Agenda • October 25, 2012 • Portsmouth, NH

Directions to meeting location: http://www.cityofportsmouth.com/library/about-dir.htm

9:15 AM	**Arrive & Networking**
9:30 AM	**Welcome & Introductions** *Bruce Carlisle, MA and Bob LaBelle, DOI-BOEM*
9:45 AM	**NROC Update** The Chair will provide an update on action items and subsequent progress made since the spring NROC Retreat and Council meeting. *Meeting Materials – revised Compass Statements, TOR, and Who-What-How documents (p. 7)*
9:55 AM	**Partner Updates** The Chair will facilitate the review of updates submitted by NROC partners and others. *Please review items before the meeting.* Content: ▪ **Partner Update:** NERACOOS ▪ **Partner Update:** Sea Grant Consortium ▪ **Partner Update:** Gulf of Maine Council ▪ **Update:** New England Federal Partners ▪ **Update:** North Atlantic Landscape Conservation Cooperative ▪ **Audience updates:** Meeting attendees provide updates
10:30 AM	**Regional Planning Body Update** Betsy Nicholson and Katie Lund, of NOAA-CSC, will provide an update covering the RPB roster, draft agenda, and discussion about NROC's role in the upcoming meeting.
11:10 AM	**Logo and Web Site Review** Peter Taylor, of Waterview Consulting, will give a preview and demonstration of the new draft NROC web site.
11:30 PM	**Lunch** – local Portsmouth eateries

1:00 PM	**Work Plan Discussion by Committee**
	Each committee will give an overview of their work plan activities and will highlight a recent project success and its next steps, followed by discussion.
	
	▪ **Coastal Hazards Resilience**
	  ○ Overview of 2013-2014 Work Plan
	  ○ Highlighted Project - New England Municipal Resilience Grants
	  ○ Discussion
	
	▪ **Ocean and Coastal Ecosystem Health**
	  ○ Overview of 2013-2014 Work Plan
	  ○ Highlighted Project – Climate Change Sentinel Monitoring Strategy
	  ○ Discussion
	
	▪ **Ocean Planning**
	  ○ Overview of 2013-2014 Work Plan
	  ○ Project Updates
	  ○ Discussion
	
	Meeting Materials – Draft 2013-2014 Committee Work Plans (p. 16)

3:30 PM	**Closing Business** ▪ Discuss winter meeting dates and topics
3:45 PM	**Adjourn**

NROC Update

Since our last Council meeting and the retreat, NROC has made significant progress on action items and priorities.

Council Operations and Communications:

- With efforts from a working group and EC input and feedback, NROC has revised and updated important materials, including our Terms of Reference and two communication pieces—one we are calling NROC Compass Statements which contains our vision, mission statement and goals, and the other a NROC Who-What-How summary which provides more detail and context about the organization, what it does and how we operate. *(See attachments)*
- We have modified our mission statement and developed an organizational "vision", and our stated goals are now tied directly to the goal of each of our three standing committees.
- NROC has also been working closely with a contractor to revamp the NROC logo and web site. This work is close to completion. A recommended logo will be presented at the Council meeting, along with a preview and demonstration of the new draft web site.
- In terms of internal communications, as requested at the last Council meeting, our internal Basecamp site is now being utilized as the "go-to" place for information, documents, and calendar items. The notes from the biweekly EC calls are being summarized and posted on Basecamp.
- Another take away point from the retreat was consensus around the suggestion of taking time at Council meetings to focus on an issue or topic and dig deeper as a Council to discuss perspectives and share ideas. We welcome Council and partner suggestions for topics for our Winter meeting, and we have time at the end of the day for folks to share ideas.

Work Plan & Projects/Activities:

- Committee co-chairs, with input from committee members, have drafted new 2-year work plans. These plans have been reviewed by the EC and are currently out to NROC members and partners for review. (*See attachments*)
- The agenda has time set aside for updates from Committees on work plan development as well as progress on specific projects and activities, but we do want to highlight two notable items:
    - The Northeast LiDAR and Sea Level Rise Impacts Workshop was held in July. 75 federal, state and local data managers and users participated in a two day workshop to discuss use of high resolution LiDAR in sea level rise and inundation mapping efforts. At the workshop, invited participants were presented with the latest sea level rise projections, status of LiDAR available for the region, inundation mapping techniques, and details of three municipal projects. Participants also joined in discussion on additional LiDAR data needs and data sharing, community risk mapping projects, and habitat change mapping projects. Hands-on training sessions also provided participants with the opportunity to try new software and tools.
    - NROC states, through our coastal programs, have been working on a NOAA grant project (Project of Special Merit) which is focused on increasing coordination and collaboration around marine habitat classification and characterization. The project steering committee has been meeting and has developed a scope of work developed with timeline and outcomes. Invitations have been sent to a working group which will kick off its first meeting November 29th. The steering committee has asked Matt Nixon from the Maine coastal program to serve as chair of the working group. In addition, through NROC, a related RFP was released and a contractor hired to coordinate with the working group and NROC, inventory and review existing habitat characterization and classification methodologies, develop and apply methods for comparing marine habitat classification and models, and present results and recommendations at a NROC workshop currently planned for next May.

Partner Updates

NERACOOS:

Climatology Data Product
The NERACOOS products team is continuing its development of meteorological and oceanographic climatology data products from buoy data that has been collected over the past decade in the Gulf of Maine and Long Island Sound. The products team is currently in the process of testing the prototype product with key users and expects to launch the product in the first quarter of 2013. For more information contact Tom Shyka (tom@neracoos.org).

Monitoring Ocean Acidification
NERACOOS received funding through the NOAA Ocean Acidification and IOOS programs to help monitor ocean acidification in Northeast ocean waters. This funding is going to the University of New Hampshire's (UNH) Ocean Process Analysis Laboratory (OPAL) who are using it to continue the deployment of a buoy with specialized ocean acidification sensors. Information from this buoy (Appledore Island CO2) and other ocean observing stations in the region can be found at http://www.neracoos.org/realtime_map. Information about NOAA's ocean acidification program can be found at:
http://www.pmel.noaa.gov/co2/story/Ocean+Acidification

New England Ocean Literacy Summit
NERACOOS is helping to sponsor and support the New England Ocean Science Education Collaborative (NEOSEC) Ocean Literacy Summit, which will be held from November 1–2 at the University of Rhode Island. Dr. Kathryn Sullivan will speak at a kick-off event Thursday evening, November 1, in association with a *Gallery of Ocean Discoveries* and reception, and Dr. Robert Ballard will be our keynote speaker on November 2. Ocean scientists and educators will team up to provide fifteen concurrent sessions expanding on multiple aspects of Ocean Literacy Principle 7, "The ocean is largely unexplored." To learn more and to register, go to http://www.neosec.org/ or contact Cassie Stymiest (cassie@neracoos.org).

Coastal Hazards Resiliency
The NERACOOS Northeast Coastal Ocean Forecast System (NeCOFS) team is currently working with the NWS, the State of NH, and the Town of Hampton, NH to develop a coastal inundation forecast system for the Hamptons area of NH. The NeCOFS team has developed an inundation forecast system for Scituate, MA coastal area. The Scituate and other ocean forecasts are available at:
http://neracoos.org/datatools/forecast/oceanforecasts

NERACOOS Strategic Planning and Implementation team
NERACOOS has re-populated its Strategic Planning and Implementation (SPI) team and held its first meeting with the new team in September. During this meeting various strategic planning areas were discussed including gaining efficiencies in shared functional areas, future equipment needs, funding opportunities and working groups. The SPI team is in the process of developing a work plan to move some of these efforts forward. The NERACOOS Ocean and Coastal Ecosystem Health and Coastal Hazards work groups have merged with similar work groups of NROC. If you are interested in learning more about the SPI team, please contact Dr. Hanson (akhanson@gso.uri.edu).

Northeast Coastal and Ocean Data Partnership
NERACOOS recently hosted a data management workshop with Northeast Coastal and Ocean Data Partnership (NeCODP) in conjunction with the NERACOOS SPI team meeting. The Partnership reviewed and discussed its role and scope and agreed to focus its efforts on being an information sharing and training forum for regional data managers, providers and integrators. The Partnership agreed to have NERACOOS host the partnership and provide logistical support. The data management workshop also included presentations on IOOS recommended data management approaches and standards as well as presentations from several other data management efforts in the Northeast. The presentations will be made available on the NERACOOS website. If you would like more information about the workshop or the Partnership please contact Tom Shyka (tom@neracoos.org).

National Ocean Observing Summit
The Interagency Ocean Observation Committee (IOOC) is sponsoring the upcoming Integrated Ocean Observing System (IOOS) Summit being held at the Hyatt Dulles November 13-16, 2012. The Summit is titled "A New Decade for a Sustained and Integrated Ocean Observing System." NERACOOS will have several representatives participating in the summit. For more information about NERACOOS participation please contact Ru Morrison (ru@neracoos.org) and for additional information about the summit please visit http://www.iooc.us/summit/ioos-summit/.

NERACOOS Annual Meeting
NERACOOS will be holding its annual meeting on December 5, 2012 at the Seacoast Science Center in Rye, NH. The theme of the meeting is "the value of ocean observing." The meeting will feature a presentation on the economic value of ocean observing and a panel discussion of users of ocean observing information. If you are interested in learning more about the meeting please contact Ru Morrison (ru.morrison@neracoos.org).

Northeast Sea Grant Consortium (NESGC):

Barry Costa-Pierce, Rhode Island Sea Grant and 2012 Chair of the Consortium, took a new position at University of New England. Alan Desbonnet, RI Sea Grant Interim Director, is serving out the remaining period as Chair of the NESGC.
The first round of NESGC funded research in the Gulf of Maine (2 projects) was extended due to unanticipated funding delays, and will wrap up towards the end of this year and outcomes expected early next year.

Four ongoing regional projects (decision support for MSP; governance role of local authorities in MSP; climate change adaptation and resilience; and social and economic impacts of fisheries catch share programs) are in year 1 of work and an annual update will be available late winter/early spring of 2013.

NESGC Regional RFP is slated to be released in very early January 2013. The focus of the call has not yet been determined but several areas have been discussed:

- Continuation / expansion of social science research similar to that undertaken during the previous call, but with new partners that might allow for expansion in either number or size (of individual) projects.

- Utilization of observing systems data for analysis of spatial and temporal change in chemical and physical water parameters along the Northeast Atlantic/New England region.

NESGC will convene its Advisory Board meeting on November 15th.

Gulf of Maine Council:

1. 2012–2017 Action Plan. The Council is currently working on the implementation of the priority goals of the Action Plan to pursue ongoing efforts to maintain and enhance environmental quality in the Gulf of Maine/Bay of Fundy and its watersheds to allow for sustainable resource use. The Action Plan has three priority goals: (1) Restored and Conserved Habitats, (2) Environmental and Human Health, and (3) Sustainable Communities. Initiatives are currently underway to pursue the activities and fulfill these goals, including:
    - Development of work plans by the committees describing how they plan to implement the activities they have been tasked with under the Action Plan goals. Work is ongoing to seek funding for the various tasks under the Plan.
    - Review of the current committee organization structure. An Ad Hoc committee has been set up to review the status of each committee and its relevance and preparedness to implement activities in the Action Plan. The Ad Hoc Committee is coordinating closely with Councilors who

have volunteered to provide advice on specific Action Plan goals. Based on the findings of the Ad Hoc committee, the Working Group will address the various issues and concerns, and present to Council a “plan of action” for moving forward with the implementation of the Action Plan.

2. In August 2012 the GOMC and NOAA announced that seven projects in the Gulf of Maine watershed have received support from the GOMC-NOAA Community-Based Habitat Restoration Partnership. Projects in Maine, Massachusetts and New Hampshire will receive technical assistance and grant funding totaling $336,800. Projects receiving grants from the GOMC-NOAA Partnership seek to reverse impacts to salt marshes, rivers, streams, shellfish beds, eelgrass, and other key features of ecological, economic and cultural importance in the Gulf of Maine ecosystem.

3. Implementing coastal infrastructure vulnerability assessments: The Council is working with members of the NROC Hazards Committee to develop a funding proposal to NOAA that will: 1) develop a guidebook for municipal and regional officials on how to implement climate change and extreme weather infrastructure vulnerability and risk assessments; 2) engage 2 to 3 coastal communities to serve as pilot for the implementation of the guidebook; 3) create a web page for the StormSmart Coasts to disseminate this information; and 4) roll-out the product within the region and to other regions. The proposal is due in mid-November.

4. State of the Gulf of Maine series: Work continues on the development, publication and rollout of State of the Gulf theme papers. The most recent on Eutrophication can be found at http://www.gulfofmaine.org/2/resources/state-of-the-gulf-of-maine-report/

5. The GOMC is currently preparing to announce Request for Qualifications for its Core Services: Council Coordination, Fund Development, Information Technology, and the Gulf of Maine Times. With the advent of a new 5-year Action Plan as well as increasing funding challenges, the Council is revising its priorities. This serves as an opportune time to revise the scope of these services and make sure that they align with the goals and needs of the Council. RFQs for Council Coordination and Fund Development have been drafted and will be announced in late October/early November for a contract start day of January 1, 2013. RFQs for IT and the GOM Times will be announced in April for a start date of July 1, 2013.

6. Earlier this year the Gulf of Maine Association (officially the Association of United States Delegates to the Gulf of Maine Council on the Marine Environment) was formed. This replaces the US Gulf of Maine Association and the Board includes members from the Canadian jurisdictions. The Association has a four member Executive Committee with representatives from the US and Canada.

ROI on participation in regional organizations: The Working Group is exploring methodologies that would describe the return on investment (ROI) of participating in the activities of regional organizations, who the audiences are for this information and how it would be used. Examples of questions include: Is the Gulf of Maine any better as a result of the activities of the Council? What is the value of Council products and services? What are economic benefits to member agencies from participation in GOMC? What is the economic effect of the Council¹s habitat restoration grant program or the Gulfwatch monitoring program?

New England Federal Partners:

Fall Meeting, September 5-6, 2012

New England Federal Partners (NEFP) was convened to support and solidify federal partnerships to support the needs of the states, Tribes, and communities in the New England Region by providing a forum for interagency communication, coordination, cooperation, and collaboration. The Partners work together to effectively address complex large-scale issues that cut across the agencies' missions. NEFP currently has two primary focus areas – climate adaptation and mitigation, and ocean planning. The Climate Workgroup (adaptation and mitigation combined), the Ocean Planning Workgroup and the full NEFP met September 5-6, 2012to continue working towards stronger interagency partnerships in these focus areas.

The Climate Change Workgroup met over two half-days, focusing on two primary areas:

- Refining the group's strategic purpose, objectives, and near-term activities (decisional discussion), and
- Information sharing about existing efforts and regional climate networks (informational speakers).

  Several themes emerged from these discussions, one being the recognition of the importance of consistent and clear communication between federal partners, and another being the need for coordinating our communication and interpretation of climate science and services to our various audiences. Several efforts are underway to enhance the coordination and collaboration between members of this group including the development of an external regional website for data, products, and the regional network, and the construction of an internal collaboration site for the group's use.

The Ocean Planning Workgroup met for a half day prior to the full NEFP meeting. The group started their day with a national update on the implementation plan for the National Ocean Policy, imminent release of the "CSMP Handbook," a check-in on progress in other regions, and additional news from the National Ocean Council. The group then discussed the Northeast Regional Planning Body (RPB) status of membership and began to discuss resource needs and planning for the first RBP meeting (capacity assessment, charter, goal setting, and objectives for first meeting). The Coast Guard gave a presentation on "in-reach" within its agency to increase buy-in and awareness of ocean planning efforts in the region. Lastly, John Weber (Northeast Regional Ocean Council (NROC) Ocean Planning Director) gave an update on portfolio of NROC ocean planning projects, including commercial fishing mapping, marine industry engagement, recreational boating survey, Northeast Data Portal, and developing projects such as habitat classification, natural resource conservation and science and communications. The group will re-assemble prior to the Nov 19-20 RPB meeting.

The full **NEFP meeting** was focused on sharing opportunities to collaborate as well as a discussion of mechanisms for exploring how federal partnerships can be leveraged in various projects and situations. Focusing on the process of collaboration, the federal partners are developing a better understanding of how interagency work can be forged in practice and how to reach that point more efficiently and effectively in the future. Some planning applications and project areas were identified for the Partners to implement this collaboration. Lastly, NEFP has begun the annual process of rotating leadership to another partnering agency and designating a new chair. The next NEFP meeting will be in winter of 2013.

NROC Compass Statements

Vision: Healthy, vibrant and thriving ocean resources and Northeast coastal communities.

Mission:
Provide a voluntary forum for New England states and federal partners to coordinate and collaborate on regional approaches to support balanced uses and conservation of the Northeast region's ocean and coastal resources.

Scope:

- Identify local, state, and regional ecosystem-based environmental issues;
- Seek new, and encourage existing, ocean and coastal initiatives and partnerships;
- Facilitate information exchanges, including reports, discussions, initiatives and plans which may be developed or considered; and
- Foster regional communication, interaction and cooperation on marine and oceans-related research and development, education, exploration and observation.

Goals:
Build hazards resilience to impacts of coastal flooding, storms, and climate change through region-wide dissemination of tools, case studies, and data and fostering collaborative actions.

Enhance region-wide coordination and collaborative actions on shared ocean and coastal ecosystem health including those affecting water quality, habitats, and living resources and their derived social and economic benefits.

Assist in the development of a regional ocean plan to support ecosystem-based management of the Northeast's marine environment and its human uses by working collaboratively with federal, state and tribal government, the NE Fisheries Management Council, and stakeholders.

Northeast Regional Ocean Council

Terms of Reference

The Northeast Regional Ocean Council (NROC) is a regional ocean partnership that provides a forum for the New England states and federal agencies to address ocean and coastal issues that benefit from a regional response. NROC was formed to augment current state, multi-state, and federal governance and institutional mechanisms to improve management of ocean and coastal resources. NROC encourages and values partnerships and collaboration with other regional organizations and groups to advance shared interests.

Mission

Provide a voluntary forum for New England states and federal partners to coordinate and collaborate on regional approaches to support balanced uses and conservation of the Northeast region's ocean and coastal resources.

Scope

NROC was formed in 2005 by the New England Governors and works to:

- Identify and address local, state, and regional ecosystem-based environmental issues;
- Seek new, and encourage existing, ocean and coastal initiatives and partnerships;
- Facilitate information exchanges, including reports, discussions, initiatives and plans which may be developed or considered; and
- Foster regional communication, interaction and cooperation on marine and oceans-related research and development, education, exploration and observation.

Structure

Council Membership

Each NROC member state – Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut - may appoint up to two senior level representatives. Governors' appointees may designate an alternate to serve on the Council in their absence. (Alternates will be consistent from meeting to meeting.) To maintain continuity, council members shall remain appointed until removed by a Governor through a reappointment.

Federal agencies are equal members of the Council and are represented by the Department of Commerce through the National Oceanic and Atmospheric Administration (NOAA); the Department of the Interior through the US Geological Survey, Bureau of Ocean Energy Management, US Fish and Wildlife Service, and National Parks Service; the Department of Agriculture through the USDA Natural Resources Conservation Service; the Department of Defense through the US Army Corps of Engineers; the Department of Homeland Security through the US Coast Guard; and the U.S. Environmental Protection Agency.

Council Co-Chairs

One state representative and one federal representative will co-chair NROC for an agreed upon period (i.e. 12 or 18 months). These individuals will organize agendas, run meetings, track progress on the biannual work plan, and act as principal points of contact and spokesmen for the Council. In addition, they may present an annual report to the NE Governors' Conference.

State chairs will rotate in the following order based on geography from North to South: ME, NH, MA, RI, CT. Federal chairs will rotate by federal line department.

Executive Committee

The Executive Committee will consist of the current NROC co-chairs, as well as the previous and upcoming sets of co-chairs. This will amount to three state and three federal representatives. Examples of Executive Committee duties include attending to administrative matters between meetings and developing recommendations to the Council on projects and partnerships.

Committees and Working Groups

NROC may form committees that reflect and work on Council priority issues and goals. These standing committees will develop and implement specific two-year work plans. They will inform and recommend to the Council how best to approach regional problems and coordinate activities.

In addition, NROC may convene working groups to take on specific projects and develop recommendations for approval by the Council. Working groups will form as needed and disband upon completion of a project.

Each committee and working group will have representatives from pertinent state and federal agencies and may include representatives from NGOs, academia and industry. Each committee and working group shall elect a representative to call and chair meetings.

Relationships

NROC benefits from, and values, having close and collaborative relationships with other regional organizations. NROC has Memoranda of Understanding with the Northeast Regional Association of Coastal and Ocean Observing Systems (NERACOOS), the Regional Sea Grant Consortium, and the Gulf of Maine Council on the Marine Environment, and will participate in the activities of these organizations.

NROC will communicate directly with the New England Governors and the President's National Ocean Council and its Steering Committee and Governance Coordinating Committee to make clear the priorities and needs for the Northeast. In addition, NROC will work closely and communicate with the Northeast's Regional Planning Body for ocean planning.

Operations

Meetings

NROC will meet three to four times a year. Meetings will take place in a central location to facilitate participation. The Executive Committee will hold regular meetings, every 2-3 weeks, via conference call. Committees and working groups will meet as necessary.

Decisions

NROC will develop recommendations on a consensus basis. In the unlikely event that consensus cannot be achieved, a vote will be held and the concerns of abstaining or opposing members will be made known to appropriate agencies. In a voting situation, there shall be equal representation between state and federal members. Each member state and federal agency, regardless of the number of appointees, will have only one vote on the Council.

Activities

NROC shall execute strategies and activities identified in a biannual work plan. NROC will produce an annual summary of activities and accomplishments.

Support

NROC will seek funds as appropriate to support the implementation of its goals. In addition, NROC will seek assistance with staffing and preparing meetings, recording action items and tasks, and other administrative tasks as needed.

Communications

To enhance internal communications and file and work sharing, NROC will maintain a Council share site (e.g., Basecamp). This site will be limited to member state and federal agency Council and Committee representatives only, and share site content and access should be treated as internal and confidential. NROC will also maintain an external public website for broader communication purposes.

Northeast Regional Ocean Council

Who we are

The Northeast Regional Ocean Council (NROC) is a state and federal partnership that facilitates the New England states, federal agencies, regional organizations, and other interested regional groups in addressing ocean and coastal issues that benefit from a regional response. It is NROC's mission to provide a voluntary forum for New England states and federal partners to coordinate and collaborate on regional approaches to support balanced uses and conservation of the Northeast region's ocean and coastal resources.

NROC was formed in 2005 by the Governors of the New England states—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut—to serve as a forum for the development of goals and priorities and address regional coastal and ocean management challenges with creative solutions. Recognizing the importance of the national role in these regional issues, NROC was expanded to include federal agencies as members of the Council. In addition to the members listed below, NROC works with bordering states and countries as needed.

NROC is currently comprised of the following member state and federal agencies:

State Council Members:

Maine Coastal Program
Maine Department of Marine Resources
New Hampshire Coastal Program
Massachusetts Office of Coastal Zone Management
Rhode Island Coastal Resources Management Council
Rhode Island Department of Environmental Management
Connecticut Department of Environmental Protection

Federal Council Members:

US Geological Survey
Bureau of Ocean Energy Management
US Fish and Wildlife Service
National Parks Service
US Environmental Protection Region One
National Ocean and Atmospheric Administration
USDA Natural Resources Conservation Service
US Army Corps of Engineers
US Coast Guard First District

What we do

NROC facilitates the development of coordinated and collaborative responses to coastal and ocean management issues that benefit from regional solutions. This results in more effective use of resources and potentially happens faster than any state or federal agency could address.

NROC was formed to augment the functions and activities of existing entities in the region and build upon current state, multi-state, and federal governance and institutional mechanisms to improve management of ocean and coastal resources by:

- Identifying local, state, and regional ecosystem-based environmental issues;
- Seeking new, and encouraging existing, ocean and coastal initiatives and partnerships;
- Facilitating information exchanges, including reports, discussions, initiatives and plans which may be developed or considered; and
- Fostering regional communication, interaction and cooperation on marine and oceans-related research and development, education, exploration and observation.

NROC's current efforts are focused on three issue areas:
- Ocean and Coastal Ecosystem Health
- Coastal Hazards Resilience
- Ocean Planning

These issue areas form the basis for NROC's standing committees, which define and implement specific work plans. It is important to note that NROC has identified climate change as a priority and recognizes it as a major driver that is not limited to a single issue area, and thus strives to include and integrate climate change issues across all work plans.

Since NROC's inception, the region has made important progress in advancing coordinated and collaborative actions and responses to priority coastal and ocean management issues. While the benchmarks of progress are many, a few recent examples include:
- Creation of the Northeast Ocean Data Portal—a decision support and information system for managers, planners, scientists and project proponents.
- Building capacity of New England communities through training and small grants program designed to improve the region's resilience and response to impacts of coastal hazards and climate change.
- Convening of a Northeast Workshop on Regional Ocean Planning, where representatives from state, federal and tribal government, industry, academia, non-profit and private organizations, and others, received overviews of existing, related work in New England and shared perspectives on ways to improve the understanding and management of ocean resources and uses.
- Convening of an Ecosystem Health Indicators Conference that brought together policy-makers, managers, and scientists to strengthen collaboration and better understand the programs and specific indicators that are best suited to answer specific management questions and track the overall health and trends of socioeconomic and ecological systems in the region.
- Enhancement of regional collaboration on marine habitat mapping, characterization, and classification.

Regional ocean partnerships like NROC are recognized in reports issued by the US Commission on Ocean Policy and the Pew Oceans Commission as key mechanisms to enable coordinated, ecosystem-based management approaches to identify regional goals and priorities, improve responses to regional needs, and develop and disseminate regionally significant research and information.

How we work

NROC meets and conducts business as a full Council three times a year. The Council outlines its issue areas, defines its strategic priorities, and develops and implements a 2-year Work Plan detailing specific strategies and activities. Council meetings are open to all stakeholders and interested members of the public. Meeting agendas specifically include opportunities for partners and audience updates and feedback. Council meetings are held in different locations throughout the region to ensure balanced opportunities for attendance, and meeting notices are posted on the NROC website.

NROC is led by state and federal co-chairs who serve on an 18 month rotation. The state co-chair rotates based on geography from North to South (i.e., Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut). The federal co-chair rotates by federal line departments (i.e., Department of Commerce, Department of the Interior, Department of Homeland Security, etc).

The majority of NROC's work is done through committees (Executive, Ocean and Coastal Ecosystem Health, Coastal Hazards Resilience, Ocean Planning). NROC's Executive Committee handles administrative and operational matters between Council meetings, makes certain decisions while deferring others to the full Council, and develops recommendations on agendas, projects, and partnerships. The Executive Committee consists of six members—the current, immediate past, and future NROC state and federal co-chairs. NROC also has standing committees for each of its key issue areas: Ocean and Coastal Ecosystem Health, Coastal Hazards Resilience, and Ocean Planning. These committees are comprised of members from NROC agencies as well as NGO, academic and private sector subject matter experts. The committees define and implement specific 2-year work plans for their issue area.

NROC benefits from, and values, having close and collaborative relationships with other regional organizations. NROC has Memoranda of Understanding with the Northeast Regional Association of Coastal and Ocean Observing Systems (NERACOOS), the Regional Sea Grant Consortium, and the Gulf of Maine Council on the Marine Environment.

NROC continues to be a leader in regional ocean partnerships, demonstrating the benefits of how close coordination and collaboration among state and federal government agencies, working together with other regional entities, organizations, interests, and stakeholders can develop and implement regional approaches to many of our ocean management challenges.

Ocean and Coastal Ecosystem Health

The goal of NROC's Ocean and Coastal Ecosystem Health Committee is to enhance region-wide coordination and collaborative actions on shared ocean and coastal ecosystem health priorities including those affecting water quality, habitats, and living resources and their derived social and economic benefits.

The Northeastern U.S. coastal ocean is a rich and diverse place, from the near-shore sounds of southern New England to the beaches of Cape Cod, and the rocky shores and complex circulatory patterns of the Gulf of Maine.

These ecosystems have abundant resources and have supported coastal communities for generations. But these valuable ecosystems are vulnerable. The impacts of increasing human uses, including many new industrial uses, and the effects of fragmented, single-sector management are showing in degraded water quality, depleted fish stocks, and damaged habitat that have diminished our lifestyle and economy alike. These effects are widespread, often linked to common causes, as evidenced by documented "dead zones" in Long Island Sound, shifting and unbalanced natural communities from changing climate and invasive species, and diminished fisheries in the Gulf of Maine. The New England states also have identified causal links to human activity such as development on land and use of fossil fuels with the health of our coastal waters and estuaries.

Many people, agencies, and organizations are already working to protect and restore coastal and ocean ecosystem health in the Northeastern U.S.. NROC's role is to support the NOC's draft Implementation Plan, guided by the four themes of 1) adopting EBM; 2) obtaining, using and sharing the best science and data; 3)

promoting efficiency and collaboration; and 4) strengthening our regional effort. These themes are well-suited to NROC's and to the OCEH Committee's construct and strategy to enhance communication and collaboration, advocate for collectively-determined priority regional actions, and help articulate a common vision for management and restoration. To implement this strategy, NROC has identified three areas of focus within ocean and coastal ecosystem health:

- Linking observations to management decision-making,
- Enhanced data collection, integration and dissemination, and
- Better governance, coordination and communication.

As described in the 2013-2014 work plan, there are two main strategies for the Ocean and Coastal Ecosystem Health Committee:

- Support research and monitoring that enhances our understanding of ecosystem structure and function, improves utility of social, economic and environmental indicators, and leads to effective EBM implementation.
- Strengthen regional coordination to promote efficiency and collaboration by building partnerships, sharing resources, and reducing redundancy of efforts and ensuring full public and professional participation in the decision-making process.

Coastal Hazards Resilience

The goal of NROC's Coastal Hazards Resilience Committee is to build hazards resilience to impacts of coastal flooding, storms, and climate change through region-wide dissemination of tools, case studies, and data and fostering collaborative actions.

New England coastal communities have experienced coastal storm events that have led to loss of life and major damage to homes, businesses, infrastructure, and shorelines. Coastal hazards information and tools can assist state and local officials to better plan for impacts of storms and sea level rise and implement strategies to prevent recurring future damages. Data such as detailed terrestrial contours, shallow water bathymetry, and mean high water positions are needed throughout the region to support efforts to identify potential inundation zones from storm surge, erosion and sea level rise. A companion to data is the need to develop user-friendly tools to access and analyze data and support management decisions and recommendations.

As described in the 2013-2014 work plan, there are three main strategies for the Coastal Hazards Resilience Committee:

- Promote regional dialogue on broad-scale adaptation strategies for responding to the effects of sea-level rise.
- Act on data acquisition priorities and user-friendly tools needed to support planning for and responses to coastal hazards.
- Partner with academia, industry and public agencies to develop a plan for an Integrated Ocean Observing System (IOOS) that supports storm surge and inundation forecasting and response.

Ocean Planning

The goal of NROC's Ocean Planning Committee is to assist in the development of a regional ocean plan to support ecosystem-based management of the Northeast's marine environment and its human uses by working collaboratively with federal, state and tribal government, NE Fisheries Management Council, and stakeholders.

The health of the ocean and the livelihoods that depend on it are vitally important to New England residents, visitors and businesses. In 2009, ocean-related economic activity totaled over $11 billion in GDP for the region, providing over 190,000 jobs. People in New England greatly value this traditional ocean-related heritage and are seeking basic needs from the ocean—food, energy, conservation, and others—in new and increasingly complex ways. Simultaneously, there is much to learn about the ocean ecosystem, its natural resources, and existing uses that depend on those resources such as fishing, shipping, and recreation. Better scientific information and a better understanding of current and potential human uses of the ocean will enable New England to achieve its economic goals and ensure healthy oceans.

To meet these needs, NROC is gathering data and developing maps of human activities such as commercial fishing, shipping, and boating. NROC also is helping to enhance understanding of the ocean ecosystem by developing maps of areas used by marine mammals, fish, and birds. For these projects, NROC is working with people directly involved with these activities: scientists, fishermen, boaters, and environmental groups, as well as leaders in the shipping, ports, and energy industries. This approach ensures that people who depend on the ocean are involved in NROC's work.

The National Ocean Policy states that a Regional Planning Body will have the responsibility of developing an ocean management plan for New England. In spring 2012, New England's Governors, federal agencies, NE Fishery Management Council, and tribal governments named representatives to this Regional Planning Body. NROC shares membership with the Regional Planning Body, and thus NROC will be an important resource and contributor to the development of a New England ocean plan—a blueprint for the future of our ocean.

As described in the 2013-2014 work plan, there are three main strategies for the Ocean Planning Committee:

- Quantify progress on ocean planning in New England.
- Develop information and engage stakeholders in support of ocean planning.
- Serve as a "work horse" committee in support of the Regional Planning Body process.

Contact us

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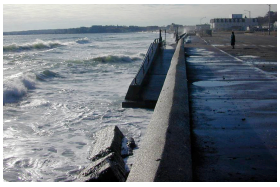
October 2012

DRAFT

Coastal Hazards Resilience Committee
2013-2014 Work Plan



The Coastal Hazards Resilience Committee is one of three NROC standing committees. This committee was established to inform and recommend to the Council how best to approach regional issues and coordinate activities related to coastal hazards in New England.

Goal:
Build hazards resilience to impacts of coastal erosion, flooding, storms, and climate change through region-wide dissemination of data, tools, and case studies, as well as fostering collaborative actions.

Need for Action:
New England coastal communities have experienced coastal storm events that have led to loss of life and major damage to homes, businesses, infrastructure, and shorelines. Coastal hazards information and tools can assist state and local officials to better plan for impacts of storms and sea level rise and implement strategies to prevent recurring future damages. Data such as detailed terrestrial contours, shallow water bathymetry, and mean high water positions are needed throughout the region to support efforts to identify potential inundation zones from storm surge, erosion and sea level rise. A companion to data is the need to develop user-friendly tools to access and analyze data and support management decisions and recommendations.

Strategies: The committee has determined three strategies for working toward its goal. During 2013-2014, the committee will:

1. Promote regional dialogue on broad-scale adaptation strategies for responding to the effects of sea-level rise.
2. Act on data acquisition priorities and user-friendly tools needed to support planning for and responses to coastal hazards.
3. Partner with academia, industry and public agencies to develop a plan for an Integrated Ocean Observing System (IOOS) that supports storm surge and inundation forecasting and response.

Strategies and activities: Each of the three strategies has specific associated activities that the committee members will implement.

Strategy CHR-1: Promote regional dialogue on broad-scale adaptation strategies for responding to the effects of sea-level rise.

Activities:

CHR-1.1 Continue StormSmart Coasts New England webinar series.

Organize and conduct webinars to share information on topics related to impacts of coastal hazards, emergency preparedness, community resilience, and climate adaptation as well as specific case studies or pilot projects from New England. The webinar series will promote engagement in the New England StormSmart Coasts Network. Topics and presenter profiles will be featured on the StormSmart New England group page. The committee will focus on advance planning of topics, broader distribution of announcements, and building participation in the webinars. The

committee will identify continuing education credit programs for each webinar to provide additional benefits to participants.

1.1.1 Define Topics, Presenters, and Schedule

1.1.2 Identify (and apply for) Appropriate Continuing Education Credits

1.1.3 Develop an Outreach Plan

1.1.4 Explore Options for Recording Webinars and Generating Discussion

CHR-1.2 Recognize success of New England Municipal Coastal Resilience Grants Projects.

Organize a half-day meeting for grantees to share results of their projects and share lessons learned with each other. The committee will develop a package of materials including a summary of projects, key project deliverables (e.g., maps, guidance, and plans), and contact information. The committee will potentially link the results to the webinar series.

1.2.1 Organize Planning Team

Define goals of meeting, timeframe, location and participants. Explore options for connecting to the Gulf of Maine Council meeting.

1.2.2 Develop NROC webpage devoted to Grants

1.2.3 Create Meeting Materials

CHR-1.3 Maintain and Evaluate StormSmart Coasts New England Network.

Identify funding and opportunities to maintain, update, and enhance the StormSmart Coasts New England websites, including developing a new point of entry from the NROC webpage. The committee will also evaluate the impact and effectiveness of the StormSmart Coasts New England Network through tracking of web stats, contacting state site leads, and setting up a potential SurveyMonkey for site users. The committee will work with state site leads in Maine and Connecticut to launch network sites.

CHR-1.4 Create a Regional Media Toolbox for the StormSmart Coasts New England Network.

Work with Clean Air-Cool Planet to highlight and expand a media toolkit developed for New Hampshire. Specifically, develop a framework to integrate with other StormSmart Coasts New England Network sites, including media resources, hazards and climate related stories and map, and template for state and local contacts.

1.1.1 Organize a Webinar to Introduce Framework Piloted in New Hampshire

CHR-1.5 Develop Regional Funding Proposals.

Assess opportunities to partner with other organizations on funding proposals for climate adaptation and hazards resilience related projects.

Strategy CHR-2: Act on data acquisition priorities and user-friendly tools needed to support planning for and responses to coastal hazards.

Activities:

CHR-2.1 Promote the Use of StormReporter.

Assess and support opportunities for expanding the use of StormReporter across the region. The committee will also provide input on the development of a StormReporter application for iPhone and Android devices. This project builds off of the ongoing work in Massachusetts on StormReporter.

CHR-2.2 Develop Supporting Products and Information for FEMA programs.

Work with FEMA Region 1 and other partners to develop products and information that support programs such as the Community Rating System (CRS). The committee will review the new point system for CRS and provide guidance to New England coastal communities. The StormSmart Coasts Network will continue to be used as a venue for sharing products and information that support qualified activities.

2.2.1 Organize a Regional Meeting or Focus Group

2.2.2 Inventory of Available Information to Support CRS

2.2.3 Develop Community Toolkit to Support CRS

2.2.4 Develop Framework for StormSmart Coasts New England Network Sites

2.2.5 Test Community Toolkit with Interested Communities

2.2.6 Develop Lessons Learned and Highlight Toolkit Through Webinar Series

CHR-2.3 Contribute to Inundation Visualization Tools.

Provide input on the development of visualization tools for inundation, storm surge, seal level rise, and economic impacts. The committee will request presentations from tool developers to provide feedback from the state and local coastal management perspective.

Strategy CHR-3: Partner with academia, industry and public agencies to develop a plan for an Integrated Ocean Observing System (IOOS) that supports storm surge and inundation forecasting and response.

Activities:

CHR-3.1 Increase capacity of models to incorporate modern terrain and reforecast inundation from major past events.

Work with NERACOOS and other partners to identify opportunities for supporting models.

CHR-3.2 ***Develop hazards resilience requirements for ocean observations in partnership with NERACOOS.***

Continue to assess ocean observations requirements and partnerships for hazards resilience.

Resources:

The following table shows which activities can be undertaken with existing resources, and which require additional resources.

With Existing Resources	With Additional Resources
Promote regional dialogue	
CHR-1.1: Webinar Series	CHR-1.2: Meeting of Resilience Grantees

CHR-1.3: Maintain and Evaluate StormSmart Coasts New England Network (evaluation)	CHR-1.3: Maintain and Evaluate StormSmart Coasts New England Network (updates and maintenance)
CHR-1.4: StormSmart Coast New England Network Media Toolbox (develop framework)	CHR-1.4: StormSmart Coast New England Network Media Toolbox (modify SSCN sites)
CHR-1.5: Regional Funding Proposals	
Data acquisition and tools	
CHR-2.1: StormReporter (input)	CHR-2.1: StormReporter (expansion)
CHR-2.2: Develop Supporting Products and Information for FEMA programs	
CHR-2.3: Inundation visualization tools	
IOOS partnerships	
CHR-3.2: Develop hazards resilience requirements	CHR-3.1 Increase capacity of inundation models

Implementation Leads:
The following table shows the lead agency responsible for implementing each activity. While all committee member agencies are encouraged to participate in the implementation of activities, the lead agency is responsible for coordinating, monitoring, and reporting on designated activities.

Strategies and Activities	Lead Organizations
CHR-1: Promote regional dialogue on broad-scale adaptation strategies for responding to the effects of sea-level rise	
CHR-1.1 Continue Bimonthly webinar series	TNC
CHR-1.2 Meeting of resilience grantees	TNC, NOAA
CHR-1.3 StormSmart Coasts Network website	ME, CT
CHR-1.4 StormSmart Coast Network communications	
CHR-1.5 Write/seek/fund regional proposals	
CHR-2: Act on data acquisition priorities and user-friendly tools needed to support planning for and responses to coastal hazards.	
CHR-2.1 StormReporter	MA
CHR-2.2 Integrate FEMA products	NOAA, MA
CHR-2.3 Inundation visualization tools	USGS
CHR-3: Partner with academia, industry and public agencies to develop a plan for an Integrated Ocean Observing System (IOOS) that supports storm surge and inundation forecasting and response.	
CHR-3.1 Increase capacity of inundation models	NERACOOS
CHR-3.2 Develop hazards resilience requirements	NERACOOS

Past Accomplishments:
Below is a summary of past accomplishments of the Coastal Hazards Resilience Committee.

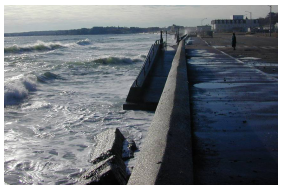
- **Hazards Resilience Workshop (November 2007)** Thematic areas included determining impacts of past hazard events, learning the effects of climate change on the intensity and frequency of future events, and understanding the region's current resiliency to better gauge existing preparedness and improve future capacity. Nearly

60 stakeholders from diverse backgrounds participated in the workshop. Presenters provided important inspiration and background on issues like storm events and climate change impacts, as well as valuable opportunities and lessons learned from specific efforts to improve coastal hazards resiliency.

- **LiDAR Workshop (May 2009)** NROC and USGS sponsored a workshop to discuss regional LiDAR data needs and requirements.
- **New England LiDAR Proposal to USGS (2009)** New England states (data managers and data users) collaborated to submit a regional proposal for the USGS 'ARRA' Funding Opportunity for LiDAR acquisition. The New England states used the results of the May 2009 LiDAR workshop to inform the proposal.
- **Climate Adaptation Proposal to NOAA (September 2010)** NROC Hazards Committee Co-chairs worked with the Gulf of Maine Council's Climate Change Network to identify regional climate adaptation planning needs and submitted a successful collaborative proposal to NOAA's Climate Program Office.
- **Coastal Climate Adaptation Training (October 2010)** NROC identified the need for a regional Climate Adaptation Training for state managers. NOAA's Coastal Services Center and the Northeast States for Coordinated Air Use Management (NESCAUM) organized a training with additional support from EPA's Region 1, New England Interstate Water Pollution Control Commission, and Rhode Island Sea Grant. More than 25 state agencies and regional organizations received training on coastal climate adaptation planning.
- **Development of the StormSmart Coasts New England Network (June 2011)** State pages available for Rhode Island, Massachusetts, and New Hampshire.
- **StormSmart Coasts New England Webinar Series (September 2011 - October 2012)** NROC organized 6 webinars on topics related to impacts of coastal hazards, emergency preparedness, community resilience, and climate adaptation as well as specific case studies or pilot projects from New England. An average of 20 to 50 state and local officials participated in each webinar.
- **Northeast LiDAR and Sea Level Rise Impacts Workshop (July 2012)** 75 federal, state and local data managers and users participated in a 2 day workshop to discuss use of high resolution LiDAR in sea level rise and inundation mapping efforts.

2013-2014 Committee Members:
Julia Knisel, Massachusetts Office of Coastal Zone Management (State Co-chair)
Adrianne Harrison, NOAA (Federal Co-chair)
Susan Russell-Robinson, US Geological Survey (Federal Co-chair)
Kevin O'Brien, Connecticut Office of Long Island Sound (NERACOOS Co-chair)
Steve Couture, New Hampshire Coastal Program
Stephen Dickson, Maine Geological Survey
Sherry Godlewski, New Hampshire Department of Environmental Services
Edward Fratto, Northeast States Emergency Consortium
Janet Freedman, Rhode Island Coastal Resources Management Council
Regina Lyons, EPA Region 1
Ellen Mecray, NOAA
Sam Merrill, New England Environmental Finance Center
Paul Morey, FEMA Region 1 *(invited)*
Jennifer Pagach, Connecticut Office of Long Island Sound
Lisa Rector, NESCAUM
Peter Slovinsky, Maine Geological Survey
Tonna-Marie Surgeon-Rogers, Waquoit Bay National Estuarine Research Reserve
Adam Whelchel, The Nature Conservancy

Ocean and Coastal Ecosystem Health Committee
2013-2014 Work Plan



The Ocean and Coastal Ecosystem Health (OCEH) Committee is one of three Northeast Regional Ocean Council (NROC) standing committees. This committee was established to help identify and coordinate regional activities to preserve and restore ecosystem health in New England. As recommended in the National Ocean Council's (NOC) *Draft National Ocean Policy Implementation Plan*, ecosystem health and the ability to sustain those services derived from healthy coastal ecosystems will rely heavily on an ecosystem-based management (EBM) approach. In an EBM context, NROC and the OCEH Committee believe that we have the best prospects for integrating management efforts that crosscut most if not all of the most pressing issues related to ocean and coastal ecosystem health. Further, an EBM framework automatically incorporates other national priority objectives for supporting data and science, spatial characterizations, and program integration that will foster better decisions and management that can help achieve the overarching goal of healthy ecosystems.

Over the past year, NROC has been working with the Northeast Regional Association of Coastal and Ocean Observing Systems (NERACOOS) to merge their respective ecosystem health committees into a single committee that will advise both organizations and identify joint priorities for their respective work plans. This work plan represents the first effort of the combined programs, but it is acknowledged that full integration must engage many other programs, including those that offer social and economic expertise to support EBM decisions along with the scientific and management expertise the OCEH committee presently comprises. This is essential, especially for developing a regional monitoring network that will fuel an effective EBM approach and the indicators that are derived from monitoring data that will guide and chart their progress.

Goal: Enhance region-wide coordination and collaborative actions on shared ocean and coastal ecosystem health priorities including those affecting water quality, habitats, and living resources and their derived social and economic benefits.

Need for Action: The Northeastern U.S. coastal ocean is a rich and diverse place, from the near-shore sounds of southern New England to the beaches of Cape Cod, and the rocky shores and complex circulatory patterns of the Gulf of Maine.

These ecosystems have abundant resources and have supported coastal communities for generations. But these valuable ecosystems are vulnerable. The impacts of increasing human uses, including many new industrial uses, and the effects of fragmented, single-sector management are showing in degraded water quality, depleted fish stocks, and damaged habitat that have diminished our lifestyle and economy alike. These effects are widespread, often linked to common causes, as evidenced by documented "dead zones" in Long Island Sound, shifting and unbalanced natural communities from changing climate and invasive species, and diminished fisheries in the Gulf of Maine. The New England states also have identified causal links to human activity such as development on land and use of fossil fuels with the health of our coastal waters and estuaries.

Many people, agencies, and organizations are already working to protect and restore coastal and ocean ecosystem health in the Northeastern U.S.. NROC's role is to support the NOC's draft Implementation Plan, guided by the four themes of 1) adopting EBM; 2) obtaining, using

and sharing the best science and data; 3) promoting efficiency and collaboration; and 4) strengthening our regional effort. These themes are well-suited to NROC's and to the OCEH Committee's construct and strategy to enhance communication and collaboration, advocate for collectively-determined priority regional actions, and help articulate a common vision for management and restoration. To implement this strategy, NROC has identified three areas of focus within coastal and ocean ecosystem health:

- Link observations to management decision-making,
- Enhance data collection, integration and dissemination, and
- Improve governance, coordination and communication.

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Strategies: The committee has identified two strategies for working toward its goal of protecting and restoring coastal and ocean ecosystems in the Northeast:

1. Support research and monitoring that enhances our understanding of ecosystem structure and function, improves utility of social, economic and environmental indicators, and leads to effective EBM implementation
2. Strengthen regional coordination to promote efficiency and collaboration by building partnerships, sharing resources, and reducing redundancy of efforts and ensuring full public and professional participation in the decision-making process

During the 2013-2014 timeframe the OCEH Committee will be developing comprehensive plans within these two strategies to guide funding and activities that will most effectively meet the goal of a healthy and sustainable regional ecosystem. Activities listed below are underway or in the development phase and will begin the process of implementing the strategies. While far from complete with respect to the goal of implementing an EBM framework throughout the region, many of these actions provide a start, or even a cornerstone towards achieving that goal.

Strategies and activities: Each of the strategies and activities have specific associated steps that the committee members and their partners will implement over the next two years.

Strategy OCEH-1: Support Research and Monitoring

Activities:

OCEH - 1.1 Initiate the development of a regional climate change sentinel monitoring strategy

NROC will work closely with NERACOOS to promote the development of an integrated regional climate change sentinel monitoring strategy for the Northeast region (from the Canadian Maritimes to Long Island Sound) that includes standard data collection of water column and benthic properties. The goal is to quantify regional changes in the environment brought about by climate change. The approach is to build on the existing Long Island Sound sentinel monitoring project, scaling it to the regional level.

1.1.1 Form a project steering committee

Regional experts will be invited to serve on a project steering committee. The steering committee will provide input and guidance throughout the project.

1.1.2 Conduct a rapid assessment/inventory of current climate change sentinel monitoring programs

Current lists of regional monitoring programs will be sought and gathered. Additional research and efforts will be made to add to and update those lists. This may include attending relevant meetings and conferences, such as the IOOS Summit, to learn about other regional efforts. A short document will be produced with compiled results.

1.1.3 Collect lessons learned from LIS monitoring project and other climate change sentinel sites

Regional climate change sentinel site and monitoring projects, including LIS, will be contacted to get information on what worked and didn't work in establishing their strategy. The LIS project manager is planning a webinar for Fall 2012 to review progress on the project and help initiate discussions about a regional network. A short document will be produced with compiled results.

1.1.4 Draft a funding proposal to develop a strategy

The steering committee will utilize the NERACOOS Sentinel Monitoring White Paper and other information generated by 1.1.2 and 1.1.3 to write a proposal that can be used by partner organizations to secure grant funding to develop the strategy.

1.1.5 Convene a workshop on sentinel site monitoring

1.1.6 Develop a workshop report

OCEH-1.2: Participate in seafloor habitat characterizations and classification
Coordinate with NROC Ocean Planning Committee to conduct a comprehensive assessment of the various characterization and classification efforts underway, produce a summary of state coastal policies and management needs which would be advanced by improved marine habitat characterization and classification, and develop a regional action plan to identify synergies and opportunities to unify mapping, characterization, and classification approaches in terms of methodologies, structure, data requirements, and coordination and leveraging data acquisition. This project has received NOAA CZM funding as a Project of Special Merit.

1.2.1 Create a working group

Establish an NROC working group to act as regional forum to establish common understanding of the various efforts underway (and their objectives, functions, and status); seek consensus on a unified classification framework for the region; and address disparate levels of data availability, resolution, and types throughout the region.

1.2.2 Review and compare habitat classification models

Review approaches underway across the region to better inform managers and scientists of the details of specific classification efforts underway, incorporating consideration of models' data requirements as a component of this review. Prepare a written review and comparison of marine habitat classification models.

1.2.3 Assess management objectives and need

Identify state policy and management objectives which could be achieved or assisted through application of marine habitat classification. Prepare a written summary of New England states' coastal and marine habitat management and policy needs and priorities.

1.2.4 Convene a seafloor mapping workshop

The purpose of this workshop is to coordinate regional bathymetric data collection. This was identified as a priority need for the region during the Northeast LiDAR and Sea Level Rise Impacts Workshop in July 2012. NROC will facilitate the development of regional seafloor mapping priorities and leverage existing mapping activities in partnership with the Gulf of Maine Council and the NROC Ocean Planning Committee by discussing the results of the review conducted in Task 1.2.2, through a prism of management and policy objectives, to identify commonalities, synergies, and opportunities to work toward uniformity in practice in New England. The workshop proceedings will be published and made available.

1.2.5 Create an action plan

Develop specific action items, further investigations, and opportunities for further coordination between marine habitat classification approaches. Prepare an action plan and agreement on steps for pursuing a regionally comprehensive marine habitat classification approach in New England.

Strategy OCEH-2: Strengthen Regional Coordination

Activities:

OCEH-2.1 Support the marsh migration pilot project

A marsh migration project established as part of the larger New England Governors' Coastal Conservation Strategy has developed into a pilot project for the states of Maine, Massachusetts and New Hampshire. In addition, Rhode Island has received NOAA climate change funding to work on marsh migration using the SLAMM model to evaluate RI coastal marshes. NROC will provide support to various aspects of the existing projects.

2.1.1 Assist with project report

Support will be provided as needed during the development of the project reports. This may also include dissemination and outreach of the final product to appropriate state land conservation groups.

2.1.2 Explore next steps

Consideration and initial exploration of relevant follow-up projects will be conducted. This may include conducting similar projects at other locations in the region using tools currently under development.

OCEH-2.2: Promote communication and coordination between ecosystem indicator programs

NROC will continue to promote communication and coordination among ecosystem indicator programs. Key metrics and indicators will be identified and tracked to measure coastal and ocean ecosystem health and climate change. For example, several NROC partner organizations established the Community of Practice web site because of a recommendation from the March 2011 indicators workshop convened by COMPASS and MOP.

2.2.1 ***Reassess utility and value of Community of Practice web site***

Conduct survey of March 2011 indicators workshop participants to ask them: (1) if they know about the web site, (2) if they've used the web site, (3) if those who have used if have found it useful, and (4) if they have better idea(s) for how to share information and communicate among the community.

2.2.2 Consider alternative communication and coordination mechanisms
Depending on outcome of 3.1, revisit March 2011 workshop recommendations to determine whether to continue Community of Practice web site or try another communications vehicle.

2.2.3 Provide funding to organization to actively promote and maintain the Community of Practice web site

2.2.4 Update compendium of ecosystem indicator programs in New England region

OCEH-2.3: Develop an environmental events database
Throughout the northeast, various environmental "events" occur that may be recorded by individual groups or state programs but not widely shared. These events include eelgrass declines, fish kills, HAB outbreaks, sudden vegetation dieback, shellfish diseases, and algal blooms. Sometimes these events occur simultaneously in multiple states, but absent a regional database to record these events, managers never connect the dots or learn too late about an event that could otherwise be surveyed and studied. Building on other indicator and database work, develop recommendations for development of an online regional database to track environmental events. Consider including environmental and public health events they often intermingle (ex: mosquito borne disease outbreaks mean more spraying which means more chemicals in water impacting species including humans).

2.3.1 Create steering committee recommendations
Convene a small core group of regional experts in environmental events (should include members outside of the OCEH committee) that can address the tasks in 2.3.2 and prepare a report regarding the development of a database. This committee will identify other individuals in the region to review and comment on the draft report.

2.3.2 Define vision, goal and scope of database and what types of events/indicators could be tracked
Tasks that would help team accomplish this include the following:

- Identify available databases that track environmental events (e.g., HAB, sentinel monitoring, ESIP, Florida Fish Kill database).
- Review the databases and other materials such as reports about environmental events, the Sentinel Monitoring Strategy and Data Citation Clearinghouse, findings from the 2011 ecosystem indicator workshop and associated COP website, etc. to identify appropriate content for a regional database.
- Make recommendations regarding fields and possible spatial (GIS) aspect for the database.
- Identify the primary versus secondary audience and consider utility as well as current and future management needs/implications.
- Identify the likelihood that this database could be created as a module to an existing database which would thus capitalize on existing online services and scripts to support database functionality.

2.3.3 Recommendation report
Develop a report with recommendations for the content of the database, describe how managers and scientists would or could use the data, identify if there is an existing

database that could support an environmental events module (i.e., not start from scratch) and identify possible mechanisms and funding sources for implementation.

Resources: The following table shows which activities can be undertaken with existing resources, and which require additional resources.

With Existing Resources	With Additional Resources
OCEH 1.1 Regional sentinel monitoring strategy	
OCEH-1.1.1 Form a project steering committee	OCEH-1.1.5 Convene a workshop on sentinel site monitoring
OCEH-1.1.2 Conduct a rapid assessment/inventory of current climate change sentinel monitoring programs	OCEH-1.1.6 Develop a workshop report
OCEH-1.1.3 Collect lessons learned from LIS monitoring project and other climate change sentinel site	
OCEH-1.1.4 Draft a funding proposal to develop a strategy	
OCEH 1.2 Participate in seafloor mapping characterizations	
OCEH-1.2.1 Create a working group	
OCEH-1.2.2 Review and compare habitat classification models	
OCEH-1.2.3 Assess management objectives and need	
OCEH-1.2.4 Convene a seafloor mapping workshop	
OCEH-1.2.5 Create an action plan	
OCEH 2.1 Support the marsh migration pilot project	
OCEH-2.1.1 Assist with project report	
OCEH-2.1.2 Explore next steps	
OCEH 2.2 Promote communication and coordination between ecosystem indicator programs	
OCEH-2.2.1 Reassess utility and value of Community of Practice web site	OCEH-2.2.3 Provide funding to organization to actively promote and maintain the Community of Practice web site
OCEH-2.2.2 Consider alternative communication and coordination mechanisms	OCEH-2.2.4 Update compendium of ecosystem indicator programs in New England region
OCEH-2.3: Develop an environmental events database	
	2.3.1 Create steering committee recommendations
	2.3.2 Define vision, goal and scope of database and what types of events/indicators could be tracked

	2.3.3 Recommendation report

Implementation Leads: The following table shows the lead agency responsible for implementing each activity. While all committee member agencies are encouraged to participate in the implementation of activities, the lead agency is responsible for coordinating, monitoring, and reporting on designated activities.

Activities	Lead Organization
OCEH 1.1 Regional sentinel monitoring strategy	EPA/GMRI
OCEH-1.1.1: Form a project steering committee	
OCEH-1.1.2: Conduct a rapid assessment/inventory of current climate change sentinel monitoring programs	
OCEH-1.1.3: Collect lessons learned from LIS monitoring project and other climate change sentinel sites	
OCEH-1.1.4: Draft a funding proposal to develop a strategy	
OCEH-1.1.5: Convene a workshop on sentinel site monitoring	
OCEH-1.1.6 Develop a workshop report	
OCEH-1.2: Participate in seafloor mapping characterizations	NROC
OCEH-1.2.1 Create a working group	
OCEH-1.2.2 Review and compare habitat classification models	
OCEH-1.2.3 Assess management objectives and need	
OCEH-1.2.4 Convene a seafloor mapping workshop	
OCEH-1.2.5 Create an action plan	
OCEH-2.1: Support the marsh migration pilot project	EPA
OCEH-2.1.1: Assist with project report	
OCEH-2.1.2: Explore next steps	
OCEH-2.2: Promote communication and coordination between ecosystem indicator programs	
OCEH-2.2.1: Reassess utility and value of Community of Practice web site	
OCEH-2.2.2: Consider alternative communication and coordination mechanisms	
OCEH-2.2.3: Provide funding to organization to actively promote and maintain the Community of Practice web site	
OCEH-2.2.4: Update compendium of ecosystem indicator programs in New England region	
OCEH-2.3: Develop an environmental events database	
OCEH-2.3.1 Create steering committee recommendations	
OCEH-2.3.2 Define vision, goal and scope of database and what types of events/indicators could be tracked	
OCEH-2.3.3 Recommendation report	

Past Accomplishments: Below is a summary of accomplishments of the Ocean and Coastal Ecosystem Health Committee and its many partners during 2010-2012. The order of accomplishments is based on the 2010-2012 work plan.

- **Developed a regional ocean data portal and network for regional coastal and marine**

spatial data (June 2011) A work group comprising representatives of Sea Plan, NROC, NERACOOS, NOAA, NOAA, and ASA developed the portal, which is a decision support and information system for managers, planners, scientists and project proponents involved in ocean planning in the northeast region.

- **Convened a regional Ecosystem Health Indicators Conference (March 30-31, 2011)** The Communication Partnership for Science and the Sea (COMPASS) and the Massachusetts Ocean Partnership (now Sea Plan) hosted the 2011 Ecosystem Health Indicators Conference in Boston, MA. More than 50 representatives from northeastern regional monitoring, indicator, and resource management programs met to network and share scientific and communication "best practices" for environmental indicators.
- **Submitted successful funding proposal for a coastal climate change land conservation demonstration project (2011)** NROC state agencies worked with NEGC's Commission on Land Conservation to develop and submit a proposal to NOAA that was selected for funding. The Safeguarding Coastal and Estuarine Land pilot project that builds on state and regional land conversation, climate, and wildlife plans to address joint goals for land conversation, climate change adaptation, and habitat protection.
- **Convened an Estuarine Nutrient Criteria Regional Technical Advisory Group meeting (June 2011)** EPA hosted a regional estuarine nutrient criteria workshop that brought together RTAG members from other federal agencies, the five New England coastal states, NEIWPCC, and the six National Estuary Programs to share information on the science behind the states' respective efforts to develop numeric nutrient criteria.
- **Supported the Sudbury Group** (technical arm of New England Regional Dredging Team) The Sudbury Group met five times during 2011-2012 and continued to make progress working with the states to improve the scientific basis for the imposition of "time-of-year" restrictions on dredging and other coastal development projects. The Massachusetts Division of Marine Fisheries completed a multi-year project to update its TOY recommendations for all estuarine and coastal waters, and is serving as a model for the other New England states.
- **Merged NROC and NERACOOS Ocean and Coastal Ecosystem Health Committees (July 2012)** NROC and NERACOOS initiated joint priority setting and annual work planning to improve coordination and efficiency among the various agencies and organizations participating on these two committees.

2013-2014 Committee Members:
Brian Thompson, CT, Long Island Sound Program (State Co-chair)
Mel Coté, US EPA Region 1 (Federal Co-chair)
Regina Lyons, US EPA Region 1 (Alternate Federal Co-chair)

Ocean Planning Committee
2013-2014 Work Plan

The Ocean Planning Committee is one of three NROC standing committees. This committee was established to inform and recommend to the Council how best to approach regional issues and coordinate activities related to ocean planning in New England.

Goal: Assist in the development of a regional ocean plan to support ecosystem-based management of the Northeast's marine environment and its human uses by working collaboratively with federal, state and tribal government, NE Fisheries Management Council, and stakeholders.

Need for Action: The health of the ocean and the livelihoods that depend on it are vitally important to New England residents, visitors and businesses. In 2009, ocean-related economic activity totaled over $11 billion in GDP for the region, providing over 190,000 jobs. People in New England greatly value this traditional ocean-related heritage and are seeking basic needs from the ocean—food, energy, conservation, and others—in new and increasingly complex ways. Simultaneously, there is much to learn about the ocean ecosystem, its natural resources, and existing uses that depend on those resources such as fishing, shipping, and recreation. Better scientific information and a better understanding of current and potential human uses of the ocean will enable New England to achieve its economic goals and ensure healthy oceans.

To meet these needs, NROC is gathering data and developing maps of human activities such as commercial fishing, shipping, and boating. NROC also is helping to enhance understanding of the ocean ecosystem by developing maps of areas used by marine mammals, fish, and birds. For these projects, NROC is working with people directly involved with these activities: scientists, fishermen, boaters, and environmental groups, as well as leaders in the shipping, ports, and energy industries. This approach ensures that people who depend on the ocean are involved in NROC's work.

The National Ocean Policy states that a Regional Planning Body will have the responsibility of developing an ocean management plan for New England. In spring 2012, New England's Governors, federal agencies, NE Fishery Management Council, and tribal governments named representatives to this Regional Planning Body. NROC shares membership with the Regional Planning Body, and thus NROC will be an important resource and contributor to the development of a New England ocean plan—a blueprint for the future of our ocean.

Strategies: The committee has determined three strategies for working toward its goal. During 2013-2014, the committee will:

1. Quantify progress on ocean planning in New England.
2. Develop information and engage stakeholders in support of ocean planning.
3. Serve as a "work horse" committee in support of the Regional Planning Body process.

Strategies and activities: Each of the three strategies has specific associated activities that the committee members will implement.

Strategy OP-1: Quantify progress on ocean planning in New England

Activities:

OP-1.1 Inventory progress toward achieving NROC work plan and regional planning goals

NROC will inventory progress (in product form) on ocean planning in New England and enable the region to catalog accomplishments, tap existing expertise, and ensure an organic approach to regional ocean planning. This document will be shared publically through the NROC web site, at public meetings, and in other means as appropriate.

Strategy OP-2: Develop information and engage stakeholders in support of ocean planning

Activities:

OP 2.1. Conduct stakeholder engagement activities.

NROC will provide opportunities for broad public engagement and will continue to engage specific interests to develop data, discuss ocean planning goals, develop regional ocean plan-related products, and help ensure an open, transparent process. This includes the following specific projects:

2.1.1 Maritime Industry Engagement: Engage the following sectors via interviews, surveys, and working sessions to characterize the current state and trends, identify data and research needs, and determine regional planning issues. Sectors include:

- Maritime commerce; including ports, shipping, tug/tow operators, pilots, and cruises
- Offshore energy; including offshore wind, tidal, and natural gas interests
- Aquaculture; including growers, associations, and academic extension agents

2.1.2 Commercial Fishing Mapping: Map commercial fishing activity using available data sources, including Vessel Trip Reports, Vessel Monitoring System, and Observer datasets. Engage the industry in the development of appropriate maps from these sources, to identify gaps, and to determine appropriate methods for collecting additional data. Future phases of this project could include the collection of new data to fill gaps using guidance obtained during this project.

2.1.3 Recreational Boating: Develop data characterizing recreational boating in New England, including maps of boating areas, estimates of economic importance, and information on related recreational activities from the 2012 Northeast Recreational Boating Survey. Engage the industry in the review of these data, their appropriate use, and the identification of related ocean planning issues.

2.1.4 Natural Resource Conservation and Science: Engage the natural resource conservation and science communities to determine the appropriate use of science and data in a regional characterization of natural marine resources. Informed by stakeholder input, identify and define related ocean planning issues for consideration.

2.1.5 Engage Other Ocean Stakeholder Groups: Develop projects to engage other specific stakeholders potentially including, but not limited to, recreational fishing, cultural, and tourism interests.

2.1.6 Engage The Public and Ocean Stakeholders in the Development and Review of Ocean Planning Goals: Engage the public through a series of listening sessions, workshops, and other meetings that are closely coordinated with Regional Planning Body activities.

OP 2.2 Develop data and science products in support of regional ocean planning.

NROC will obtain existing data and facilitate appropriate analysis and processing to produce data products related to human uses/activities and natural resources. New data products for activities such as recreational boating and commercial fishing will be developed in partnership with NROC partners.

2.2.1 Develop data products for ocean planning priorities: Develop data products and maps characterizing biological and physical ocean resources and the use of ocean resources and space. Review data products with the appropriate stakeholders, experts and data providers and ensure long term availability and maintenance of ocean planning products. Coordinate data product development with stakeholder engagement activities in OP 2.1.

2.2.2 Review habitat classification methodologies and coordinate regional habitat mapping: Develop a regional Action Plan that identifies steps and makes recommendations for collaborating and unifying mapping, characterization, and classification approaches in terms of methodologies, structure, data requirements, and leveraged data acquisition.

2.2.3 Conduct an economic assessment of ocean industries: Building on information acquired through initial stakeholder engagement, develop a quantitative and qualitative assessment of potential future trends for ocean economic sectors including policy developments, technological advances and market changes.

OP 2.3 Continue to develop decision support tools such as the Northeast Ocean Data Portal, and explore opportunities for additional tool development.

Additional uses for the data portal to serve data, engage stakeholders, and provide additional utility in regional ocean planning will be examined and developed as necessary.

2.3.1 Maintain and develop the NortheastOceanData.org website: Continue to maintain and develop the www.northeastoceandata.org website as the primary vehicle for providing data, tools, information, and communications about data and science development for ocean planning.

2.3.2 Maintain the Northeast Ocean Data Viewer: Maintain and strategically develop the Northeast Ocean Data Viewer as the primary tool for viewing the entire catalog of data maintained by the Northeast Ocean Data Portal and from select external data providers such as the Multipurpose Marine Cadastre, MORIS, BOEM, and others.

2.3.3 Develop ocean planning data themes: Develop web content and an associated interactive map displaying data specific to ocean planning data themes, including commercial fishing, maritime commerce, energy,

aquaculture, recreation, and marine life. Add themes as ocean planning advances and needs are identified. Ensure that ocean planning data themes and associated functionality are simple and support public and stakeholder engagement activities.

2.3.4 Assess additional decision support needs: As ocean planning advances, assess additional functionality and decision support tools for their potential use and incorporation into the Northeast Ocean Data Portal.

OP 2.4 Complete a "baseline characterization" of the New England region.
NROC will compile information and data developed through the Northeast Ocean Data Portal and discussions with stakeholders and prepare a baseline characterization summarizing the extent of knowledge about marine waters offshore New England. NROC will consider whether an ecosystem services-type approach to this product is appropriate.

OP 2.5 Consider regional ocean plan implementation opportunities.
NROC will convene discussions on specific opportunities to achieve regional goals, such as identifying and addressing regulatory efficiencies, through existing federal and state programs.

OP 2.6 Seek additional opportunities/grants/partners to pursue regional ocean planning priorities.
NROC will work with existing partners and seek new opportunities to complete regional ocean planning work.

OP 2.7 Continue to identify and implement regional communications strategies.
NROC will build on efforts to develop website capabilities, two-way online communications, and preparation and marketing of project summaries. NROC will also consider opportunities to synch messaging with RPB communication efforts.

Strategy OP-3: Serve as a work-horse committee in support of the Regional Planning Body process

OP 3.1 Continue to convene regular Ocean Planning Committee meetings
The NROC Ocean Planning Committee will continue to serve as an important discussion vehicle for NROC members to discuss progress toward achieving regional planning goals.

NROC will determine with the NE Regional Planning Body when formed, the appropriate level and mechanisms for communication and coordination on work products.

Resources:

All tasks described above are supported by NROC grants. NROC will continue to seek additional opportunities in support of regional ocean planning work.

Implementation Leads:

NROC has two full-time staff responsible for implementing NROC's work plan. In addition to these staff resources, NROC members serve on the ocean planning

committee and share responsibility for conducting NROC business such as developing Requests for Proposals, reviewing proposals, and other related tasks. Finally, through one of the NROC grants, NROC state members have received funding to directly support their involvement in implementing specific tasks.

Past Accomplishments:

Below is a summary of past accomplishments of the Ocean Planning Committee.

- **Comments to Ocean Policy Task Force on draft National Framework for Coastal and Marine Spatial Planning (2009-2010)**
  NROC provided comments to the Ocean Policy Task Force during the development of the National Ocean Policy.
- **Funding to support the NROC work plan**
  NROC has been awarded four separate grants, and has also leveraged a significant amount of in-kind resources, in support of its work plan.
- **Regional Coastal and Marine Spatial Planning Workshops (2010 and 2011)**
  NROC convened two regional ocean planning workshops: the first in late 2010 to discuss with partners development of a framework for regional ocean planning. In March 2012, NROC convened a workshop with approximately 200 people to discuss NROC's work plan.
- **NROC work plan implementation**
  Following the March 2012 workshop, NROC has been implementing its work plan.
- **Launch of the Northeast Ocean Data Portal**
  The Northeast Ocean Data Portal Working Group formed in early 2010, and in collaboration with NROC, launched the initial version of the portal in mid-2011.

2013-2014 Committee Members:

John Weber, NROC
Nick Napoli, NROC
Betsy Nicholson, NOAA CSC (Federal Co-chair)
Grover Fugate, RI (State Co-chair)
Brian Thompson, CT
Bruce Carlisle, MA
Cherryl Barnett, Navy
Chris Williams, NH
Christopher Boelke, NOAA
Mel Cote, US EPA
Daniel Hubbard, USCG
Daniel Martin, NOAA CSC
David Blatt, CT
David Russ, USGS
James Martin, FERC
Jeffrey Flumignan, DOT
Joe Atangan, Navy
Kathleen Leyden, ME
Katie Lund, NOAA CSC
Regina Lyons, US EPA
Matthew Nixon, ME
Michele DesAutels, USCG
Ron Beck, USCG
Sherry Morgan, FWS
Steve Couture, NH
Timothy Konnert, FERC
Peter Murdoch, USGS
Walter Barnhardt, USGS
Robert LaBelle, BOEM
Leann Bullin, BOEM
Patrick Gilman, DOE
Lorraine Wakeman, DOT
George Jackson, DOT