ocean plan could advance the agencies' ability to assess cumulative impacts, different agencies had different perspectives about the most effective way to do so. Different recommendations included:

- Develop a consistent methodology for use of plan data and agency guidance to support consistent analysis;
- Recognize that individual approaches may be better suited for specific circumstances and focus on clarifying and/or coordinating existing agency guidance and organizing the data to support future individual agency assessments;
- Use plan data to assess the regional cumulative impacts of particular actions, such as the impacts of a structure on seafloor habitat or a migratory pathway; and
- Use plan data to assess the regional cumulative impacts of categories of infrastructure, such as wind energy, sand and gravel extraction, and/or deep water aquaculture.

5. Incorporate reference to the data portal in New England Programmatic General Permit and other regulatory guidance materials

As demonstrated by recent projects in the region, the availability of high quality data for resources and human activities enhances the proponent's ability to present a project that avoids areas or activities of importance or incompatibility, and provides a common baseline of information that all interested parties can work from. Through the ocean planning process, agencies will be coming to agreement about how data can best represent resources and human activities for particular management purposes. The PGP and other agency guidance materials, such as BOEM's survey guidelines specific to offshore wind development, provide an opportunity to maximize the use of ocean plan data and information.

[12] *Consideration Of Cumulative Impacts In EPA Review of NEPA Documents,* U.S. Environmental Protection Agency, Office of Federal Activities (2252A), EPA 315-R-99-002/May 1999

- The forthcoming PGP and other relevant external federal and state agency guidance materials could cite the ocean plan and data portal as an informational resource.

SUPPORT STATE AND FEDERAL OCEAN MANAGEMENT OBJECTIVES UNDER THE CZMA

1. Coordinate ocean plan data and guidance development with state ocean plans or interests

All states in the Northeast region manage their ocean space with state ocean plans and/or state coastal management programs developed under the CZMA. Through their coastal management programs, each state in the region has coastal policies that address its management interests, and that apply to actions of the federal government in, and in some instances outside of, state waters. States with ocean management plans have developed additional data and information that includes management requirements that are incorporated as enforceable policies in their coastal management programs. States will look to ensure that practices developed under the regional ocean plan are not inconsistent with those already in place at the state level. This includes both planning decisions that may have the implicit effect of new policy regarding management of human activities or natural resources, or at a finer scale, how data are developed to represent these features and how they interrelate with those data already employed by the states.

- Agencies could Identify key data and planning decisions that would benefit from specific coordination with state ocean plan materials or policy interests

2. Evaluate the opportunity to support regionally or sub-regionally consistent 'geographic location descriptions' for specific activities

Under approved state coastal programs, states have the authority under the CZMA to review for consistency with state policy federal actions that may affect the uses or resources of a state's coastal waters, among which include actions proposed by the federal agencies themselves (such as USACE dredging project) and actions that require federal permits or licenses (such as an aquaculture project). One way that states can formally exert jurisdiction is to define specific areas outside state waters in which it has been determined that a specific kind of activity will have an effect on uses or resources in state waters (requires approval by NOAA/OCRM). Some states in the Northeast have established these areas for certain uses, which, while effective in advancing state management interests, can create a geographic management patchwork. The ocean plan

provides an opportunity to consider whether or how the interests behind the establishment of those areas can be addressed consistently across regional waters.

3. **Develop regionally consistent categories of federal agency actions that can be addressed by general consistency or comparable provisions under the CZMA**

Because federal agency activities and federal license or permit activities are diverse in scope, scale, and potential level of significance, NOAA's CZMA regulations provide for a number of ways that federal agencies can submit those activities for state review that correlate the significance of the potential impacts of the activity with the level of effort associated with the development of the review material and state's review. "General consistency provisions," for example, are similar to programmatic consultations, and can achieve the same kinds of efficiencies: one initial review of a category or class of activity can be used to address all future activities within the category. This provides flexibility and efficiency for both the federal agency and the state conducting the review, both of which can ensure that their interests are addressed through the minimum necessary level of effort, and for private project applicants, who may not be required to submit an application.

The ocean plan provides an opportunity to identify federal agency activities and federal license and permit activities to determine whether data and information developed in the plan can support use of general consistency or other provisions in NOAA's CZMA regulations to provide administrative efficiencies and predictability across the region. Components of BOEM's marine mineral and renewable energy leasing programs and U.S. Navy training exercises and U.S. Coast Guard buffer zones are examples of potential candidates for general consistency. For federal license or permit activities, the states could apply "de minimus" or "general consistency provisions" to categories of activities related to the four uses, such as the Rhode Island coastal program's designation of meteorological data towers located outside specific fishing areas as an activity exempt from formal federal consistency review.

Additional Information

Energy infrastructure

- BOEM Offshore Wind Energy Program
- BOEM Renewable Energy Program Regulations (30 CFR 585)
- BOEM Guidance Documents
    - Guidelines for BOEM Renewable Energy Framework
    - Guidelines on Regulation of Marine and Hydrokinetic Energy Projects on the OCS
    - Guidelines for Information Requirements for a Renewable Energy Construction and Operations Plans (COP)
    - Guidelines for Submission of Spatial Data for Atlantic Offshore Renewable Energy Development Site Characterization Surveys.
    - Guidelines for Providing Avian Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585.
    - Guidelines for Providing Geological and Geophysical, Hazards, and Archaeological Information.
    - Guidelines for Providing Fisheries Survey Information (Atlantic OCS).
    - Guidelines for Providing Benthic Habitat (Atlantic OCS).
    - Guidelines for Providing Marine Mammal and Sea Turtle Survey Information (Atlantic OCS).

Sand and gravel extraction

- BOEM Marine Minerals Program
- Procedures for Pursuing a Negotiated Agreement For the Use of Sand and Gravel Resources on the Outer Continental Shelf

Deepwater Aquaculture

- NOAA Office of Aquaculture
- NOAA Aquaculture Policy

Regulatory authorities

- National Environmental Policy Act: Regulations
- Essential Fish Habitat: Regulations
- Endangered Species Act: Regulations
- Migratory Bird Treaty Act: Regulations
- National Historic Preservation Act: Regulations
- Coastal Zone Management Act: Regulations

State Federal Consistency Lists identifying Federal Agency, Federal License or permit, and federal financial assistance activities subject to federal consistency review.					
Maine	New Hampshire (pg 4)	Massachusetts	Rhode Island	Connecticut	New York

State Enforceable Policies	
ME	Maine's core laws, representing many but not all of the federally approved enforceable policies, are listed in their federal consistency guide *See page 10 of consistency guide applicable state laws.
NH	New Hampshire's enforceable policies are listed in their federal consistency guide. *See Chapter 3 of *NH's Coastal Program Final EIS* (July 1998) for applicable state laws
MA	Massachusetts enforceable policies are listed in the MA CZM's policy guide. *See appendix 3 of policy guide for applicable state laws.
RI	Rhode Island's enforceable policies are aggregated in their Special Area Management Plan and Coastal Resources Management Program, a.k.a. the "Red Book"
CT	Connecticut's enforceable polices exist in a stand-alone document; (Reference Guide to Coastal Policies and Definitions) *Applicable state laws referenced underneath enforceable policies
NY	NY enforceable polices exist in a stand-alone document; (State Coastal Policies) *Applicable State laws referenced in Part II, Section 6 of NY CMP & Final FEIS

AGENCIES AND REGULATORY PROFESSIONALS CONSULTED

Potential options to support effective decision making are based on information developed over the course of meetings with federal and state agencies and regulatory professionals from marine industry and public interest organizations. This is a preliminary list as of August 13, 2014.

FEDERAL AGENCIES

- U.S. Army Corps of Engineers New England District
- National Oceanic and Atmospheric Administration/Office of Ocean and Coastal Resource Management
- National Oceanic and Atmospheric Administration/NOAA Fisheries Greater Atlantic Regional Fisheries Office
    - Protected Resources Division
    - Habitat Conservation Division
    - Office of Aquaculture

- U.S. Environmental Protection Agency Region 1
- U.S. Department of Energy Office of Energy Efficiency & Renewable Energy
- U.S. Coast Guard First District
- U.S. Department of Interior/Bureau of Ocean Energy Management:
    - Office of the Deputy Director
    - Renewable Energy Program
    - Minerals Management Program

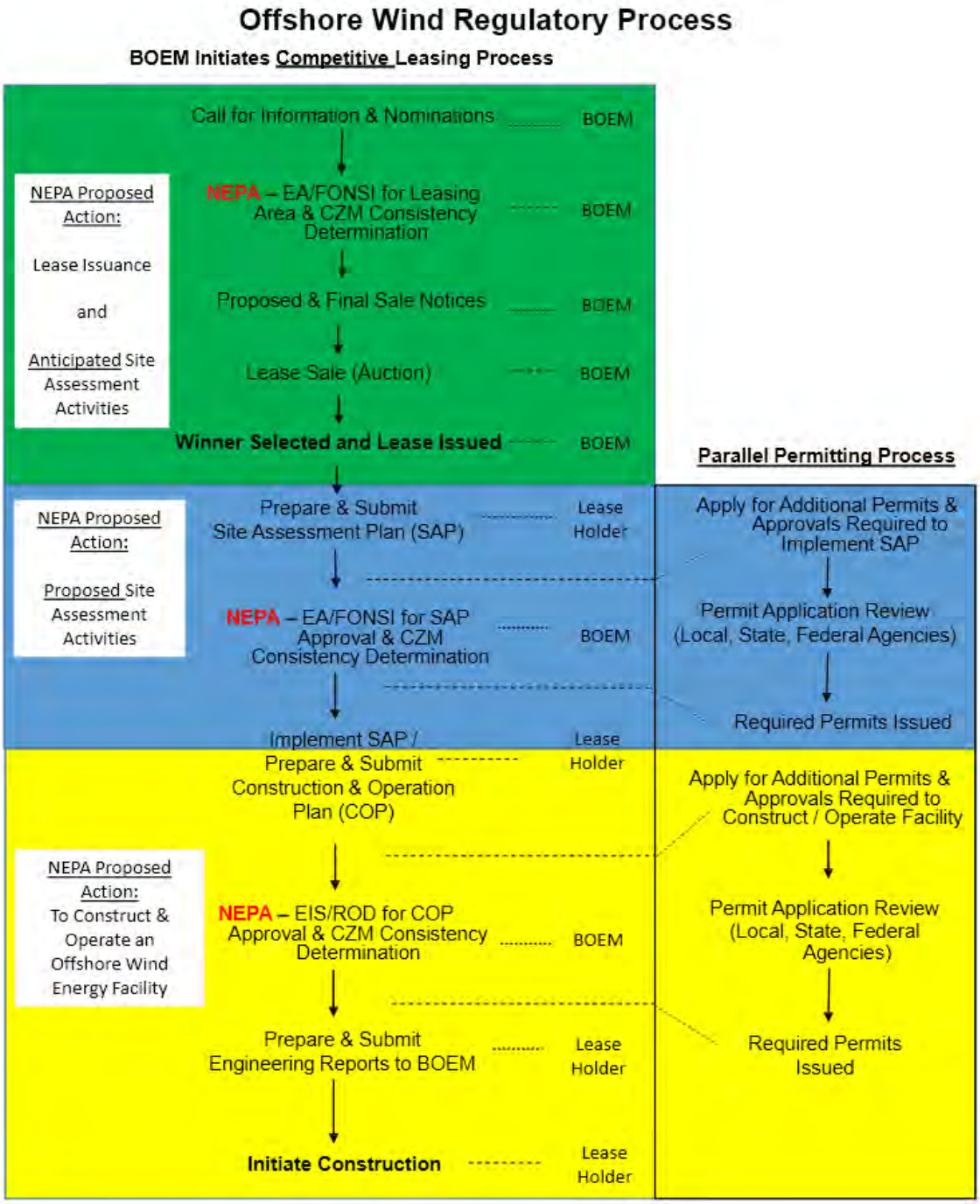
STATES AGENCIES

- Maine Coastal Program and Department of Marine Resources
- New Hampshire Coastal Program and Department of Environmental Services
- Massachusetts Office of Coastal Zone Management
- Rhode Island Coastal Resources Management Council
- Connecticut Coastal Management Program
- New York Coastal Management Program and Department of State

MARINE INDUSTRY AND PUBLIC INTEREST ORGANIZATIONS

- Deep Water Wind
- American Mussel Harvesters, Inc.
- East Coast Shellfish Growers Association
- Mintz Levin Cohn Ferris Glovsky and Popeo PC
- Durand & Anastas Environmental Strategies
- Conservation Law Foundation
- Natural Resources Defense Council
- Environmental Business Council of New England:

    - Tetra Tech
    - Normandeau Associates, Inc.
    - Epsilon Associates, Inc.
    - TRC
    - Woods Hole Group, Inc.
    - AIG
    - Alpha Analytical
    - CDW Consultants, Inc.
    - GZA GeoEnvironmental, Inc.
    - HRA Gray & Pape
    - Cape Cod Community College
    - National Grid
    - Grasso Associates
    - Cronin Management


Offshore Wind Regulatory Process
BOEM Initiates Competitive Leasing Process
Call for Information & Nominations
BOEM
NEPA Proposed Action:
Lease Issuance
and
Anticipated Site Assessment Activities
NEPA – EA/FONSI for Leasing Area & CZM Consistency Determination
BOEM
Proposed & Final Sale Notices
BOEM
Lease Sale (Auction)
BOEM
Winner Selected and Lease Issued
BOEM
Parallel Permitting Process
NEPA Proposed Action:
Proposed Site Assessment Activities
Prepare & Submit Site Assessment Plan (SAP)
Lease Holder
Apply for Additional Permits & Approvals Required to Implement SAP
NEPA – EA/FONSI for SAP Approval & CZM Consistency Determination
BOEM
Permit Application Review (Local, State, Federal Agencies)
Required Permits Issued
Implement SAP / Prepare & Submit Construction & Operation Plan (COP)
Lease Holder
Apply for Additional Permits & Approvals Required to Construct / Operate Facility
NEPA Proposed Action:
To Construct & Operate an Offshore Wind Energy Facility
NEPA – EIS/ROD for COP Approval & CZM Consistency Determination
BOEM
Permit Application Review (Local, State, Federal Agencies)
Prepare & Submit Engineering Reports to BOEM
Lease Holder
Required Permits Issued
Initiate Construction
Lease Holder

ACRONYMS

BOEM	Bureau of Ocean Energy Management
CZMA	Coastal Zone Management Act
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Report
ESA	Endangered Species Act
MBTA	Migratory Bird Treaty Act
MMPA	Marine Mammal Protection Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
OCRM	Office of Ocean and Coastal Resource Management
OCSLA	Outer Continental Shelf Lands Act
PGP	New England Programmatic General Permit
RPB	Northeast Regional Planning Body
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

Document 4.2
Draft Tribal Consultation Best Practices Guidelines

OCEAN PLANNING IN THE NORTHEAST

TRIBAL CONSULTATION

Best Practices Guidelines

The development of Tribal Consultation Best Practices Guidelines is directly related to objectives of the Effective Decision Making goal. This goal focuses on enhancing interagency coordination and improving respect for the customs and traditions of indigenous peoples in decision-making.

Northeast Regional Planning Body

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DRAFT

TRIBAL CONSULTATION BEST PRACTICES GUIDELINES

Introduction

The National Ocean Policy, established by Presidential Executive Order in 2010, called for the formation of nine Regional Planning Bodies (RPBs) to better manage the nation's oceans and coasts, with tribes co-leading the effort and participating on each of the RPBs. New England was the first region in the nation to respond to this call, launching the Northeast RPB in November 2012. The Northeast RPB (NE RPB) includes representatives from the six New England states, ten federally recognized tribes, ten federal agencies, and the New England Fishery Management Council.

The NE RPB is working to create an ocean plan and oversee its implementation, with many opportunities for public participation. In 2014, NE RPB members approved the following three goals for the region's ocean plan (go to neoceanplanning.org to learn more about specific actions, outcomes, and timelines associated with these goals):

- Healthy Ocean and Coastal Ecosystems
- Effective Decision Making
- Compatibility Among Past, Current, and Future Ocean Uses

The development of Tribal Consultation Best Practices Guidelines is directly related to objectives of the Effective Decision Making goal. This goal focuses on enhancing interagency coordination and improving respect for the customs and traditions of indigenous peoples in decision-making. To implement strategies for tribal engagement and tribal interests related to this aspect of ocean planning, a work group led by the NE RPB's tribal co-lead was formed and consists of tribal RPB members who consult with federal agency staff. .

This document contains the best practices derived from comments and responses through valuable input from tribal leaders, examples of existing consultation policies provided by tribes, reference materials such the United Nations Declaration on the Rights of Indigenous Peoples, and material provided by the Environmental Protection Agency (EPA) on consultation practices.

- GOAL of document is to be a starting point for moving conversation forward. Living document/ongoing process developing consultation practices.
- While EPA was primarily used to create these draft best practices, tribal RPB members recognize that there are several agencies that have policies in place (BOEM, ACOE, NOAA) and that there is a need to research and include concepts of these moving forward.
- Upcoming RPB meeting focus will be to discuss how to move forward and how integrate pieces of the tribal consultation into other activities under the Effective Decision Making goal.

Since November 2009 when President Obama directed federal agencies to develop plans to ensure regular and meaningful consultation with federally-recognized tribal governments, tribal leaders provided constructive and helpful comments on how efforts can be improved to consult and coordinate with tribes. This data was gathered through numerous listening sessions and meetings with tribes and tribal organizations, two sets of national consultation conference calls and written submissions.

Only federal agencies are bound by Executive Order 13175, however the Tribal RPB encourages the adoption of best practices standards for all and any seeking to create consultation plans. By the authority vested in the President by the Constitution and the laws of the United States of America, and in order to establish regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, to strengthen the Unites States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes.

The United States has a unique legal and political relationship with Indian tribal governments, established through and confirmed by the Constitution of the United States, treaties, statutes, executive orders, and judicial decisions. In recognition of that special relationship, pursuant to Executive Order 13175 of November 6, 2000, executive departments and agencies are charged with engaging in regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, and are responsible for strengthening the government-to-government relationship between the United States and Indian tribes.

The overall Executive Order is to reaffirm commitment to tribal sovereignty, self-determination and self-governance through consultation and coordination with Indian tribal governments.

The goals of creating best practices consultation guidelines are to:
1) establish clear standards for the consultation process, including defining the what, when, and how of consultation;
2) designate specific personnel responsible for serving as consultation points of contact in order to promote consistency in, and coordination of, the consultation process; and
3) establish a management- oversight and reporting structure that will ensure accountability and transparency. Moreover, any proposed consultation policy sets a broad standard for when federal agencies should consider consulting with federally-recognized tribal governments.
Notably, the scope of this document is intended to broaden that found in Executive Order 13175.

Agencies are encouraged to designate a Tribal Consultation Advisor (TCA). The fundamental role of TCAs is to ensure adherence to any proposed consultation policy and ensure its consistent application throughout the agency. The TCAs should form a consultation policy implementation workgroup that will take up the suggested goals referenced above, as well as develop any additional guidelines and tools necessary for effective and meaningful consultation. Agencies with tribal liaisons should have Tribal Consultation Advisors for consistency and continuity in the long-term process of consultation.

General Guidelines

1. Value the input from tribal governments.

a. Federal agencies should understand that tribal input is valuable, and proposed consultation policy guidance seeks to ensure that tribal input is duly considered by the agency in its decision-making processes. It is important to ensure that tribal input was considered by officials and that tribes are informed about *how* their input was considered.
b. It is very important to demonstrate a "paper trail" or to validate that the consultation was engaging and has follow- through within a developed process.

2. Provide early scoping.

a. Federal agencies should provide early scoping meetings with tribes before preliminary decisions are made on any particular consultation matter.
b. Make certain tribes are provided the opportunity to give input prior to agency decision making on particular actions.
c. Make certain that these approaches supplement and inform consultation activities and not replace them.
d. Ensure the triggers for consultation are NOT ambiguous. Be specific as to which actions require consultation.
e. Make certain that the policy developed proposes a broad standard to ensure that the agency conducts an analysis for upcoming activities warranting consultation. Demonstrating consistency on how analysis is conducted.
f. Federal agencies need to make certain that tribes are notified on issues early in the process. Design the policy so that notification minimizes occurrences of late notice. Make it clear that notification will happen early in the process and allowing for sufficient time for tribes to provide meaningful input. Establish timelines for correct implementation of consultation.
g. Develop a more consistent approach to consultation. Develop standardized procedures for conducting consultation. Set specific timelines for consultation. One of the primary objectives of the proposed consultation policy is to promote consistency in the consultation process. This includes how the federal agencies determine which actions warrant consultation and conducts consultation. The federal agencies need to consider the development of implementation guidance allowing for flexibility in the consultation process to respond to the unique nature of each consultation situation.
h. Ensure tribes are consulted when agencies determine that consultation is not necessary.
i. Activities with impacts on tribal lands or tribes should trigger consultation.

3. Conduct cultural resource and other appropriate training of agency employees working with tribes.

a. It is important to develop training on best practices for tribal communications and more specifically on consultation. Agencies could also consider adding information to their training programs on the protection of tribal cultural resources.
b. Develop implementation plans for the proposed consultation policy, and consider what additional training would be appropriate for personnel involved in the consultation process.
c. Tribes can assist in training appropriate staff and provide details on how their government works both culturally and officially.

4. Establish an advisory committee to: (a) guide development of a consultation policy, if none exists, or (b) if any agency consultation policy exists, then guide development of a consultation policy implementation document, or (c) if a policy and implementation document exists, then guide biannual reviews of its agency's consultation policy implementation document to evaluate the implementation document as appropriate.

a. Agencies can expand their resources to develop a group that is tasked with frequently communicating with tribal partnership groups, including the Tribal RPB, and with tribes during the early phases of development of a proposed consultation policy implementation document. The advisory committee may hold teleconferences, meetings and other opportunities to engage with tribes and tribal organizations to design a customized approach to what meaningful consultation means between the agency and the tribes.

b. Federal agencies are encouraged to enhance communication not just with tribes, but also very importantly with other federal agencies in an effort to demonstrate parity among contributors of the consultation design and implementation.

5. Federal agencies owe a duty to tribes under the trust responsibility of the federal government.

a. Federal agencies have trust responsibility in support of the duty to consult with tribes and to protect human health and the environment in Indian country. The trust responsibility should be guided by applicable case law, federal statutes, and executive orders that set forth the framework of the trust responsibility. Given the complex and varied nature of the trust responsibility in differing circumstances, it is difficult to articulate a simple definition that fits all circumstances that might arise.
b. It is important to recognize that tribes may or may not have treaty rights that apply.
c. Agencies have trust obligation to tribes, however legal counsel and services under a contractual obligation with the federal agency for client protection do not. It is important to pay attention to any conflicts of interest and/or interference from legal counsel on behalf of the agency. When agencies are upholding their trust responsibility, any legal position or legal action on behalf of the agency should not obstruct that trust responsibility.

6. Include a comprehensive definition of consultation.

a. Consultation is a process of meaningful communication and coordination between a federal agency and tribal officials prior to taking actions or implementing decisions that may affect tribes. As a process, consultation may include several methods of interaction that could occur at different levels. The appropriate level of interaction is determined by past and current practices, the continuing dialogue between the agency and tribal governments, and any possible national, regional, and agency program office policies and plans. The proposed consultation policy then further describes specific details of the consultation process.

7. Use existing tribal relationships for consultation as much as possible.

a. Use various tribal partnership groups that federal agencies meet with regularly, including the national and regional tribal caucuses, and use these meetings for consultation and coordination as much as possible. While discussions with these groups are not a substitute for government-to-government consultation, these interactions nonetheless add significant value to the consultation process.

b. Consultation should consider to include inter-tribal organizations in government-to-government consultations for certain groups of tribes. For example, inter-tribal organizations are important to include when working with Alaskan Native Corporations, along with the understanding that most Alaskan tribes have statutory recognition as development corporations through congressional acts.

8. Hold regularly-scheduled meetings between tribal leaders and agency leaders.

a. Tribes request that federal agencies hold regularly-scheduled annual or semi-annual meetings between tribal nations and federal leaders, especially within their respective regions. This is very important in addressing and ensuring the government-to-government relationship and the intention of the Executive Order.

9. Recognize that tribes have limited resources to participate in consultations. Provide tribes with resources to allow tribal personnel to travel to consultations or other necessary meetings. Also consider alternative methods to distant face-to-face meetings.

a. Federal agencies should strive to minimize the resource investment required by tribes to participate in the consultation process. For example, consider holding meetings at tribal offices or piggybacking off other meetings that tribes attend. Encourage the use of alternative methods for consultation across federal agencies such as those suggested by tribes.
b. Caution: tribal consultation can never become diluted or "information only". The set up and design must adhere to the process and allow for executive session discussions and open forum. Tribes have the right to be heard one on one.

c. Do not use time and resource constraints as a potential caveat to when/how your federal agency will consult with tribes. Transparency about limitations with budgets and resources available can be important to tribes in order to plan sufficient and meaningful consultation around any restrictions. If tribes have suggestions regarding ways to ensure consultation on certain matters while accounting for resource constraints, agencies should be open to considering those suggestions.

10. Respect tribal preferences in terms of communication and notify or copy appropriate staff.

a. Federal agencies should honor a tribe's preferences regarding to whom correspondence is addressed, individuals to be copied, and other tribe-specific communication preferences. Regional offices interact with tribes most directly and are frequently in the best position to capture this information. Tribes should also keep their regional contacts updated when the tribe has personnel, address, email, or phone changes.
b. Allow for a two stage meeting one day with leaders and program staff. This works very well and results in meaningful engagement. The process should never resemble committee work or conferences.

11. Consultation should be treated as substantive rather than procedural.

a. Consultation should not be viewed merely as a procedural requirement rather than a meaningful opportunity for tribes to provide substantive input on federal agency actions. In order to ensure consultation is meaningful, the federal agency should describe consultation as having several phases, including an input phase. The purpose of this phase is to ensure that tribes have a meaningful opportunity to provide input on what actions warrant what level of consultation. A suggested follow-up phase ensures that the federal agency informs tribes about how their input was considered. Follow up and follow-through are key components for a healthy government-to-government relationship.
b. Face-to-face meetings are the only true way to consult with tribes.
c. The proposed consultation policy should be intentionally designed to accommodate the diverse range of tribal consultation needs and preferences. Moreover, the specific form that any given consultation process takes is influenced by the variety of factors including, but not limited to, the issues being considered, the number of tribes potentially impacted, time and resource limitations of the tribes involved, and other pertinent factors.
d. In some cases, agencies may need to rely on teleconferences or other approaches in order to conduct consultation. Although federal agencies may not be able to commit to face-to-face meetings in all instances, they should attempt to regularly meet face-to-face with tribes and tribal groups in a variety of settings, including the National Tribal Caucus and other national and regional tribal partnership groups, and whenever it is appropriate and feasible.

12. Honor the confidentiality of certain information provided by tribes (e.g., sacred sites).

a. Federal agencies should be aware that tribes may request that they honor the confidentiality of certain information that they may provide, such as locations of sacred sites, hunting and fishing locations, or other information that tribes may consider sensitive. Agencies should respect and honor these requests to the extent allowable by law.
b. Federal agencies should request that tribes advise of such instances prior to providing the sensitive information so that the agency can advise the tribe as to whether it can treat the information as confidential.
c. All tribal data and input should be viewed as confidential and all agencies should gain permission as to using or releasing it. Even data that one may think is public, is still tribally owned.

13. Use "Indigenous Nation" or other terms when referring to Indian governments rather than "Tribe."

a. Various federal laws refer to "federally recognized Indian tribes." Tribes are also referred to as villages, pueblos, or rancherias. To simplify your documents and ensure consistency with federal law and Executive Order 13175, utilize the term "Indian tribe". When consulting directly with a tribal government, however, refer to the government by its chosen, official term whether that term is tribe, nation, or other title.

b. It is important to remain respectful of what language the tribe has adopted when referring to the tribal organization. The title can be revealed through the consultation process and understanding the nation that you are dealing with.

14. Include within the scope of tribal interests off-reservation reserved rights and subsistence gathering/use a broad interpretation of tribal land.

a. Agencies should use the term "tribal interests" broadly when implementing the proposed consultation policy and that includes encompassing reserved rights and subsistence/sustenance gathering where appropriate. Apply this broad interpretation consistent with any applicable limits imposed by law.
b. Include aboriginal territories within the scope of tribal interests.
c. Federal agencies must consider consulting with tribes when agency actions may affect tribal interests, and that may include interests or reserved rights in ceded territories or areas eligible for protection under the National Historic Preservation Act.
d. Federal agencies may not always be aware of a particular tribe's interest in aboriginal lands, therefore, they need to be understanding that tribes may bring those interests to their attention.
e. Ensure that the correct participants attend consultation meetings. As a general matter, federal agencies should ensure that managers should be present at consultation meetings, particularly when tribal leaders are present. There may be situations, however, such as during informational meetings, where technical staff will be the sole participants in meetings and do not involve senior agency decision-making officials. It is recommended

that tribes discuss, in advance, who the appropriate participants are for any consultation meeting prior to the consultation occurring.

15. Improve interagency coordination of consultation for multi-agency actions.

a. Federal agencies should frequently engage the Bureau of Indian Affairs, the Indian Health Service, the National Indian Gaming Commission, the Department of Justice, and other federal tribal agencies on issues that potentially impact Indian country. Federal agencies should search for opportunities to improve interaction with other federal agencies on Indian country issues.
b. Once best practices are designed, all agencies should adopt the document and allow for continuity of the process even throughout ever-changing hands.

16. Ensure consultation by states when states are implementing authorized programs.

a. Recognize tribal concerns about consultation by states with tribes when states are implementing federal programs. Encouragement of states to consult with tribes whenever possible. Notably, some states, including New Mexico and New York, actually have tribal consultation policies and can potentially serve as models. All agencies State or Local need a policy if the executive order is in force and applicable.

17. Issue progress reports on implementation of the policy.

a. Federal agencies should plan to request and receive ongoing feedback about the effectiveness of the proposed consultation policy from all parties, and particularly tribes.
b. Agencies can plan opportunities to gather input from tribes and intertribal organizations on the implementation of the proposed consultation policy through tribal partnership meetings with tribes and intertribal organizations.
c. Be sure to inform tribes on what kind of feedback is received and what changes or revisions to the policy are planned, if any.
d. Include "consensus" as the goal of consultation. The purpose of consultation is to allow tribes to provide meaningful input so federal agencies may consider that input in final decisions on actions that may affect tribal interests. While the goal of some consultation efforts may be to reach consensus on a matter where there is a disagreement between the agency and a tribe, it should be understood that some consultation efforts may have other purposes such as communicating agency research or receiving tribal input on an upcoming agency activity.
e. While the federal agency should strive toward mutually acceptable outcomes, an agreed upon outcome may not always be possible, and therefore the actions (if any) should reflect this.

18. Recognize that consultation represents an ongoing process, including a back-and-forth exchange, not simply "notice and comment."

a. Effective consultation involves two-way communication. The consultation process should be flexible and actual consultation is conducted. A primary objective of a proposed consultation policy should be to promote consistency in the consultation process, including how the agency determines which actions warrant consultation and conducts consultation in a meaningful manner.
b. The consultation policy should consider implementing guidance for consultation while still allowing for flexibility in the consultation process to respond to the unique nature of each consultation situation.
c. Establishing set timelines with a mutual understanding that it is evolutionary in nature and an ongoing process.
d. Provide follow-up and feedback to tribes regarding actions ultimately taken. Consultation policies should direct follow-up to consultation that includes formal, written communication from a senior federal agency official regarding how tribal input was considered in the final action. The follow-up should include how the input was incorporated.
e. Include accountability mechanisms to track when and how consultation occurred.

19. Add a dispute resolution provision.

a. Consultation steps for a dispute resolution should be outlined in the consultation policy. A consultation advisory committee, as previously suggested, or an implementation workgroup should explore what initial dispute resolution processes might be appropriate and what steps might even be taken above and beyond those initial first steps.
b. Tribal governments should be encouraged to communicate any concerns about a specific consultation or the consultation process in general to a Tribal Consultation Advisor, the head of the program or regional office conducting the consultation.
c. It is very important to have a dispute resolution provision in place and have the adequate agencies available to assist in rendering a decision, such as the Department of Interior, for example.

Document 5.1
Summary of options for identifying important ecological areas and conducting other assessments for ocean planning

Summary of options for identifying important ecological areas and conducting other assessments for ocean planning

The following are general categories of options to advance work under Action 1-2 of the Healthy Ocean and Coastal Ecosystems Goal in the Framework for Ocean Planning in the Northeast US. They incorporate and build on the options discussed at the June 24, 2014 Natural Resources Workshop, the June 25, 2014 Northeast Regional Planning Body (RPB) meeting, and the draft summary of marine life data sources and approaches to define ecologically important areas and measure ocean health. The intent of this document is to provide a concise set of options in order to obtain public input and initiate RPB consideration of the range of potential approaches to achieving regional planning objectives.

For many of the options described below, the RPB will likely need to conduct additional research to determine the management applicability through existing authorities and will need to consider its long term role in implementation - similar to the options currently under consideration for the Effective Decision Making goal. The RPB will also need to consider agency and staff capacity, budget, and the overall planning timeline. A summary of these practical considerations are provided with the options below.

Options for identifying important ecological areas

Options 1 through 5 represent a progression in terms of the likely increased level of effort. Agency and staff capacity, budget, science and technical support, and legal research requirements increase in order to develop scientifically sound products that can be implemented under existing authorities. Sequencing of activities is also a consideration as some options rely on outputs from previous options. Lastly, the RPB will need to consider historic and future trends, including changing ecological conditions, in each of the options and decide on long term maintenance of data products developed for decision making.

1. **Summarize ecological areas currently designated through existing authorities in the Northeast**
   Compile maps of important ecological areas already designated through existing authorities and state planning efforts. Consider the protections already provided in those areas, especially in areas designated under multiple authorities. These include, but are not limited to:
   - Critical Habitat designations under the federal Endangered Species Act;
   - Essential Fish Habitat under Magnuson-Stevens Act;
   - Special, Sensitive and Unique areas under the MA Ocean Plan;
   - Areas Designated for Preservation or Areas of Critical Concern under the RI OSAMP

   Considerations:
   A. The Northeast Ocean Data portal team, with input from relevant agencies, is already compiling areas identified by the above authorities and planning efforts.
   B. Areas related to the above authorities are designated for different management purposes, resulting in differences in how spatial areas are mapped and how those maps are utilized
   C. Potential actions:
      i. Identify and consider other existing Federal and state authorities with similar spatial management measures and obtain designation area boundaries

ii. Consider methods for merging boundaries to identify areas that have been designated by multiple authorities
iii. Determine potential management implications for areas identified as ecologically important by multiple authorities

2. Develop distribution and abundance products for marine life species

The RPB is characterizing the distribution, abundance, and trends of marine life species that are protected through existing authorities or are socioeconomically and culturally important. The RPB has established three work groups composed of experts from state and federal agencies, tribes, academia, industry, and environmental organizations to inform and review product development. In combination with areas designated through existing authorities (1 above) and habitat and range maps already used by regulatory agencies, these products will provide additional context, previously unavailable at this geographic extent, about these species and their important habitats.

Considerations:

A. An extensive effort is underway for marine mammals, sea turtles, birds and fish. This includes a large research team and three expert work groups composed of over 60 individuals. Additional experts have been identified and will be contacted as necessary.
B. Final products are expected in the summer of 2015
C. Potential actions:
    i. Regulatory agencies will need to engage in product development and consider potential management applications (relates to options being discussed under the Effective Decision Making goal)

3. Identify abundance hot spots and other core habitat and occurrence areas

Derive regional abundance hot spots for individual marine life species from the products developed in option 2. If possible, identify additional habitats for each species that may not be captured by distribution and abundance maps, such as migratory corridors or spawning areas. As part of the Effective Decision Making goal, determine how hot spots and other habitats would be incorporated into existing regulatory efforts.

Considerations:

A. The RPB will need final products from option 2 in order to complete this option. Some activities can commence before final products, such as consideration of methods and initial analysis.
B. Potential actions:
    i. Direct existing expert work groups to inform methodologies for identifying hot spots, migration corridors, and other potentially important habitat areas that are not captured by distribution and abundance maps. Ensure consistency of approaches across taxa
    ii. Identify capacity and budgetary needs and obtain technical support for conducting analyses
    iii. Regulatory agencies will need to engage in product development and consider potential management applications

4. **Overlay abundance hot spots, core habitat, and other occurrence areas for protected and important marine life species**

   Combine maps indicating regional abundance hot spots and other core habitat developed in options 2 and 3 to identify areas important to multiple marine life species.

   Considerations:

   A. The RPB will need to complete products from options 2 and 3 in order to proceed
   B. The RPB will need to develop a methodology for combining multiple species hot spots and other core habitat areas
   C. The RPB will need to identify potential management applications for final products
   D. Potential actions:
      i. Establish a multi-disciplinary work group, composed of members of the three existing work groups and other potential experts, to inform methodologies for combining hot spot and habitat data for multiple species
      ii. Identify capacity and budgetary needs and obtain technical support for conducting analyses
      iii. Research and consider the legal implications associated with identifying important areas for multiple protected species and consider developing plan implementation guidance accordingly.

5. **Explore options for advancing an ecosystem-based approach to identifying ecologically important areas**

   Define ecological importance and understand existing science and research for evaluating different ecological components that may not be characterized through species' distribution and abundance modeling. This could include consideration of issues such as identifying areas of high productivity and biological diversity, species rarity, persistence, vulnerability, function and resilience. Consider opportunities for utilizing products under existing authorities.

   Considerations:

   A. Existing science and potential management applications should be researched in advance of conducting these analyses
   B. Products from option 1, 2 and other decisions will likely need to be completed in advance
   C. It will be challenging to reach agreement on the scientific definitions of ecological importance and on potential technical approaches
   D. This option will require an extensive and likely long-term effort to complete
   E. Potential actions:
      i. Establish a work group composed of experts in the physical, biological, and social sciences to define ecological importance and to identify, evaluate and recommend approaches to identifying areas
      ii. Conduct legal research and consider the opportunities for utilizing an analysis of important ecological areas under existing authorities
      iii. Determine level of effort, capacity and budget required to advance an approach or approaches to identifying important ecological areas

Options for measuring ocean health and conducting other assessments

The following options focus on opportunities discussed at the June 24th Natural Resources Workshop to conduct other assessments for ocean planning, including measuring ocean health and conducting tradeoff analyses.

1. **Coordinate with existing regional efforts to measure ocean health**

   Consider opportunities to coordinate and partner with existing programs and projects to measure ocean health, track changes over time and inform regional planning and regulatory decisions. Relevant existing efforts include, but are not limited to NROC/NERACOOS Sentinel Monitoring for Climate Change, the Gulf of Maine Council's Ecosystem Indicator Partnership (ESIP), the National Estuary Programs (NEP), and efforts to establish a Biological Condition Gradient framework or assess cumulative impacts. The potential outcome of this option would be the establishment of a regional baseline using indicators selected from existing regional programs.

   Considerations:

   A. Existing programs have been developed to inform specific and likely different management efforts and therefore indicators of ocean health may not be ideally suited for regional ocean planning purposes
   B. Timing - additional progress may be necessary on other ocean planning activities in advance of identifying programs and indicators for measuring ocean health
   C. While selecting or developing indicators, the RPB will need to consider and articulate its long term role in ocean plan implementation
   D. Potential actions:
      i. Identify opportunities to coordinate with existing programs and efforts
      ii. Establish a work group composed of RPB staff and representatives from regional indicator programs to select indicators that are most relevant to ocean planning goals and to establish a baseline
      iii. Identify capacity and budgetary needs to support a work group and establish a baseline
      iv. Develop a strategy for using those indicators to track ocean health and plan implementation, including determining the RPB's long-term role

2. **Consider customizing the Ocean Health Index (OHI) for the Northeast**

   The OHI (www.oceanhealthindex.org) has recently been developed globally and has been customized to inform regional scale management and planning in different areas. The RPB could review the OHI and consider adopting its framework for evaluating and monitoring the ecological, economic and cultural benefits of the ocean. The potential outcome of this option would be a framework for monitoring ocean health that is developed by the RPB to more directly support regional planning needs.

   Considerations:

   A. The OHI provides the RPB with an opportunity to customize measures to ocean planning priorities and engage the public in defining ocean health in terms of ecological and cultural goals for the region.

B. The RPB will be able to leverage extensive data development through the data portal, marine life, and baseline assessment projects. However, development of the index will require additional budget and capacity to customize goals, conduct analyses, and establish a baseline.
C. Timing - additional progress may be necessary on other ocean planning activities in advance of developing goals and indicators for the OHI
D. While developing indicators, the RPB will need to consider and articulate its long term role in ocean plan implementation
E. Potential actions:
    i. Establish a work group composed of ocean planning staff, RPB members or staff, and others to work with the OHI team to customize the OHI framework to measure the human and ecological components relevant to ocean planning in the Northeast
    ii. Identify capacity and budgetary needs to develop the OHI
    iii. Develop a strategy for using the OHI to inform plan implementation, including determining the RPB's long-term role

3. <u>Revisit the opportunity to conduct tradeoff analyses</u>
   Tradeoff analyses typically require robust spatial and socioeconomic data and specific spatial management decisions. The RPB could consider revisiting the opportunity to conduct tradeoff analyses in 2015 after developing baseline data products, deciding whether and how to identify ecological areas or measure ocean health, and determining the use of plan data and information under existing authorities.

Document 5.2
Project Update: Mapping Commercial Fisheries

OCEAN PLANNING IN THE NORTHEAST

Mapping Commercial Fisheries

A Project of the Northeast Regional Planning Body

As commercial fishing in New England changes, the need for better data and information, including traditional knowledge, has never been more urgent. Understanding where and when commercial fishing happens, and how that picture is changing, can lead to smarter decisions and help reduce conflicts among new and traditional ocean uses.

Project Goals

Ocean planning staff are gathering data on existing ocean uses to provide a baseline of information for ocean planning in the Northeast. Commercial fishing is a priority in this effort, given its importance in the economy and culture of New England. Several projects to map patterns of commercial fishing have been undertaken in recent years in different parts of the region. This project builds on those efforts, with the goal of producing maps, available to the public, that show commercial fishing activity region-wide.

Accurate maps of commercial fishing activity, created in partnership with the fishing community, are essential to ocean planning in the Northeast.

Data Sources

The maps rely on data developed for federal fisheries management purposes—for example, vessel trip report (VTR) and vessel monitoring system (VMS) databases. These data are plotted on NOAA charts to show how much activity is taking place (red = more activity; blue = less activity). The maps show activity across New England over several years (generally 2007 to 2010) and are organized by fishery. These data sources have limitations; for example, they do not include some fisheries, such as lobster or bluefin tuna.

Fishing Community Participation

Fishing industry participation is key to this project's success. For this reason, the project is designed as a partnership with the fishing industry, scientists, and managers. Between August 2012 and July 2013, the project team held more than 50 gatherings throughout New England to obtain advice and input for developing maps of commercial fishing activity, and to discuss ocean planning in general. Forums for these meetings have included fishing sector/community meetings, New England Fishery Management Council meetings, one-on-one conversations, and events such as the Maine Fisheries Forum and the New Bedford Waterfront Festival.

The Northeast Regional Planning Body, established under the National Ocean Policy, is responsible for developing New England's ocean plan. To learn more about its work, go to **neoceanplanning.org**.

Project Team

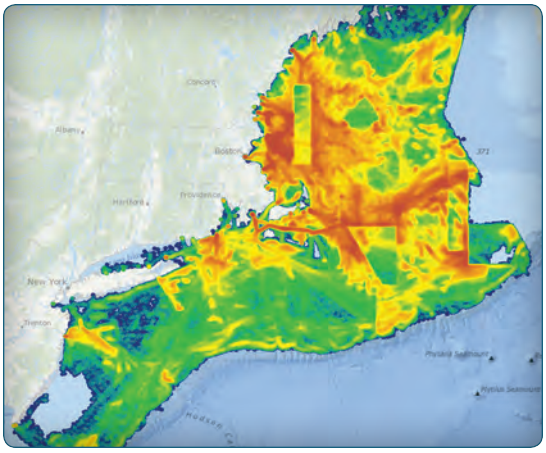
For assistance with the first phase of this project, in 2012 ocean planning staff worked with a team consisting of George Lapointe Consulting, the Island Institute, and the Rhode Island Sea Grant. This team engaged the commercial fishing and party/charter industries, fisheries scientists, and managers to develop and refine the maps and to understand their limitations and potential uses.

Accomplishments Through 2013

- Developed a series of maps showing areas of commercial fishery use of the ocean, relying on existing data such as vessel monitoring system and other available data sources.
- Met with hundreds of fishermen, managers, and scientists throughout New England to discuss the draft maps and the overall ocean planning effort.
- Produced a report (available online at **neoceanplanning.org**) summarizing Phase I of the project (through the summer of 2013) and providing recommendations for Phase II (through 2014). Recommendations for Phase II include updating maps with more recent data and developing products related to fisheries not well represented by existing data. Like Phase I, Phase II will emphasize engaging the fishing industry, managers, and scientists.
- Developed a work plan to address high-priority data gaps.

Next Steps

- Continue to review map products with the fishing community and others, incorporating the latest available data.
- Publish and update maps with appropriate descriptions and caveats on the Northeast Ocean Data Portal (**www.northeastoceandata.org**).
- Develop and implement methods to develop maps for additional fisheries such as lobster and bluefin tuna.



Map on the Northeast Ocean Data website (**www.northeastoceandata.org**). All maps are developed through a scientific process that incorporates input from industry, scientists, and managers.

For more information

To learn more about this and other ocean planning activities in New England, go to **neoceanplanning.org** or scan the QR code to the right.

OCEAN PLANNING IN THE NORTHEAST

Document 5.3A
Baseline Assessment
Project Summary

OCEAN PLANNING IN THE NORTHEAST

BASELINE ASSESSMENT PROJECT SUMMARY

New England's marine resources are an important source of economic and ecosystem value. Together with the region's coastal infrastructure and human use, these resources are inputs to industrial, recreational, and service sector activities that support jobs and income. They also are a source of ecosystem services that contribute to the well-being of residents and visitors.

Project Goals

In support of the Northeast Regional Planning Body's (RPB) ocean planning effort, a baseline assessment will compile existing information and conduct new analysis to characterize the region's ecosystem, economy, and cultural resources. The assessment will provide guidance on how a regional ocean plan can address pressures on resources and resource use conflicts, and support sustainable economic activity. The assessment team includes researchers from the Woods Hole Oceanographic Institution's Marine Policy Center, the University of Southern Maine, the University of Massachusetts Boston, and the New England Aquarium.

The goals of the baseline assessment are to: 1) describe the connections between natural resources, infrastructure, and economic value (broadly defined) in the region at present and in the future; and 2) provide tools and considerations to the RPB as it embarks on the development of a regional ocean plan. The intent of the project is to improve understanding of marine resources as inputs to economic activity and to the generation of ecosystem services while giving RPB members and others involved in ocean planning a tool that helps evaluate how a potential planning decision might affect future resource status and economic value generation. The assessment will also identify key gaps in data and information to consider in future planning.

Project Tasks and Timeline

The assessment will include the following tasks:

1. Development and RPB review of an assessment outline: ***Sept – Oct, 2014***
   (see following pages for detailed outline, which will discussed at the Nov. RPB meeting)
2. Analysis of regional Marine Economy and Resources: ***Nov – Mar, 2015***
   a. Regional, state, coastal county level economic indicators
   b. Summary of non-market valuation studies
   c. Summary of status/trends of marine resources and infrastructure
   d. Map resources to economic activity and production
3. Summary of potential future considerations specific to ocean uses: ***Nov – Mar, 2015***
   a. Economic trends and projections
   b. Federal and state planning/strategic planning initiatives
   c. Best management and construction practices (e.g. marine and coastal facilities and operations, ocean industry siting)
4. Production and review of draft and final baseline assessment: ***April – Sept, 2015***

For more information

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Document 5.3C
Baseline Assessment
Timeline

Baseline Assessment for Northeast Regional Ocean Planning

1. Introduction
    a. Purpose and scope of baseline assessment
    b. Resources and economic value generation
    c. The role of ocean planning in promoting sustainable economic activity
2. Resources and Infrastructure
    a. Marine and coastal natural resources
    b. Marine and coastal cultural resources
    c. Marine and coastal infrastructure
    d. Human resources
3. Coastal and Marine Economy
    a. Definitions and boundaries
    b. Sectors (see details on following pages)
    c. Geographic regions (states, counties)
    d. Links to the regional economy (IMPLAN)
4. Ecosystem Services
    a. Definitions and boundaries
    b. Review of non-market value studies
    c. Categories (see detail on following pages)
    d. Gaps in present knowledge
5. Mapping Resources to Economic Value Generation
    a. Sectors and resources; production functions
    b. Opportunities for conflict/role of planning
6. Trends and Future Considerations for Planning
    a. Climate change
    b. Socio-economic changes
        i. Demographics
        ii. Macro-economic structure
    c. Technological change in marine industries
    d. Changes in macro-economic structure
7. Recommendations and Priorities for Future Research
    a. Resources
    b. Economic sectors

Tables on the following pages describe the scope and scale of data we plan to assemble to support sections 2, 3, and 4. These data will be assembled and made accessible through the NROC Data Portal, and will be summarized and illustrated in the Baseline Assessment document with appropriate maps, figures, and tables, as well as text summaries. The Baseline Assessment document will also contain references and links to source documents and other data sets from which the Baseline Assessment data are drawn.

2. Resources and Infrastructure

Natural Resources	Parameters	Sources	Spatial Resolution	Temporal Resolution	Project Lead
Ocean waters	Bathymetry Temperature Productivity Water quality Currents Waves	Portal NERACOOS/NOAA NERACOOS/NOAA Portal/EPA NERACOOS NERACOOS	[hydro surveys] regional relevant subregions: Gulf of Maine, RI/BI/LI Sounds, etc.	2013 or most recent available; monthly/seasonal variation; long-term trends	Kite-Powell
Seabed and habitat	Seabed type (sand, rock, etc.) Habitat type	TNC NAMERA USGS	Regional [USGS surveys]	2013 or most recent available	Kite-Powell
Beaches	Shoreline length; beach width Beach/shoreline erosion rates Beach water quality advisories	USGS Portal/EPA	[USGS, state geological surveys] Beach	2013 or most recent available Annual	Hoagland
Wetlands	Area	Portal/NWI	[USGS, state maps]	2013 or most recent available; trends	Kite-Powell
Coastal conservation lands	Area	Portal	Town	2013 or most recent available	Kite-Powell, Colgan
Marine Protected Areas	Area	Portal/MPA center	[NOAA, state maps]	2013 or most recent available	Hoagland
Living resources	Distribution, abundance, biomass (as available) by species/group	[NROC/Duke project]			Kite-Powell, Wikgren

Infrastrucutre/ Human Resources	**Parameters**	**Sources**	**Spatial Resolution**	**Temporal Resolution**	**Project Lead**
Tribal/cultural resources	Paleo-artifacts	John King, URI		2013/most recent, static	Hoagland
Archaeological resources	Historic shipwrecks	Vic Mastone, Mass. Portal/AWOIS	[1 km^2]	2013/most recent, static	Hoagland
Shoreline structures	Seawalls Jetties Groynes Dunes	[contact Napoli]	[10-100m]	2013	Hoagland
Commercial ports	Docks and facilities Deepwater ports	ACoE, ports	Town	2013	Kite-Powell
Naval facilities	Docks and facilities	Portal	Town	2013	Kite-Powell
Marinas	Establishments	Census/ENOW	Town	2013	Colgan
Pipelines	Location, length, nature	Nautical charts	[10-100m]	2013	Hoagland
Cables	Location, length, nature	Nautical charts	[10-100m]	2013	Hoagland
Residential real estate	Total housing units Occupied housing units Seasonally used housing units	Census/ENOW	Shore-adjacent Census blocks and shore-adjacent towns	2010	Colgan
Commercial real estate	[tbd]		[tbd]	[tbd]	Kite-Powell, Colgan
Human resources	Population	Census	Census blocks, towns, counties	Most recent available	Colgan

3. Coastal and Marine Economy

Note: "Indirect effects" refers to indirect and induced employment, output value (GDP), personal income (wage and non-wage), and tax revenue.

Economic Sector	Parameters	Sources	Spatial Resolution	Temporal Resolution	Project Lead
Commercial fishing	Est. Employment Estimated Wages Indirect effects Fishing activity Landings (species/gear) Ex-vessel prices	Census/ENOW IMPLAN VMS maps NMFS	State and county State [75 km^2]	Annual, 2005-2012 (possibly earlier) 2013 Monthly	Colgan Jin Hoagland, Wikgren
Aquaculture	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Seafood processing	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Seafood markets	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Recreational fishing	Activity days	NROC survey project; MRIP			Kite-Powell
Recreational boating	Activity days	NROC survey			Kite-Powell

	Boat registrations	project	State	2012/annual	
Beach recreation	Visitor-days	States/parks NOAA	Beach/park	Annual	Kite-Powell
Marinas	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Deep sea freight transportation	Establishments Employment Wages Output (GDP) Indirect effects Cargo moved Vessel transits AIS tracks	Census/ENOW IMPLAN ACoE, ports Portal/AIS	State and county Port	Annual, 2005-2012 Annual, 2008-2012 Annual, 2011-2013	Colgan Jin Kite-Powell
Marine passenger transportation	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Marine transportation services	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Search and navigation equipment	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Ship- & boat building and repair	Establishments Employment	Census/ENOW	State and county	Annual, 2005-2012	Colgan

	Wages Output (GDP) Indirect effects	 IMPLAN			 Jin
Marine construction	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Boat dealers	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Eating & drinking places	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Hotels & lodging places	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Recreational vehicle parks & campgrounds	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Scenic water tours	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin

Sporting goods retailers	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Aquaria and zoos	Establishments Employment Wages Output (GDP) Indirect effects	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin
Energy	OCS lease tracts Wind, wave, etc. lease sites Energy production				Hoagland
Minerals	Establishments Employment Wages Output (GDP) Indirect effects Sand & gravel leases and production	Census/ENOW IMPLAN	State and county	Annual, 2005-2012	Colgan Jin Hoagland
Homeland Security	[tbd]				
Research & education	[tbd]				

4. Ecosystem Services

Project lead: Hoagland, Colgan

This section of the Baseline Assessment will summarize the results of specific studies, geo-referenced to indicate range of applicability, of Northeast region marine ecosystem services and their values. We will follow established conventions for cataloguing ecosystem services, including provisions services (such as food production), regulating services (such as climate regulation and water purification), habitat and supporting services (such as primary production), and cultural services (such as recreation and aesthetics).

Ecosystem service	**Parameters/Proxies**	**Value Estimates**	**Examples/Studies**
Food production	Commercial fishing		
Bio-chemicals			
Genetic resources			
Climate regulation			
Water purification			
Storm surge regulation			
Recreation	Beach recreation Recreational boating Recreational fishing		
Aesthetics	Beach recreation Real estate		
Education	Research & education		
Cultural/spiritual			
Nutrient cycling			
Primary production			

5. Mapping Resources to Economic Value

This section of the Baseline Assessment will map infrastructure and resources to economic and ecological value, to help planners understand how resource management decisions are likely to affect future value generation. In particular, we will:

- Identify which resources/infrastructure components are inputs to each category of economic/ecosystem service value generation
- Summarize what (if anything) is known about these "production functions"
- Highlight limiting factors and (potential) conflicts

The following table illustrates the framework for mapping resources and infrastructure (columns) to economic and ecological value generation (rows):

	Ocean waters	Seabed/habitat	Beaches	Wetlands	Coastal conservation land	Marine Protected Areas	Living resources	Etc...	Tribal/cultural resources	Archaeological resources	Shoreline structures	Commercial ports	Naval facilities	Marinas	Pipelines, cables	Residential real estates	Commercial real estates	Etc...	Human resources			_		
Commercial fishing																								
Aquaculture																								
Seafood Processing																								
Seafood markets																								
Recreational fishing																								
Recreational boating																								
Beach recreation																								
Marinas																								
Deep sea freight transportation																								
Marine passenger transportation																								
Marine transportation services																								
Search and navigation equipment																								
Ship- & boat building/repair																								
Marine construction																								
Boat dealers																								
Eating & drinking places																								
Hotels & lodging places																								
Etc...																								
Bio-chemicals																								
Genetic resources																								
Climate regulation																								
Water purification																								
Storm surge regulation																								
Etc...																								

Document 5.3C
Baseline Assessment
Timeline

BASELINE ASSESSMENT TIMELINE

							2014								2015			
		Project month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Task		Deliverable	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	baseline assessment outline																	
	detailed workplans for Tasks 2-6																	
		final version of outline					x											
2	analysis of regional marine economy																	
2.1	assembly of market economy data																	
2.2	summary of non-market valuation studies																	
		detailed outline and workplan						x										
		interim products								x								
		final products: NE marine economy									x	x						
2.3	summaries status/trends for resources																	
2.4	map resources to production																	
		resource/infrastructure summaries								x								
		mapping of inputs to production										x						
3	considerations for future ocean uses																	
3.1	economic trends and projections																	
3.2	government planning initiatives																	
3.3	best management practices																	
		detailed outline and workplan						x										
		interim products							x									
		final products: trends and context									x	x						
4&5	baseline assessment document																	
4.1	drafting																	
4.2	reviews																	
		detailed plan for review processes						x										
5	final production																	
		first draft								x								
		final draft											x					
		final product																x
6	participation in RPB meetings																	

Document 5.4A
Objective 2 Status Report

Status Report for Healthy Ocean and Coastal Ecosystems - Objective 2

The following materials provide an update of the Healthy Ocean and Coastal Ecosystems Objective 2 subcommittee activities. The Framework for Ocean Planning in the Northeast identifies the following as Objective 2: "Identify and Support Existing Non-regulatory Opportunities to Work Toward Conserving, Restoring, and Maintaining Healthy Ecosystems." Federal agency staff (led by the US Army Corps of Engineers) is leading subcommittee efforts and will provide an update at the NE RPB meeting on the following:

- **Subcommittee members (briefing material 5.4B):** The subcommittee is co-lead by EPA and US Army Corps of Engineers (USACE). Once agreed on by the NE RPB, the subcommittee will meet quarterly to update members on projects and funding opportunities. The official list of subcommittee members is attached in briefing material 5.4B; each has been endorsed by their respective NE RPB member.

- **Regional restoration priorities (briefing material 5.4C):** The subcommittee has produced and will maintain an updated list of restoration and conservation priority projects that relate closely to ocean planning goals and objectives. Eventual endorsement of this list by the NE RPB will assist project proponents in obtaining state, federal and NGO funding.

- **Federal funding opportunities (briefing material 5.4D):** The attached matrix of federal funding opportunities will be maintained and updated by the subcommittee. It should eventually be available to the public on the NE RPB web site so communities can identify additional funding sources. The act of this subcommittee meeting quarterly will strengthen each state/tribal/federal subcommittee member's knowledge of each other's programs. A future goal should be to leverage private foundation funding to assist in the non-federal cost share most of the federal programs require to implement the NE RPB priority projects.

- **Project criteria (briefing material 5.4E):** The subcommittee suggests the NE RPB consider the following criteria to endorse restoration and conservation priority projects that relate closely to ocean planning goals and objectives.

Document 5.4B
Objective 2
Subcommittee Members

Objective 2 Subcommittee Members Identified by RPB leads

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Document 5.4C
Regional Restoration Priorities

Regional Restoration Priorities for Northeast Regional Planning Body Ocean Planning Framework Healthy Ocean and Coastal Ecosystems Ecosystem Health Objective 2

NOTE: An Asterisk (*) denotes construction within 18 months is possible

Massachusetts:

Mashpee Coastal Watershed Tribal Partnership Project
Aquinnah Menemsha Pond Coastal Watershed Tribal Partnership Project
Herring River, Wellfleet
Neponset River Restoration
Fitchburg River Restoration
Shawsheen River Dam Removals
Provincetown Dike
Plymco Dam Removal, Plymouth*
Little River Stream Naturalization, Gloucester
Broad Cove, Hingham
Bucks Creek, Chatham *
Champlain Creek, Chatham
Coonamessett Bogs, Falmouth*
Davis Road / OR-7, Orleans
Farm Pond, Oak Bluffs*
Kent's Island Marsh, Newbury
Palmisanno Marsh, Orleans*
Smith Lane, Eastham
West End Marsh, Provincetown*
Village Marsh, Sandwich

Mill Street Dam, Pittsfield
Amethyst Brook, Timber Crib Dam Removal*
Beaver Dam Brook / Tidmarsh Farms River and Wetland Restoration*
Bound Brook, Hunters Pond Dam Removal*
Coonamessett River Restoration*
Cotley River / Barstow's Dam Removal*
Fall River Dam Removal*
Ipswich River, South Middleton Dam Removal*
Ipswich River, Ipswich Mills Dam Removal
Jones River Restoration, Canton/Kingston*
Kinne Brook Restoration, Stroud Dam Removal*

Mill River Restoration, West Britannia Dam Removal*
Neponset River Restoration, Milton/Boston
Nissitissit River, Turner Dam Removal*
Red Brook / Centry Bog Restoration*
Shawsheen River Restoration (two dam removals)*
Third Herring Brook Restoration (3 dam removals)*
Town Brook, Holmes Dam Removal
Town Brook, Plymco Dam Removal*
W. Branch Housatonic, Tel Electric Dam Removal
Wekepeke Brook, Bartlett Dam Removal*

Coastal estuarine habitat restoration

- Herring River, Wellfleet (1,000 acres)

Coastal watershed dam removal

- South Middleton Dam on the Ipswich River in Middleton, MA. This is the third dam on the mainstem and the first without a fish ladder. Removing the dam will open over 50 miles of mainstem and tributary habitat to diadromous fish.

Rhode Island:

Calf Pasture Point Wetlands Restoration
South Coastal Salt Ponds Salt Marsh Restorations
Woonasquatucket River Diadromous Fish Restoration-Manton Dam fishway
Lower Blackstone River Diadromous Fish Restoration
    Main Street Dam Fishway
    Old Slater Mill Fishway
    Elizabeth Webbing
    Valley Falls
Pawtuxet River Diadromous Fish Restoration – Pontiac Dam
Wood Pawcatuck River Diadromous Fish Restoration /Dam Removals—Bradford, White Rock, Potter Hill
Narragansett Indian Aguntaug Ceder Swamp Restoration*
Narrow River Tidal flushing, Eelgrass and Salt Marsh Restoration
EQIP Farmer Based Oyster Restoration*
RI Stream Continuity-Brook Trout Projects

Dye Hill Road*
Statewide Coastal Wetland Restoration Priority Assessment

New Hampshire:

Diadromous Fish
Great Dam Removal- Exeter River, Exeter*
Upper and Lower Sawyer Mill Dams Removal- Bellamy River, Dover*
Old Mill Pond Dam Removal, Hampton*
Thompson Brook Culvert Replacement, Greenland*
Gonic Dam and Gonic Sawmill Dam Removal- Cocheco River, Rochester
Nature-Like Fishway Feasibility, Wadleigh Falls Dam, Lamprey River, Lee
McLane and Goldman Dams Removal, Sohegan River, Milford
Restoration of the inlet to Hodgson Brook, North Mill Pond, Portsmouth
Lubberland Creek culvert replacement, Bay Road, Newmarket
Fresh Creek Culvert Replacement with bridge, Dover

Shoreline
Wagon Hill Farm Shoreline Restoration, Durham

Oyster
Great Bay Estuary Oyster Restoration (10 acre), Greenland*
Upper Salmon Falls River oyster reef, Dover*
Mid Great Bay Historic Oyster Reed, Durham

Dune
Building Capacity for Resilience of Human and Natural Communities in Dune Systems, Seabrook/Hamptons*
Restoration of the Seabrook Back Dunes, Seabrook*

Seagrass
Restoration of Widgeon Grass to South Mil Pond, Portsmouth*

Salt marsh
Facilitation of Migration Paths in Response to Sea Level Rise, Portsmouth*
Phragmites Removal Following Tidal Restoration, Rye*
Native species restorations at many existing restoration sites,

Coastal Zone*
Phragmites Management in Hampton Seabrook Estuary, Seabrook/Hamptons
Tidal Restoration of Johnson Creek, Durham
Tidal Marsh Restoration of decommissioned Sewage Lagoons on the Squamscott River (20 acres)
Conservation of SLAMM (Sea Level Affecting Marshes Model) identified, undeveloped, low lying land adjacent to salt marsh that will allow for natural salt marsh migration in response to sea level rise

Maine:
Saint John River Watershed Tribal Partnership Project
Penobscot Indian Nation Tribal Lands Partnership Project
Pleasant River Addison Maine Wetlands Restoration Project
St. Croix River/Passamaquoddy Nation Diadromous Fish Restoration
NOAA Habitat Blueprint/Penobscot Habitat Focus Area – fish passage
Orland Village Dam fish passage, Orland River (Orland, ME)
Frankfort Dam fish passage, Marsh River (Frankfort, ME)
Head Tide Dam fish passage, Sheepscot River (Alna, ME)
Coopers Mills Dam fish passage, Sheepscot River (Whitefield, ME)
Cherryfield Dam fish passage, Narraguagus River (Cherryfield, ME)
Seal Cove Pond Dam fish passage improvements (Mount Desert Island)
Patten Stream rock ramp fishway construction (Surry, ME)
South Branch Lake fish passage (Penobscot Indian Nation land)
Sabattus River fish passage (6 dams, Lisbon and Sabbattus, ME)
Cobbosseecontee Stream fish passage (Gardiner, ME)
China Lake Outlet Stream fish passage (6 dams, Vassalboro, ME)
Culvert replacements in Androscoggin, Kennebec, Sheepscot, Ducktrap, Narraguagus, Machias and Penobscot River watersheds (multiple towns)

Connecticut:

Restoration:
Tingue Dam Fish Bypass Channel, Seymour *
Brides Brook at Rocky Neck State Park, East Lyme*
Dodge Paddock and Beal Preserve, Stonington Borough*
Ed Bill's Pond Dam Removal, Lyme*
Guilford Harbor Marsh Restoration *
Heminway Pond Dam Removal, Watertown*
Holly Pond, Stamford

Leetes Island Tidal Marsh Restoration, Guilford*
Mitchell College Dunes, New London*
Pond Lily Dam Removal*
Rainbow Dam Fishlift, Farmington River, Windsor
Samp Mortar Dam Fishway, Fairfield
Springborn Dam Removal, Scantic River, Enfield *
Stratford Point Living Shoreline, Stratford*
Ward's Millpond Dam Removal, Branford

Conservation Acquisition:
Avery Farm Acquisition, Ledyard/Groton*
Nell Island Marsh/Charles Wheeler Marsh WMA acquisition, Milford*
SLAMM projects - Additional sites to be identified soon

Project Details

Tingue Dam, Seymour – Work is currently in progress but needs about $300,000 to complete construction. This was Steve Gephard's highest priority in 2009, and it still is. Steve runs the State's fish passage restoration program.

Brides Brook Restoration Project, East Lyme (phase 2) – Phase 1 of this project was completed in 2010 at an approximate cost of $950,000 for both design and construction. The primary objective of the project was to restore the mouth of Brides Brook by replacing the existing pipes (undersized, too narrow, too long, and invert too high; corroded and collapsing; intermittently plugged with sand) with a combination open channel and large box culvert design. The project was completed and the associated alewife run has increased each year since. But the full benefits to the 85-acre tidal marsh in this system have not yet been realized. There are a series of sandy shoals in the lower end of Brides Brook that act like a sill. They trap water in the system and do not allow full drainage at low tide. It has been over 4 years since the larger box culvert was installed, but the shoals have not washed out on their own yet. *We seek funds to dredge these sandy deposits and place them either on the adjacent dune, in low spots in the tidal marsh (restoring proper marsh surface elevation so that vegetation can grow), or both*. This project is fully designed and permitted, but needs construction funds. Cost estimate is $152,000

Dodge Paddock and Beal Preserve, Stonington Borough – Fresh water wetlands and coastal grassland restoration (about 5 acres). Cost estimate is $50,000

Ed Bill's Pond Dam Removal, Lyme – A fish ladder was installed on this dam in fall 2000. The new owner of the property is interested in removal and planning is well underway. Approximately $300,000 has been awarded so far (for feasibility, design, permitting, etc; possibly some of this will be left for removal as well). Project is about $400,000 shy of amount needed for implementation.

Guilford Harbor Marsh Restoration – The marsh at the mouth of the West River (east side) has been slowly eroding away and retreating landward for the last few decades. The plan is to construct cells to contain clean sediments dredged out of the nearby harbor and navigation channel (dredging to be funded separately). The material placed into these cells would be used as a substrate to restore the marsh to its former footprint (ca. 1950). Filling up to about the Mean High Water mark will allow emergent vegetation to once again colonize this area. Project has a strong link to the concept of Beneficial Reuse of Dredged Material. Cost estimate is $4,000,000

Heminway Pond Dam – Removal Project, Steele Brook, Watertown
CT DEEP funded dam removal design through a federal CWA 319 NPS grant which was completed November 2013 for the Town of Watertown by Princeton Hydro. Design includes ready-to-submit State and federal permit packages which the Town of Watertown is planning to pursue next. At the same time, the Town also seeking funds for dam removal "implementation" phase. So, in other words, this project is practically "shovel ready". Estimated cost for dam removal over $1 million.

Town of Watertown has been working on this project steadily for many years, starting with development of 319 funded watershed based plan. Dam is (now) owned by Town. Once completed, the project may only pass eels with regard to diadromous fish passage due to steep ledge downstream at Pin Shop. It will also pass a host of resident, freshwater fish.

Here is a link to project summary on EPA Grants Reporting Tracking System (GRTS)website: http://iaspub.epa.gov/apex/grts/f?p=110:700:16480544367136::NO:RP,700:P700_PRJ_SEQ:90094 (Scroll through project summary to see links to PDFs of final engineering plans and design memo.)

Holly Pond, Stamford – DEEP is entering into a contract with a consultant to perform an alternatives analysis with cost estimates for implementation of certain tasks. These include doing something with the large shoal that has formed at the northern end of the pond (primarily contaminated road sand and sediments that

have eroded off the Noroton River banks), stabilizing the banks of the Noroton River, and managing peak stormwater flow volumes to prevent/minimize future stream bank erosion. Tidal marsh restoration is a viable option here as well. Once preferred alternatives have been selected, DEEP, along with local officials and residents will be looking for final design and implementation funds. We expect to be looking for funds for these in about 18 months.

Leetes Island Tidal Marsh Restoration, Guilford* - plan is to eliminate the inadequate and failing connection to Island Bay / LIS, and create a larger connection for improved low tide drainage. The existing pipe is on private property and is too small and too high to fully drain the 40-acre marsh at low tide. It is also falling apart. The new plan is to abandon the existing pipe, and install a box culvert on adjacent Town property. Town staff will utilize their own equipment for most of the construction – town engineers are also designing it. However, funds are needed for materials. Cost estimate is $180,000

Mitchell College Dunes, New London – Cost estimate was $2,795 in 2009, but status is currently unknown. This project is not finished as they are spreading out invasive control work and other restoration activities over several years so that they can involve as many semesters' worth of environmental science students as possible. There is a new project leader assigned to this and she is using this project as sort of an outdoor classroom. Each semester has a new group of students working on a different part of the restoration, or at least a different stage of the same part (i.e, control of oriental bittersweet at the northern end of the dune). Cost estimate is on the order of about $10,000 - $20,000 per year. An elevated walkway over the dune is also under consideration, and this will probably cost about $50k - $75k.

Pond Lily Dam Removal, New Haven – Pond Lily Dam is in the West River, just a few miles upstream of a major tidal marsh and estuarine embayment restoration project, which also was designed to improve fish passage. Pond Lily Dam is the next upstream barrier and although a fish ladder was installed in 2001, the dam creates a flood hazard. Furthermore, fish ladders are designed to pass only certain species of fish – both are valid reasons to remove the dam. The result will be the permanent removal of a fish barrier and potentially catastrophe in the event of dam failure. Cost estimate for construction and related activities is $1.1 million, and currently $550,000 is needed.

Rainbow Dam Fishlift, Windsor – DEEP owns and operates a 750-foot long vertical slot fishway on a privately-owned hydroelectric dam. In 2007, Macchi

Engineers, LLC, estimated construction of the fish lift to cost $4.5 million. The plan is to replace the fishway with a fish elevator.

Samp Mortar Dam Fishway, Fairfield – First dam on the Mill River; this dam is 23' high and is a complete barrier to anadromous species. The Samp Mortar Dam created a large recreational impoundment around which a large homeowner's association has developed. There is sufficient space on association property beside the dam for a fishway. Cost estimate is $1,000,000 for fishway design and construction.

Springborn Dam Removal, Enfield – needs funds to complete final design and go to construction. DEEP has applied to DOI for Sandy Resiliency funds but awardees have not been announced yet. Estimated project costs are $4 million.

Stratford Point Living Shoreline – Project involved the deployment of prefabricated concrete Reef Balls in the nearshore waters along the northern side of Stratford Point. The tidal marsh here was removed as part of lead contamination abatement project, and was never able to recover. As a result of the lost tidal marsh, the dunes along this shoreline were also wiped out. The purpose of installing the Reef Balls is to reduce wave energy and water velocity so that sediments could fall out of suspension and accumulate within the former marsh's footprint. Once the marsh is reestablished, the dunes could be restored as well. The project has already begun after the PIs were awarded a grant through the NFWF-LIS Futures Fund program, as well as private funds from the current property owner. Additional funds are needed to expand the scope of the project, as the current installation will reestablish only a small part of the former marsh. Cost estimate = $750,000 for the low-energy side, and $8 million for the high-energy side. Fortunately, this project can easily be done in stages so even partial funding would still allow for significant expansion upon the existing deployment.

Ward's Millpond Dam Removal, Branford – This dam is at risk of failing and damaging downstream properties. It is also the first dam on the river and is located about 100 yards upstream of the high tide line. There is nice, high quality upstream habitat available for river herring. Cost estimate = $650,000 for design and construction

Conservation Acquisition Summaries

Avery Farm Acquisitions, Ledyard/Groton
Project is the 298-acre Avery Farm located in Groton and Ledyard, CT with significant freshwater emergent marsh, palustrine and riverine wetlands support coastal waterbirds and other wetland dependent avians, reptiles and amphibians. The seller will donate 146 acres, appraised at $320,000, and GOSA will purchase 152 acres for the appraised value of $1,020,000. 400 total contiguous acres would be permanently protected, including GOSA's abutting Candlewood Ridge and three smaller parcels protected by town conservation easements. This is a rare opportunity to protect a large, environmentally significant parcel within the highly developed I-95 corridor. Estimated additional acquisition costs needed = ~$400,000.

Nell Island Marsh/Charles Wheeler Marsh WMA acquisition, Milford
This 48-acre acquisition opportunity contains critical salt marsh habitat and coastal forest. It is an in-holding within Nells Island Wildlife Management Area (WMA), the largest and unditched salt marsh in Long Island Sound. The marsh represents some of the best breeding habitat in the state for American green-winged teal (Anas crecca), American black duck (Anas rubripes), and clapper rail (Rallus longirostris). Nells Island marsh provides an important wintering, nesting and migration habitat for many waterfowl species. It is within the Housatonic-Great Meadows ACJV Waterfowl Focus Area. Goals for this Focus Area are to acquire the 200 remaining acres of privately held tidal wetlands. Portions of this tract contain upland habitats that are conducive to marsh migration as sea level rise continues to occur. The owner is very interested in selling for conservation purposes. Estimated acquisition and indirect costs $225,000 (based on appraisal).

SLAMM projects – Additional acquisition project nominations are forthcoming upon completion of the LIS SLAMM (Sea Level rise Affecting Marsh Migration) project. We expect to have final data from this project in the winter/spring of 2015. The project will generate a list of properties best suited to accommodating the upland migration of CT's most ecologically important salt marshes that should be considered for conservation acquisition. More on how SLAMM works can be found at
http://www.warrenpinnacle.com/prof/SLAMM/SLAMM_Model_Overview.html

Document 5.4D
Federal Funding Sources for Conservation and Recreation

Federal Funding Sources for Habitat Restoration and Watershed Protection

AGENCY	PROGRAM NAME
National Fish and Wildlife Foundation	Long Island Sound Futures Program
	Environmental Solutions for Communities
	Sea Turtle Conservation Fund
	River Herring Conservation Initiative
U.S Department of Commerce	Coastal Services Center Cooperative Agreements
	Coastal Zone Management Administration Awards
	Community-based Habitat Restoration Project Grants
	National Sea Grant College Program
	Coastal and Estuarine Land Conservation Program
	NOAA Open Rivers Initiative
	Interjurisdictional Fisheries Act
	National Marine Sanctuary Program
U.S Department of Defense	Aquatic Ecosystem Restoration (CAP Section 206)
	Beneficial Uses of Dredged Material (CAP Section 204)
	Project Modifications for Improvement of the Environment (CAP Section 1135)
	Legacy Resource Management Program
U.S Fish and Wildlife Service	Cooperative Conservation Initiative Conservation Challenge Cost Share
	Migratory Bird Management
	Coastal Program
	Cooperative Endangered Species Conservation Fund
	State and Tribal Wildlife Grants
	National Coastal Wetlands Conservation Grant Program
	North American Wetlands Conservation Act Grants Program
	Partners for Fish and Wildlife Program
	State Wildlife Grant Program (Non-Tribal)
U. S. Department of Agriculture	Integrated Resource Restoration
	Emergency Watershed Protection
	Regional Conservation Partnership Program
	Wetlands Reserve Program
U.S. Department of Interior	Natural Resource Damage Assessment and Restoration Program
U.S. Environmental Protection Agency	Pollution Control (Section 106)
	Nonpoint Source Implementation Grants (319 Program)
	Science to Achieve Results
	Wetlands Program Development Grants
	Source Reduction Assistance Grant Program
	Urban Waters Small Grants
	BEACH Grant Program
	Clean Water State Revolving Fund

Federal Funding Sources for Ocean and Coastal Ecosystem Conservation and Restoration (2014)

AGENCY	PROGRAM NAME	OVERVIEW (PURPOSE)	ELIGIBILITY	FY '14	AGENT CONTACT	WEBSITE
National Fish and Wildlife Foundation	Long Island Sound Futures Fund	The purpose of the Sound Futures Fund is to support projects that restore and protect the health and living resources of Long Island Sound.	Educational Institution, Local Government, Nonprofit Groups	$1 million	National Fish and Wildlife Foundation	www.nfwf.org
	Environmental Solutions for Communities	In 2012, Wells Fargo and the National Fish and Wildlife Foundation launched the Environmental Solutions for Communities initiative, designed to support projects that link economic development and community well-being to the stewardship and health of the environment. This 5-year initiative is supported through a $15 million contribution from Wells Fargo that will be used to leverage other public and private investments with an expected total impact of over $37.5 million. Funding priorities for this program include: (1) supporting sustainable agricultural practices and private lands stewardship; (2) conserving critical land and water resources and improving local water quality; (3) restoring and managing natural habitat, species and ecosystems that are important to community livelihoods; (4) facilitating investments in green infrastructure, renewable energy and energy efficiency; and (5) encouraging broad-based citizen participation in project implementation.	Community/Watershed Group, Cooperative Associations or Districts, Irrigation and Drainage Districts, Local Government, Nonprofit Groups, State/Territorial Agency, Tribal Agency	$3 million	National Fish and Wildlife Foundation	www.nfwf.org
	Sea Turtle Conservation Fund	The most competitive projects under the Spring 2014 cycle of the Sea Turtle Conservation Fund will directly implement projects under the following priority topic areas. Projects outside of these priority areas or that indirectly influence these topics are still eligible for funding provided they support the goals and objectives as outlined in the Sea Turtle Conservation Business Plan , the Caribbean Hawksbill Investment Strategy, or the Eastern Pacific Leatherback Investment Strategy.	All persons, organizations, and agencies (excluding U.S. Federal Government) working on projects to increase the populations of North Atlantic leatherbacks and loggerheads, Caribbean hawksbills, East Pacific leatherbacks, hawksbills and loggerheads. Applications for funding for land or easement acquisition, political advocacy, lobbying, or litigation will not be considered.	The majority of awards under this program will fall in the range of $50,000 to $150,000	National Fish and Wildlife Foundation	http://www.nfwf.org/seaturtles/Pages/2014-STCF-Spring-RFP.aspx
	River Herring Conservation Initiative	The National Fish and Wildlife Foundation is soliciting grant proposals for the following River Herring research and conservation strategies: 1. Monitoring: Establish run counts in rivers that lack data, but are considered priority waters for river herring in the Mid-Atlantic and the Southeast, according to the Atlantic States Marine Fisheries Commission and/or state managers. Proposals that will be most competitive will seek to standardize cost-effective survey methods so they can be applied to additional rivers across a larger (state-wide or regional) geography. 2. Habitat restoration: Restore access to, and better manage, key spawning and nursery habitats. Proposals that will be considered for this funding opportunity are those which seek to remove or modify fish passage barriers to allow free passage, monitor project outcomes by way of run counts, and open at least 15 river miles of habitat within the watershed of one of NFWF's priority rivers: o Androscoggin R. o St. Croix R. o Penobscot R. o Cocheco R. o Lamprey R. o Oyster R. o Monument R. o Gilbert-Stuart R. o Connecticut R. o Santee-Cooper R. 3. Promote Sustainable River Herring Fisheries: Proposals that will be considered for this funding opportunity are those which seek to develop sustainable fisheries plans for rivers where actual and/or expected run counts are at least one million fish. Activities may include, but aren't limited to: determining appropriate harvest rates, estimating reproduction rates in key spawning areas, estimating run counts, constructing counting facilities, and/or fishing plan improvement and/or implementation.	All persons, organizations, and agencies (excluding U.S. Federal Government) working on projects to reverse declines and create sustainable populations of river herring. Applications for funding for land or easement acquisition, political advocacy, lobbying, or litigation will not be considered.	The majority of awards under this program will fall in the range of $50,000 to $300,000.	National Fish and Wildlife Foundation	http://www.nfwf.org/Documents/river_herring_fall_2014_rfp.pdf
	Aquatic Ecosystem Restoration (CAP Section 206)[1]	Agricultural Management Assistance (AMA) provides cost share assistance to agricultural producers to voluntarily address issues such as water management, water quality, and erosion control by incorporating conservation into their farming operations. Producers may construct or improve water management structures or irrigation structures; plant trees for windbreaks or to improve water quality; and mitigate risk through production diversification or resource conservation practices, including soil erosion control, integrated pest management, or transition to organic farming.	Nonprofit Groups , Conservation District , Water and Wastewater Utilities , Local Government , State/Territorial Agency	$8 million	U.S. Army Corps of Engineers	http://www.lrl.usace.army.mil/

U.S Department of Defense (Army Corps of Engineers)	Beneficial Uses of Dredged Material (CAP Section 204)[1]	Work under this authority may carry out aquatic ecosystem restoration projects that will improve the quality of the environment, are in the public interest, and are cost-effective. There is no requirement that an existing Corps project be involved	Nonprofit Groups , Conservation District , Water and Wastewater Utilities , Local Government , State/Territorial Agency	$7 million	U.S. Army Corps of Engineers	http://www.lrl.usace.army.mil/
	Project Modifications for Improvement of the Environment (CAP Section 1135)[1]	Work under this authority provides for modifications in the structures and operations of water resources projects constructed by the Corps of Engineers to improve the quality of the environment. Additionally, the Corps may undertake restoration projects at locations where an existing Corps project has contributed to the degradation. The primary goal of these projects is ecosystem restoration with an emphasis on projects benefiting fish and wildlife. The project must be consistent with the authorized purposes of the project being modified, environmentally acceptable, and complete within itself	Nonprofit Groups , Conservation District , Water and Wastewater Utilities , Local Government , State/Territorial Agency	$10.5 million	U.S. Army Corps of Engineers	http://www.lrl.usace.army.mil/
U.S. Department of Agriculture	Emergency Watershed Protection[1]	The USDA Natural Resources Conservation Service's Emergency Watershed Protection (EWP) program helps protect lives and property threatened by natural disasters such as floods, hurricanes, tornadoes, droughts, and wildfires. EWP provides funding for such work as clearing debris from clogged waterways, restoring vegetation, and stabilizing river banks. The measures that are taken must be environmentally and economically sound and generally benefit more than one property owner. EWP also provides funds to purchase floodplain easements as an emergency measure. Floodplain easements restore, protect, maintain, and enhance the functions of the floodplain; conserve natural values including fish and wildlife habitat, water quality, flood water retention, ground water recharge, and open space; reduce long-term federal disaster assistance; and safeguard lives and property from floods, drought, and the products of erosion. EWP can provide up to 90 percent cost share in limited resource areas as determined by the US Census.	Private Landowner , Conservation District , Local Government , State/Territorial Agency , Tribal Agency	$41.2 million	USDA, Natural Resources Conservation Service, Financial Assistance Programs Division	www.nrcs.usda.gov/programs/ewp/
	Integrated Resource Resoration	The Integrated Resource Restoration Program aligns with USDA's vision for an integrated approach to maintaining or restoring the ecological integrity of terrestrial and aquatic ecosystems and watersheds necessary to manage National Forest System lands so that they are ecologically sustainable	Eligibility varies depending on specific program.	$757 million	Forest Service	http://www.fs.fed.us/biology/
	Regional Conservation Partnership Program	The Regional Conservation Partnership Program (RCPP) is a new farm bill program that gives NRCS the authority to enhance regional cooperation to implement and maintain conservation activities, thereby promoting the restoration and sustainable use of soil, water, wildlife, and related natural resources on regional or watershed scales. NRCS will co-invest in mobilizing creative and workable solutions to agricultural production and resource management challenges with eligible partners. NRCS provides assistance to producers through partnership agreements and through program contracts or easement agreements. RCPP combines the authorities of four former conservation programs – the Agricultural Water Enhancement Program, the Chesapeake Bay Watershed Program, the Cooperative Conservation Partnership Initiative and the Great Lakes Basin Program. Assistance is delivered in accordance with the rules of EQIP, CSP, ACEP and HFRP; and in designated Critical Conservation Areas the Watershed Operations and Flood Prevention Program.	Conservation District, Educational Institution, Farmers, Irrigation and Drainage Districts, Local Government, Nonprofit Groups, Private Landowner, Ranchers, State/Territorial Agency, Tribal Agency	$400 million	U.S. Department of Agriculture, Natural Resources Conservation Service	www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/farmbill/rcpp/
	Wetlands Reserve Program[1]	Through this voluntary program, the USDA Natural Resources Conservation Service (NRCS) provides landowners with financial incentives to restore and protect wetlands in exchange for retiring marginal agricultural land. To participate in the program landowners may sell a conservation easement or enter into a cost-share restoration agreement (landowners voluntarily limit future use of the land, but retain private ownership). Landowners and the NRCS jointly develop a plan for the restoration and maintenance of the wetland.	Business , Community/Watershed Group , Nonprofit Groups , Educational Institution , Private Landowner , Conservation District , Water and Wastewater Utilities , Local Government , State/Territorial Agency , Tribal Agency	$230.5 million	USDA Natural Resources Conservation Service Easment Programs Division	www.nrcs.usda.gov
	Coastal Services Center Cooperative Agreements[1]	The National Oceanic and Atmospheric Administration (NOAA) guides the conservation and management of coastal resources through a variety of mechanisms, including collaboration with the coastal resource management programs of the nation's states and territories. The mission of the NOAA Coastal Services Center (CSC) is to support the environmental, social, and economic well being of the coast by linking people, information, and technology. The vision of the NOAA Coastal Services Center is to be the most useful government organization to those who manage and care for our nation's coasts.	Business , Community/Watershed Group , Nonprofit Groups , Educational Institution , Conservation District , Water and Wastewater Utilities , Local Government , State/Territorial Agency , Tribal Agency	$3.21 million	U.S. Department of Commerce National Oceanic and Atmospheric Administration National Ocean Service, Coastal Services Center	www.csc.noaa.gov or www.csc.noaa.gov/funding

Department of Commerce (NOAA)	Coastal and Estuarine Land Conservation Program	The Coastal and Estuarine Land Conservation Program (CELCP) was authorized "for the purpose of protecting important coastal and estuarine areas that have significant conservation, recreation, ecological, historical, or aesthetic values, or that are threatened by conversion from their natural, undeveloped, or recreational state to other uses."	Coastal states and territories with Coastal Zone Management Programs or National Estuarine Research Reserves approved under the CZMA and National Estuarine Research Reserves in states which do not have an approved Coastal Zone Management Plan.	$3 million	NOAA	http://coastalmanagement.noaa.gov/land/celcp_fundingop.html
	Coastal Zone Management Administration Awards[1]	This program assists states in implementing and enhancing Coastal Zone Management (CZM) programs that have been approved by the Secretary of Commerce. Funds are available for projects in areas such as coastal wetlands management and protection, natural hazards management, public access improvements, reduction of marine debris, assessment of impacts of coastal growth and development, special area management planning, regional management issues, and demonstration projects with potential to improve coastal zone management.	Community/Watershed Group , Nonprofit Groups , State/Territorial Agency	$66 million	U.S. Department of Commerce National Oceanic and Atmospheric Administration National Ocean Service	http://coastalmanagement.noaa.gov/
	Community-based Habitat Restoration Project Grants (Coastal and Marine Habitat Restoration Project Grants)	NOAA's Restoration Center recognizes that healthy habitat is critical to recover and sustain fish populations. To that end, we are currently soliciting applications for restoration projects that use a habitat-based approach to foster species recovery and increase fish production. The funding opportunity will focus on projects that will aid in recovering listed species and rebuilding sustainable fish populations or their prey. We are soliciting coastal habitat restoration projects, or suites of projects, that will recover or sustain: •threatened and endangered species listed under the Endangered Species Act and their prey •fish stocks managed under the Magnuson-Stevens Fishery Conservation and Management Act and their prey	Eligible applicants are institutions of higher education, non-profits, commercial (for profit) organizations, U.S. territories, and state, local and Native American tribal governments. Applicants must be proposing work in geographic areas that benefit species with a nexus to NOAA management, further detailed in section III.C. Applications from federal agencies or employees of federal agencies will not be considered. Federal agencies are strongly encouraged to work with states, non-governmental organizations, municipal and county governments, and others that are eligible to apply.	$20 million	U.S. Department of Commerce National Oceanic and Atmospheric Administration Office of Habitat Conservation, HC-3	http://www.habitat.noaa.gov/funding/coastalrestoration.html
	Interjurisdictional Fisheries Act[2]	To gather information and conduct activities that support management of United States multijurisdictional fisheries. Resotration Activity: Development of fishery management plans, habitat monitoring and assessment, stock assessment.	States and territories	$2,567,000	NOAA, Office of Sustainable Fisheries	http://www.nmfs.noaa.gov/sfa/state_federal/State-Federal-WEB/ijact2.htm
	National Marine Sanctuary Program (Ernest F. Hollings Ocean Awareness Trust Fund)	To conserve, protect, and enhance the biodiversity, ecological integrity and cultural legacy of the nation's system of marine protected areas. Restoration Acitivy: Restoring and rebuilding marine habitats or ecosystems to their natural condition, monitoring and maintaining already healthy areas.	Educational institution, non-profit, commerical organization, or a tribal, state, or local government.	$125,000	NOAA, National Ocean Service	http://nmsfocean.org/files/Hollings_2013_RFP.pdf
	National Sea Grant College Program[1]	The National Sea Grant College Program encourages the wise use and stewardship of marine and coastal environmental resources through research, education, outreach and technology transfer. Sea Grant works in partnership between the nation's universities and the National Oceanic and Atmospheric Administration. There are thirty Sea Grant Programs in coastal and Great Lakes States. Sea Grant serves as a bridge between government, academia, industry, scientists, and private citizens to promote the sustainable use of Great Lakes and ocean waters for long-term economic growth. Funding opportunities are available through national- and state-level competitions. (Click on the program name and refer to the link listed under "primary Internet" for information on national-level competitions and links to all state Sea Grant Program offices)	Business , Nonprofit Groups , Educational Institution , Local Government , State/Territorial Agency , Tribal Agency	$68 million	U.S. Department of Commerce National Oceanic and Atmospheric Administration National Sea Grant College Program	www.seagrant.noaa.gov
	NOAA Open Rivers Initiative[1]	Through its Open Rivers Initiative, NOAA's Restoration Center provides technical expertise and financial assistance to remove dams and barriers and restore habitat for the many species that migrate between the ocean and the nation's freshwater rivers and streams. This initiative contributes to sustainability of U.S. fisheries, provides an economic boost for communities, and improves public safety.	Business , Nonprofit Groups , Educational Institution , Local Government , State/Territorial Agency , Tribal Agency	$6 million	U.S. Department of Commerce National Oceanic and Atmospheric Administration Office of Habitat Conservation	http://www.habitat.noaa.gov/funding/ori.html
U.S. Department of Interior	Natural Resource Damage Assessment and Restoration Program[2]	Restore natural resources injured as a result of oil spills or hazardous substance releases. Assess the damage and injuries and negotiate legal settlements or take other legal action against the responsible parties. Restoration Activity: Program restores injured trust resources (migratory birds, federally-listed endangered and threatened species, anadromous fish, marine mammals, Interiormanaged lands).	Restoration carried out by the Department and its Bureaus in partnership with cotrustees (NOAA, States, Tribes) and interested parties. All restoration of the injured resources is carried out pursuant to a publicly reviewed restoration plan.	$12,539,000	Department of Interior-wide program involving the UFWS, NPS, Bureau of Indian Affairs, Bureau of Land Management, Bureau of Reclamation, and the USGS	http://www.doi.gov/budget/appropriations/2014/upload/FY2014_NRDA_Greenbook.pdf

U.S. Fish and Wildlife Service	Coastal Program[1]	The U.S. Fish and Wildlife Service (FWS) Coastal Program works to conserve healthy coastal habitats on public or private land for the benefit of fish, wildlife, and people in 22 specific coastal areas. The program forms cooperative partnerships designed to (1) protect costal habitats by providing technical assistance for conservation easements and acquisitions; (2) restore coastal wetlands, uplands, and riparian areas; and (3) remove barriers to fish passage in coastal watersheds and estuaries. Program biologists provide restoration expertise and financial assistance to federal and state agencies, local and tribal governments, businesses, private landowners, and conservation organizations such as local land trusts and watershed councils.	Business , Community/Watershed Group , Nonprofit Groups , Educational Institution , Private Landowner , Conservation District , Local Government , State/Territorial Agency , Tribal Agency , Federal Agency	$6 million	U.S. Department of the Interior U.S. Fish and Wildlife Service Branch of Habitat Restoration, Division of Fish and Wildlife Management and Habitat Restoration	www.fws.gov/coastal/CoastalProgram/
	Cooperative Conservation Initiative Conservation Challenge Cost Share – FWS[2]	To strengthen citizen participation in conservation through partnership projects that restore the health of public lands, promote collaborative management, improve services to public land users and restore upland, riparian and wetland resources. Restoration Activity: Collaborative management projects that restore upland, riparian and wetland resources.	State and local agencies, non-profit organizations, communities, educational institutions, corporations, and individuals.	$3.75 million	U. S. Fish and Wildlife Service, National Wildlife Refuge System	http://www.doi.gov/initiatives/conservation.html
	Cooperative Endangered Species Conservation Fund[1]	The U.S. Fish and Wildlife Service's (USFWS) Cooperative Endangered Species Conservation Fund provides financial assistance to states and territories that have entered into cooperative agreements with the USFWS to assist in the development of programs for the conservation of endangered and threatened species. The assistance provided to the state or territorial wildlife agency can include animal, plant, and habitat surveys; research; planning; monitoring; habitat protection, restoration, management, and acquisition; and public education. The Fund is dispersed to the states and territories through four programs: Conservation Grants, Habitat Conservation Planning Assistance Grants, Habitat Conservation Plan Land Acquisition Grants, and Recovery Land Acquisition Grants. Although not directly eligible for these grants, third parties such as nonprofit organizations and local governments may work with their state or territorial wildlife agency to apply for these funds.	State/Territorial Agency. Only the lead state or territorial wildlife agency that has a current cooperative agreement with the U.S. Fish and Wildlife Service may apply directly for funding. The information listed here reflects the funding received by the states and territories. However, third parties may submit applications to their individual states or territories for funds in accordance with the state's work program.	$62 million	U.S. Fish and Wildlife Service Branch of State Grants Endangered Species Program	www.fws.gov/endangered/grants/section6/index.html
	Migratory Bird Management[2]	Responsible for supporting the habitat conservation work of partnerships formed under four major bird plans: North American Waterfowl Management Plan, the U.S. Shorebird Conservation Plan, Partners in Flight, and the North American Waterbird Conservation Plan. Restoration Activiity: Restore habitat where bird populations are declining, on-the-ground activities to conserve migratory bird and other wildlife habitats, support regionalscale biological planning, project implementation, and evaluation.	Federal, state and local governments, organizations, corporations, tribes, individuals.	$500,000	US Fish and Wildlife Service, Division of Bird Habitat Conservation	http://www.fws.gov/migratorybirds/
	National Coastal Wetlands Conservation Grant Program[1]	The U.S. Fish and Wildlife Service's National Coastal Wetlands Conservation Grant Program provides matching grants to states and territories for coastal wetland conservation projects. Funds may be used for acquiring land or conservation easements, restoration, enhancement, or management of coastal wetland ecosystems. Projects must provide for long-term conservation of coastal wetlands.	State/Territorial Agency	$16.6 million	Wildlife and Sport Fish Restoration Program U.S. Fish and Wildlife Service	www.fws.gov/coastal/CoastalGrants/
	North American Wetlands Conservation Act Grants Program[1]	The U.S. Fish and Wildlife Service's Division of Bird Habitat Conservation administers this matching grants program to carry out wetlands and associated uplands conservation projects in the United States, Canada, and Mexico. Grant requests must be matched by a partnership with nonfederal funds at a minimum 1:1 ratio. Conservation activities supported by the Act in the United States and Canada include habitat protection, restoration, and enhancement. Mexican partnerships may also develop training,educational, and management programs and conduct sustainable-use studies. Project proposals must meet certain biological criteria established under the Act. Visit the program web site for more information. (Click on the hyperlinked program name to see the listing for "Primary Internet".)	Business , Nonprofit Groups , Private Landowner , Local Government , State/Territorial Agency , Federal Agency. Those eligible for Act grants include public, private, for-profit, and nonprofit entities or individuals who have established a habitat conservation partnership.	$34,135 million	U.S. Department of the Interior U.S. Fish and Wildlife Service North American Waterfowl and Wetlands Office (NAWWO)	http://birdhabitat.fws.gov
	Partners for Fish and Wildlife Program[1]	The Partners for Fish and Wildlife Program provides technical and financial assistance to private landowners to restore fish and wildlife habitats on their lands. Since 1987, the program has partnered with more than 37,700 landowners to restore 765,400 acres of wetlands; over 1.9 million acres of grasslands and other upland habitats; and 6,560 miles of in-stream and streamside habitat. In addition, the program has reopened stream habitat for fish and other aquatic species by removing barriers to passage.	Business , Community/Watershed Group , Nonprofit Groups , Educational Institution , Private Landowner , Conservation District , Local Government , Tribal Agency	$20 million	U.S. Department of the Interior, U.S. Fish and Wildlife Service Branch of Habitat Restoration, Division of Fish and Wildlife Management and Habitat Restoration	http://www.fws.gov/partners

	State and Tribal Wildlife Grants[2]	To assist states and tribes to stabilize, restore, enhance and protect species and their habitat that are of concern. Restoration Activites: Restore degraded habitat, reintroduce native wildlife, develop partnerships with private landowners, and focus on species that are of most concern.	State and territorial fish and wildlife agencies and federally recognized Native American tribes. Third parties may benefit by working with states through grants or partnering opportunities.	$61.3 million	Fish and Wildlife Service	http://www.fws.gov/midwest/federalaid/programs/stw.htm
	State Wildlife Grant Program (Non-Tribal)[1]	The U.S. Fish and Wildlife Service's (USFWS) State Wildlife Grant (SWG) program provides grants to states, territories, and the District of Columbia for wildlife conservation.The SWG program provides funds to help develop and implement programs that benefit wildlife and their habitat, including species that are not hunted or fished. Although not directly eligible for these grants, third parties such as nonprofit organizations may benefit from these funds by working directly with their states to see if either grants or partnering opportunities are available.	Community/Watershed Group , Nonprofit Groups , Conservation District , Local Government , State/Territorial Agency .	$5.5 million	U.S. Fish and Wildlife Service	http://www.fws.gov
	BEACH Act Grant Program	The EPA's Beaches Environmental Assessment and Coastal Health (BEACH) Act Grant Program provides formula grants to eligible states, territories, and tribes to support microbiological testing and monitoring of coastal recreation waters, including the Great Lakes, that are adjacent to beaches or similar points of access used by the public. BEACH Act grants also provide support for development and implementation of programs to notify the public of the potential exposure to disease-causing microorganisms in coastal recreation waters.	Local Government, State/Territorial Agency, Tribal Agency	$1,105,000	U.S. Environmental Protection Agency	http://water.epa.gov/grants_funding/beachgrants/
	Clean Water State Revolving Fund[1]	EPA awards grants to states to capitalize their Clean Water State Revolving Funds (CWSRFs). The states, through the CWSRF, make loans for high-priority water quality activities. As loan recipients make payments back into the fund, money is available for new loans to be issued to other recipients. Eligible projects include point source, nonpoint source and estuary protection projects. Point source projects typically include building wastewater treatment facilities; combined sewer overflow and sanitary sewer overflow correction; urban stormwater control; and water quality aspects of landfill projects. Nonpoint source projects include agricultural, silviculture, rural, and some urban runoff control; on-site wastewater disposal systems (septic tanks); land conservation and riparian buffers; leaking underground storage tank remediation, etc. Estuary protection projects include all of the above point and nonpoint source projects, as well as habitat restoration and other unique estuary projects.	Business , Community/Watershed Group , Nonprofit Groups , Private Landowner , Conservation District , Water and Wastewater Utilities , Local Government , State/Territorial Agency , Tribal Agency	$1.1 billion	U.S. Environmental Protection Agency, Office of Wastewater Management	www.epa.gov/owm/cwfinance/cwsrf/index.htm
	National Estuary Program[2]	To restore the physical, chemical, and biological integrity of the Nation's estuaries and coastal waterways by protecting and enhancing water quality and living resources. Restoration Acitvity: Restoration is a key element of National Estuary Programs and is often enumerated in Comprehensive Conservation and Management Plans.	Interstate agencies, states, local governments, non-profit organizations in designated estuaries.	$16,800,000	Office of Water	http://www.epa.gov/owow/estuaries/
	Nonpoint Source Implementation Grants (319 Program)[1]	Through its 319 program, EPA provides formula grants to the states and tribes to implement nonpoint source projects and programs in accordance with section 319 of the Clean Water Act (CWA). Nonpoint source pollution reduction projects can be used to protect source water areas and the general quality of water resources in a watershed. Examples of previously funded projects include installation of best management practices (BMPs) for animal waste; design and implementation of BMP systems for stream, lake, and estuary watersheds; basinwide landowner education programs; and lake projects previously funded under the CWA section 314 Clean Lakes Program.	Business , Community/Watershed Group , Nonprofit Groups , Educational Institution , Private Landowner , Conservation District , Local Government , State/Territorial Agency , Tribal Agency , Federal Agency	$159.3 million	U.S. Environmental Protection Agency Office of Wetlands, Oceans and Watersheds Nonpoint Source Control Branch	www.epa.gov/owow/nps/contacts.html
	Pollution Control (Section 106)[2]	To establish and maintain adequate measures for the prevention and control of surface and ground water pollution from point and nonpoint sources. Restortaion Activity: Watershed protection approaches to restore and improve the quality of rivers, lakes, and streams through pollution reduction.	States, territories and tribes.	$4.1 million	Office of Water	http://www.epa.gov/owm/cwfinance/pollutioncontrol.htm

EPA	Science to Achieve Results[1]	The Science to Achieve Results (STAR) program is designed to improve the quality of science used in EPA's decision-making process. STAR funds are provided for research in the following ten areas: (1) Air Quality: Particulate matter coarse particles. (2) Human Health: Centers for Children's Environmental Health and Disease Prevention Research; Outcomes and accountability - development of novel public health indicators; Integration of biomarkers and physiologically based pharmaco-kinetic (PBPK) and -dynamic (PBPD) modeling; Examine how lifestyle and cultural practices of tribal populations affect risks from toxic substances in the environment. (3) Ecosystem Protection/Water Quality: Ecology and oceanography of hazardous algal blooms (EcoHAB); Ecosystem services. (4) Global Change: Nonlinear responses to global change in linked aquatic and terrestrial ecosystems; Implications of tropospheric air pollution for surface UV exposures; Implications of global change for air quality; Ecological impacts of climate change and land use on the introduction of invasive species. (5) Economic, Social and Behavioral Science: Valuation for environmental policy; Market mechanisms and incentives for environmental management; Methodological advances in benefit transfer methods. (6) Drinking Water: New technologies for quantitative identification of pathogens. (7) Endocrine Disruptors/Biotechnology/Computational Toxicology: Hormones in discharges from concentrated animal feeding operations; Development of predictive toxicogenomic approaches; Biotechnology: potential allergenicity of genetically engineered foods. (8) Nanotechnology: Environmental and human health effects of manufactured nanomaterials. (9) Pollution Prevention/Sustainability: Collaborative Science and Technology Network for Sustainability. (10) Exploratory: Modeling Uncertainity in Decision-Making.	Business , Community/Watershed Group , Nonprofit Groups , Educational Institution , Local Government , State/Territorial Agency	$61.1 million	U.S. Environmental Protection Agency National Center for Environmental Research and Quality Assurance	http://www.epa.gov/ncer/
	Source Reduction Assistance Grant Program	The Source Reduction Assistance Grant Program provides grants and cooperative agreements to fund pollution prevention (source reduction and resource conservation) activities. Specifically, the Agency is interested in funding projects that help reduce hazardous substances, pollutants, or contaminants entering waste streams or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, disposal or energy recovery activities.	Cooperative Associations or Districts, Educational Institution, Indian Tribes, Irrigation and Drainage Districts, Local Government, Local Organizations, Nonprofit Groups, Schools and Governments, State/Territorial Agency, Tribal Agency, Water and Wastewater Utilities	$1 million	U.S. Environmental Protection Agency	www.epa.gov/p2/pubs/grants/index.htm
	Urban Waters Small Grants	waterways. EPA's funding priority is to achieve the goals and commitments established in the Agency's Urban Waters Strategic Framework (www2.epa.gov/urbanwaters/urban-waters-strategic-framework). This program has an emphasis on engaging communities with environmental justice concerns. The objective of the Urban Waters Small Grants is to fund projects that will foster a comprehensive understanding of local urban water issues, identify and address these issues at the local level, and educate and empower the community. In particular, the Urban Waters Small Grants seek to help restore and protect urban water quality and revitalize adjacent neighborhoods by engaging communities in activities that increase their connection to, understanding of, and stewardship of local urban waterways.	Educational Institution, Indian Tribes, Local Government, Nonprofit Groups, Schools and Governments, State/Territorial Agency, Tribal Agency	$2.08 million	Environmental Protection Agency	http://www2.epa.gov/urbanwaters/urban-waters-small-grants
	Wetlands Program Development Grants[1]	The EPA's Wetland Program Development Grants are intended to encourage comprehensive wetlands program development by promoting the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution. Projects build the capacity of states, tribes, and local governments to effectively protect wetland and riparian resources. Projects funded under this program support the initial development of a wetlands protection, restoration or management program or support enhancement/refinement of an existing program.	Nonprofit Groups , Local Government , State/Territorial Agency , Tribal Agency	$14.66 million	U.S. Environmental Protection Agency Office of Wetlands, Oceans and Watersheds Wetlands Division	www.epa.gov/owow/wetlands/grantguidelines/

U. S. Department of Defense	Legacy Resource Management Program	to the Department of Defense (DoD) efforts to preserve our natural and cultural heritage. The program assists DoD in protecting and enhancing resources while supporting military readiness. A Legacy project may involve regional ecosystem management initiatives, habitat preservation efforts, archaeological investigations, invasive species control, Native American consultations, and/or monitoring and predicting migratory patterns of birds and animals. Three principles guide the Legacy program: stewardship, leadership, and partnership. Stewardship initiatives assist DoD in safeguarding its irreplaceable resources for future generations. By embracing a leadership role as part of the program, the Department serves as a model for respectful use of natural and cultural resources. Through partnerships, the program strives to access the knowledge and talents of individuals outside of DoD. In order to support these principles, the Legacy Program emphasizes five areas: 1. Legacy incorporates an ecosystem approach that assists DoD in maintaining biological diversity, and the sustainable use of land and water resources for mission and other uses. 2. The program also implements an interdisciplinary approach to resource stewardship that takes advantage of the similarities between DoD's natural and cultural resource plans. Often, the same person is responsible for managing both natural and cultural resource plans on an installation. Legacy strives to take advantage of this by sharing management methodologies and techniques across natural and cultural resource initiatives. 3.Legacy promotes understanding and appreciation for natural and cultural resources by encouraging greater awareness and involvement by both the military and the public. 4. Additionally, the program takes advantage of similar ecosystems by applying resource management initiatives in broad regional areas. Legacy supports projects such as the Sonoran Ecosystem Management Initiative, the Gulf Coast Plain Ecosystem Partnership, the Great Basin Initiative, the	Any individual, organization (public or private), institution, or agency can apply for Legacy Program funding as long as the activities and deliverables meet the following criteria, as mandated by the Section 8102 of P. L. 101-511 (Defense Appropriations Act) and Section 332(a)(1) of P. L. 104-201, 10 U.S.C. 2694, Conservation and Cultural Activities. Each proposal must: 1. have regional or DoD-wide significance and involve more than one Military Service; 2. be necessary to meet legal requirements or to support military operations; 3. be more effectively managed at the DoD level; and 4. not be an executive agent responsibility.1 (1 An executive agent is a Military Department with designated responsibility over an area. For example, the Navy is the executive agent for sonar issues. Therefore, any Legacy proposals directly relating to sonar are not eligible for funding.)		Office of the Deputy Under Secretary of Defense for Installations & Environment	https://www.dodlegacy.org/legacy/index.aspx

Sources:

[1]Catalog of Federal Funding Sources for Watershed Protection, accessed March 2009, http://cfpub.epa.gov/fedfund/index.cfm

[2]Restore America's Estuaries, Funding for Habitat Restoration Projects: A Citizen's Guide (Year 2008 - President's Budget), http://www.restorationmarketplace.com/assets/documents/Federal_guide_Query_Print_2008_Pres_Budget.pdf

Document 5.4E
Project Criteria

Project Criteria

The subcommittee suggests the RPB consider the following criteria to endorse restoration and conservation priority projects that relate to the Healthy Ocean and Coastal Ecosystem goal:

- Endorsed by a RPB member organization.
- Improve Ocean Health.
- Have a public or NGO proponent identified.
- Incorporate climate change considerations.
- Must provide for long-term or permanent benefits for fish and wildlife habitat.
- Uncertainties for major components of proposed projects clearly identified (e.g. permitting issues, public controversy, real estate conveyances, flood plain impacts, etc.)
- Incorporate adaptive management, i.e. process/funding in place, by monitoring the extent that project objectives/expected outcomes are being achieved and mechanisms available to adjust proposed practices/methodology that need to be altered to meet objectives/outcomes.
- Must be as maintenance free as possible (post-construction).
- If a project is for a living shoreline, it must provide protection or erosion control for, or otherwise compliment, adjacent habitat.