Attendees
Deerin Babb-Brott, US Office of Science and Technology Policy; Robert Ballou, RI DEM; Ellen Bartow-Gillies, ME Coastal Program, DMR; Rick Bennett, US FWS (NROC Federal Chair); Leann Bullin, BOEM; Mel Coté, EPA Region 1; Bruce Carlisle, MA CZM; Steve Couture, NH DES; Sylvain DeGuise, CT Sea Grant; Michele DesAutels, USCG D1 (remote); Ted Diers, NH DES; Nathan Dill, Ransom Consulting, Inc.; Lisa Engler, MA CZM; Claire Enterline, Maine Coastal Program, ME DMR; Jennifer Felt, Conservation Law Foundation; Kathryn Ford, MA DMF (remote); Darryl Francois, BOEM; Peter Francis; CT DEEP (remote); Grover Fugate, RI CRMC; Adrianne Harrison, NOAA; Julia Knisel, MA CZM; Kelly Kryc, New England Aquarium; Joan LeBlanc, NROC; Kathleen Leyden, ME Coastal Program, ME DMR; Alison Lorenc, Conservation Law Foundation; Rebecca Love, NOAA; Regina Lyons, US EPA; Tony MacDonald, Monmouth Urban Coast Institute; Meredith Mendelson, ME DMR; Kate Morrison, MARCO; Ru Morrison, NERACOOS; Ivy Mlsna, US EPA; Nick Napoli, NROC; Becca Newhall, NOAA; Betsy Nicholson, NOAA; Matthew Nixon, ME Coastal Program, ME DMR (NROC State Chair); Larry Oliver, USACE; Hillary Renick, BOEM; Dan Sampson, MA CZM; Judie Talbot, Observer (remote); John Truscinski, CIRCA / UConn; Chris Williams, NH DES; Jeff Willis, RI CRMC

NROC Executive Committee
- **NROC Funding Status**: NROC State Co-Chair Matt Nixon provided an Executive Committee update regarding the status of NROC funding from the following three sources: 1) FY2016 NOAA Regional Coastal Resilience Grant – NERACOOS, 2) FY2017 NOAA Coastal Resilience Grant – TNC, 3) FY2018 NOAA / NOS / NCCOS – NERACOOS, and 4) funding for ocean planning and the NE Ocean Data Portal from the Moore Foundation and BOEM. Additional detail is included in the meeting Briefing Packet.
- **NROC Representatives to NERACOOS Board**: NROC approved nominations for NROC seats on the NERACOOS Board. The following members were approved for reelection: Carl Wilson (Maine DMR), Todd Callaghan (MA CZM), Janet Freedman (RI CRMC), and Steve Couture (NH DES). Phillip Trowbridge (CT DEEP) was approved to replace Mr. Lyman as CT DEEP’s representative.

NROC Partner Updates
**NERACOOS**
Ru Morrison provided updates regarding NERACOOS’ ongoing and new activities. NERACOOS will hold their annual meeting on December 6th in Portsmouth, NH. NERACOOS is in their third funding year for the main award supporting observations, modeling, and data management efforts in the Gulf of Maine. With new funding, NERACOOS will continue to deploy its nutrient observatory. As NERACOOS wraps up sensor deployment activities supported by the IOOS Ocean Technology Transition funding, they will host a series of webinars in 2019 to highlight successes, lessons learned, and data collected. NERACOOS and their partners were recently awarded a grant from IOOS Coastal Ocean Modeling Testbed program to deliver improved ocean coastal inundation forecasting products, and a grant from NOAA’s National Centers for Coastal Ocean Science and NOAA’s Ocean Acidification to develop a predictive model for ocean acidification thresholds in the Northeast. Updates related to the Northeast Coastal Acidification
Network (NECAN) and the Integrated Sentinel Monitoring Network (ISMN) were provided separately under the NROC Ocean and Coastal Ecosystem Health Committee. Additional detail regarding NERACOOS activities is included in the meeting Briefing Packet.

**Northeast Sea Grant Consortium**
Sylvain DeGuise provided an update regarding the Northeast Sea Grant Consortium. Funding for the Sea Grant program was added back into the federal budget by both the House and Senate. The consortium’s work has been energized by involvement from several new people. A new funding opportunity will be available soon to support lobster research in the Northeast region. The focus will be on understanding changing environmental conditions and their impact on the lobster fishery. Funding amount and eligibility will be announced with the funding opportunity in December or January.

**Gulf of Maine Council (GOMC)**
Joan LeBlanc provided an update regarding Gulf of Maine Council activities. GOMC is working with several partners (Gulf of Maine Research Institute, NERACOOS, RARGOM, Huntsman Marine, and others) to plan an international symposium, *Gulf of Maine 2050*, scheduled for November 4-8, 2019 at the Westin Portland Harborview in Portland, ME. The event will address climate-related impacts such as acidification, warming, and sea level rise, which will drive change in the Gulf of Maine over the next 30 years. The symposium will integrate environmental, economic, social, and institutional perspectives on emerging climate challenges and opportunities. GOMC recently approved a new 2018-2022 Framework for Action, and plans for 2019 include coordination of a Gulf of Maine Awards program. Additional detail regarding GOMC activities is included in the meeting Briefing Packet.

**North Atlantic Landscape Conservation Cooperative (NALCC)**
Rick Bennett provided an update regarding the NALCC. LCCs received no funding in the President’s FY18 and FY19 budgets. While Congress may restore funding, the structure and function of the LCCs are being reviewed in an effort to reinvent them in a manner that would gain support from the administration. Current priorities include informing conservation planning around energy development and overseeing agency-wide data management.

**Living Shorelines – Project Update**
Eric Roberts of The Nature Conservancy (TNC) submitted a written update (included in the meeting Briefing Packet) regarding the NOAA funded project, *Increasing Resilience and Reducing Risk through Successful Application of Nature-based Coastal Infrastructure Practices in New England*. Joan LeBlanc and state partners provided input about ongoing efforts. Key highlights since April 2018 include:

- TNC finalized the contract with NROC Coordinator for project support.
- Convened May 2018 workshop on metrics for site suitability assessment, as-built, and performance monitoring of living shoreline projects.
- Information from the workshop and a literature review are informing development of the Draft New England Living Shorelines Monitoring Metrics and Protocols Guide.
- Outreach activities include presenting at conferences and meetings, convening workshops, and preparing a two-page issue and project overview.
• State partners are in various stages of pilot project design / permit / build tasks. Jeff Willis reported that Rhode Island is in the final stages of coordinating with the City of Providence. Kathleen Leyden reported that Maine released an RFQ for engineering support for the Casco Bay sites. Julia Knisel noted that Massachusetts is focused on determining which approaches / parameters can best be used to monitor living shoreline projects. Steve Couture reported that New Hampshire is focused on monitoring and assessment of constructed living shoreline sites and developing a reference for determining site suitability.

Key Points from Roundtable Updates / Announcements / Opportunities

- Matt Nixon reported that Maine received funding from NOAA through a Project of Special Merit competition to select several working waterfronts in Penobscot Bay (10 sites, 10 towns), where a consultant will assess the vulnerability of publicly funded water infrastructure to sea level rise and increased storm surge. They will also look at socio-economic vulnerability to those communities should they lose some or all of their access.
- Rick Bennett reported that USFWS’ current broad-based focus areas are aquatic connectivity, species at risk, and coastal resiliency. Rick is also preparing final reports for completed Hurricane Sandy Projects - they will be posted on the website when complete. DOI will also prepare an assessment report on the NFWF funded projects.
- Mel Coté noted that EPA’s Region 1 Administrator Alexandra Dunn has been nominated to serve as Assistance Administrator for Chemical Safety and Pollution Prevention at EPA headquarters and will move on from her current position if confirmed (Ed. Note: She had a successful confirmation hearing on November 29 but still awaits confirmation). EPA is also undergoing an organizational restructuring so that headquarters and the regions will all have the same divisions.
- Regina Lyons reported that the EPA budget includes $4 million in funding for coastal watershed grants through the National Estuary Programs (NEP). A Request for Applications is available at https://www.epa.gov/nep and applications are due by December 20, 2018. Applications should focus on addressing relevant environmental issues outlined in Comprehensive Conservation Management Plans for NEP watersheds.
- Betsy Nicholson provided an update regarding NFWF and NOAA funding awards in the region. In November 2018, NOAA, NFWF (along with funding partners – Shell Oil Company and TransRe) announced 35 new National Coastal Resilience Fund grant awards totaling $28.9 million, leveraging $38.3 million in matching funds for a total conservation impact of $67.2 million. The goal of the program is restoring and enhancing natural resource infrastructure to reduce vulnerability of coastal communities to storms, floods and other detrimental natural events. Funding for next year is not certain. A complete summary of 2018 grants awarded is available at: https://www.nfwf.org/coastalresilience/Documents/2018grantslate.pdf. Grants were awarded to the following projects in the Northeast:
  o MA - $1.2 million to National Wildlife Federation for the project - * Restore New England's Largest Saltmarsh for Resilience and Ecological Enhancement* (25,000-acre Great Marsh)
  o ME - $250,000 to Kennebec Estuary Land Trust for the project - *Back River Creek Saltmarsh Restoration for Coastal Infrastructure Resilience*
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- NH - $136,242 to The Nature Conservancy for the project - *Tidal Crossing Replacements for a Resilient Coastal New Hampshire*
- RI - $280,140 to the RI Coastal Resources Management Council for the project – *Rhode Island Shoreline Adaptation and Habitat Enhancement Project Inventory*

- Darryl Francois reported that BOEM will host an online lease auction on December 13, 2018 to develop commercial wind power off the coast of Massachusetts for three lease areas totaling 390,000 acres. A preview will be provided during a November 28 meeting in New York. BOEM is also working on a white paper to be finalized in March 2019 on the cumulative impacts of projects, and developing a long-term fisheries strategy. BOEM will host an Atlantic Ocean Energy and Mineral Science Forum on January 23 and 24 in Sterling, Virginia to highlight various studies throughout the Atlantic region. In terms of sand management, BOEM is close to launching a marine minerals system that will integrate into the NE Ocean Data Portal.

- Ivy Mlsna of EPA reported that she is focused on water quality monitoring as well climate vulnerability in the Piscataqua region. She will provide a report out at a future NROC meeting.

- Dan Sampson reported that MA CZM is creating a repository for seafloor mapping data.

- Lisa Engler noted that MA CZM is developing a resilience blueprint to help assess how degraded a salt marsh is, evaluate vulnerability to sea level rise, and assess restoration. This project will have a regulatory and science group to determine if current regulations would allow the pilot project or if policy changes are needed. Massachusetts is also convening a new ocean acidification commission established by the legislature. NECAN’s policy and management group helped inform the legislation and the first meeting will be scheduled soon. Massachusetts is also starting to review the Massachusetts Ocean Management Plan.

- Adrienne Harrison reported that NOAA is focused on training and education and has released several new training courses, including: ‘Estimating the Marine Economy – Telling Your Story’, ‘Social Science Basics for Coastal Managers’, and ‘Building a Framework for Ecosystem Services Projects’. Information about these and other training courses and resources is available at: [https://coast.noaa.gov/digitalcoast/training/](https://coast.noaa.gov/digitalcoast/training/)

- Michele DesAutels reported that Julia Lewis is no longer working with USCG D1 as she has taken a position working in the private sector.

- Larry Oliver noted that public comments are due today (November 15) on the Draft Integrated Feasibility Report and Environmental Impact Statement for the deepening of New Haven Harbor in Connecticut. The project includes 78 acres of salt marsh creation at Sandy Point and would also create winter flounder habitat by filling in burrow pits. Other ongoing projects include the flood risk study for Narragansett Bay, looking at salmon passage for the Cherryfield Dam, and environmental assessment of alternatives for repair and / or replacement of Cape Cod Canal bridges. A series of public meetings on the Cape Cod Canal will take place in December.

- Steve Couture reported that projects in New Hampshire include: 1) continuation of the tidal crossing assessment and development of protocols (including cross training with Maine), 2) updating SLR, storm surge and extreme storm surge regulations, and 3) implementing a marsh resiliency pilot project similar to the initiative in Massachusetts. New Hampshire is also updating and creating new groundwater maps that will be applied to management – this effort incorporates University of New Hampshire research regarding risks to roads.
Grover Fugate and Jeff Willis provided the following updates for Rhode Island. There are currently four offshore wind projects in various stages of planning including Revolution Wind (400MW off Block Island and Martha’s Vineyard), Deepwater Wind South Fork (100 MW serving New York), Bay State Wind (400MW off Martha’s Vineyard), Vineyard Wind (8MW off Martha’s Vineyard). RI CRMC is also creating a shoreline management plan with new base flood elevation maps that correct errors in the FEMA maps. RI CRMC is also engaged in restoration projects with several partners including dredging projects in the Providence River, and helping municipalities to integrate sea level rise into comprehensive plans.

Kathleen Leyden reported that Maine is in transition with the recent election of new Governor Janet Mills. Maine’s recent initiatives include 1) funding $250,000 in coastal community grants with focus on priority shellfish growing areas and climate adaptation, 2) implementing a pilot shellfish collection program for reuse in living shorelines and coastal ocean acidification remediation, and 3) $2 million in funding is being targeted toward protecting working waterfront access through purchases and/or development covenants. Kathleen also noted that Maine’s interagency climate change group has been looking at coastal, environmental, and public health impacts including increases in ticks, temperature impacts etc. A compilation of climate change related work completed by all state agencies will be finalized soon.

Bruce Carlisle announced that he is leaving his position as Director of MA CZM for a new position working on offshore wind with the Massachusetts Clean Energy Center. Lisa Engler will become Acting Director of MA CZM and will represent the agency on NROC.

Kathryn Ford reported that MA DMF has produced a report on recommended fisheries studies for offshore wind. The agency is also taking an ‘environmental impact statement’ approach to inshore aquaculture to help determine how these proposals fit in with permitting.

Rick Bennett reported that the New England federal partners group recently identified the following areas of common interest: 1) determining how to share information on regional disaster resilience planning, 2) ocean planning, and 3) coordinating on efforts such as the USGS Northeast drought early warning system.

NROC Committee Initiatives
Ocean Planning Committee
Ted Diers, Mel Coté, and Nick Napoli provided an overview of recent activities of the ocean planning committee. In response to federal Executive Order 13840, which eliminated Regional Planning Bodies and established a federal Ocean Policy Committee, NROC’s Ocean Planning Committee has been working to identify regional ocean planning priorities to forward to the administration and recommend a regional structure for advancing those priorities. The Ocean Planning Committee held an all-day meeting in Rhode Island in June, conducted interviews with and engaged agencies and stakeholders throughout the summer and fall, and held an all-day meeting on November 14 in Portland, Maine. NROC was identified early on as a potential organizational option for advancing regional ocean planning priorities going forward. The Committee recommended that NROC approve use of its Ocean Planning Committee to advance regional ocean planning and management priorities that were described in the Northeast Ocean Plan and identified by agencies and the public since the plan was finalized. Committee membership would include state and federal agencies, tribes, and the New England Fisheries
Management Council. Leadership would include state and federal co-chairs as well as a potential tribal co-chair. Stakeholder engagement strategies would be flexible as needed to inform regional priorities. Nick provided an update regarding regional ocean planning priorities identified through targeted outreach calls and discussion during the November 14 ocean planning meeting. The agenda and materials from the November 14 ocean planning meeting are available at: https://neoceanplanning.org/event/fall-2018-ocean-planning-meeting/. Regional ocean planning priorities include:

- **Convening**: Providing a regional forum for a broad range of interests to engage in offshore management issues. Would include one or two in-person meetings each year and regular updates to NROC. Committee would convene discussions, forums or workshops on priority issues such as aquaculture, cumulative impacts, climate change, offshore wind, blue economy, sand, tribal interests, and regional science and research priorities.
- **Data**: Continuing to engage stakeholders in development of peer-reviewed geospatial data products of the ecosystem and human activities.
- **Best Practices**: Enhance existing regulatory and management process with specific improvements around using best available information, coordination across jurisdictions, and engaging the public.

Nick also provided an update regarding recent NE Ocean Data Portal activities, including: conducting trainings and outreach, documenting use of the portal through case studies, updating data and conducting related stakeholder engagement, maintaining the site, developing the 2019 work plan, and identifying funding opportunities and options to promote long-term sustainability. A copy of Nick’s presentation on ocean planning is available with the Council Meeting materials at: http://northeastoceancouncil.org/library/.

Key points raised during discussion about ocean planning priorities and NROC’s role in advancing them:

- **Proposed role / structure for NROC Ocean Planning Committee**:
  - NROC members recognize the need to engage stakeholders - the best process will be determined over the next year.

- **Advancing regional priorities**:
  - Deerin Babb-Brott provided insights from the perspective of the national Ocean Policy Committee. Deerin noted that it’s important for NROC members to communicate needs ‘up the line’ to their federal agencies as they are looking for guidance from the regions.
  - NROC members discussed various approaches for submitting regional priorities via written letter – final decision noted below.

- **NE Ocean Data Portal**:
  - Fishermen have an interest in going to one source for ocean planning data. NE Ocean Data Portal is well positioned to provide this benefit.
  - In terms of maintaining the portal, it is critical to get commitments from data managers to provide both accurate and up to date information.
NROC had a data information and sharing agreement with GOMC, perhaps a similar ‘data sharing agreement’ could help determine what data is needed and help ensure regular updates from source agencies.

Funding the NE Ocean Data Portal:
- NROC members noted that a long-term funding plan for the portal is needed. Nick reported that the portal is currently funded through 2020. A long-term plan for funding and maintaining the portal is being developed. Part of the long-term plan is ensuring that datasets derived from federal and state data sources are increasingly maintained at the source. The portal work plan identifies those datasets and those dependencies. The new Executive Order provides an opportunity to ensure data are increasingly maintained and available from source agencies. Additional funding will also be necessary for portal management and stakeholder outreach.
- Concerns were raised about capacity for maintaining the portal and state’s being stuck with the bill. An MOU might help agencies to target budget resources toward funding for the portal.
- The existing Work Plan for the portal could be updated to include funding needs and then provided to federal agencies. New funding from BOEM is an important step in the right direction.

**Key Decisions**
- **NROC Ocean Planning Committee.** NROC members affirmed support for reestablishing its Ocean Planning Committee with an expanded membership (including additional federal and state agencies, tribal representatives, and the New England Fisheries Management Council). Over the next year, the role of the committee would be to provide guidance, establish work groups, and convene discussions / forums on priority topics.
- **NROC Ocean Planning Committee - Leadership.** NROC members agreed by consensus that Ted Diers and Mel Coté would continue in their current roles as co-chairs of the committee to provide valuable continuity during the transition.
- **NROC letter to federal Ocean Policy Committee.** NROC members agreed by consensus to prepare and submit a letter to the federal Ocean Policy Committee outlining regional priorities for ocean planning. The letter will reflect priorities identified during the November 14 Ocean Planning Committee meeting as well as additional input provided during the November 15 NROC meeting. The letter will be signed by NROC co-chairs with an attached list of NROC members.

**Ocean and Coastal Ecosystem Health Committee (OCEH)**
Steve Couture provided an overview of OCEH Committee structure and activities. Presentations at the November meeting focused on NECAN, ISMN, and HCOM. Committee work on marsh migration also continues to move forward and will report out at a future meeting.

**Northeast Coastal Acidification Network (NECAN)**
Ru Morrison provided an update regarding NECAN activities. NECAN hosted a series of citizen science
workshops (ME, MA and CT) in the spring of 2018 to better assess and integrate water quality monitoring efforts throughout the region. NECAN is currently hosting a series of webinars focused on industry. A list of upcoming webinars and recordings of previous webinars are available on the NECAN website at: http://necan.org/resources/. The NECAN Steering Committee ongoing implementation plan is available at: http://necan.org/sites/default/files/Implementation%20Plan_Final.pdf. The working groups of NECAN (Policy, Education and Outreach, Industry, and Science) have also been very active in recent months.

**Integrated Sentinel Monitoring Network (ISMN)**
Ru Morrison provided an update regarding ISMN, a joint project of NROC and NERACOOS. ISMN is moving forward with efforts outlined in the Science and Implementation Plan (available at: http://www.neracoos.org/sites/neracoos.org/files/documents/ISMN_Plan_Edition1_final_2.pdf) to establish the Center for Analysis Prediction and Evaluation (CAPE). ISMN recently circulated a call for candidates to serve on its oversight committee. Jeffrey Runge is the initial director for ISMN. A data integration workshop will be held in the spring of 2019.

**Habitat Classification and Ocean Mapping (HCOM)**
Becca Newall provided the following updates regarding ongoing HCOM activities:

- Maine, Massachusetts, and NOAA, in communication with University of New Hampshire, are working to develop a regional habitat map.
- Plans are underway for a workshop this winter on classifying habitats using videography.
- HCOM’s work in New England may be highlighted during a special interest meeting at Geotools in February that will focus on developing compatible maps within regions.

**Coastal Hazards Resilience Committee (CHRC)**
Julia Knisel and Adrianne Harrison provided an overview of activities of the CHRC. Several members will be presenting at the Restoring America’s Estuaries Conference in California in December. Presentations will focus on diversity of coastal landforms eroding in New England and the range of approaches being used. Presenters will highlight Maine’s efforts to use natural features to mimic natural landform elements to attenuate coastal flooding. Other project highlights from Rhode Island and Connecticut will inform discussions about how to characterize ‘living shorelines’ and the sequencing of projects. Claire Enterline noted that Maine is looking at sand transport throughout the system. With funding from a NOAA Project of Special Merit, an APP is being developed to provide geographic information for sites.

CHRC co-chairs expressed interested in expanding committee membership and getting feedback from NROC members about potential committee work such as providing lessons learned from academic and private sector projects, connecting more with USGS, and framing methods on retreat policies. During discussion, NROC members provided the following key points of feedback:

- Workshops could highlight work of a few core researchers.
- Nuisance tides and living shorelines are potential research topics.
- University of New Hampshire recently invited the research community to talk with policy folks in an effort to align research with policy needs – this approach may be worth pursuing.
- On the topic of retreat, Consensus Building Institute recently hosted a workshop on retreat. NH, RI, and MA all have interest in convening discussions / workshops on issues related to retreat.
Grover Fugate and Larry Oliver noted that houses in areas impacted by retreat are starting to be raised because residents don’t want to move. Buy-outs are being considered in retreat impacted areas. Another option is building homes that can be relocated in the future.

- Determining how to measure progress in resilience is an important issue in the region. Maine has a coastal resilience check-list created by a fellow. Regional planning commissions have been trained to use the tool. One of the challenges is determining what is meant by ‘resilience metrics’.

CoastWise: Developing Science-based, Climate Resilient Practices for Community-based Replacement of Tidal Road Crossings that Support Coastal Wetland Restoration

Ellen Bartow-Gillies, Coastal Management Fellow for the Maine Coastal Program, provided an overview of her project to restore coastal wetlands by improving tidal exchange. The ‘CoastWise’ concept promotes tidal road crossing practices that help restore tidal wetland functions. Benefits include lower maintenance costs, long-lasting structures, reduced public safety risk, and increased resilience to SLR. Maine is creating an outreach program for tidal crossing standards. Ellen is also focused on developing a tidal crossing map/database to identify potential targets for restoration. A third element of the project is measuring sediment accretion along Maine’s coast. A copy of Ellen’s presentation is available at: [http://northeastoceancouncil.org/library/](http://northeastoceancouncil.org/library/). The following points were noted during discussion:

- ME engineering standards for tidal crossings are building upon the protocol develop in NH.
- Additional information is available from Maine DOT, USACOE, NOAA LIDAR data.
- There may be interest in convening a future workshop to follow up on the tidal crossings work in the region – last one was co-sponsored by NROC and GOMC.

Sand Management Committee Update

Grover Fugate and Jeff Willis provided an overview of recent activities of the Sand Management Committee. The group recently met in NH. One of the key priorities is handling emergency projects that are needed after major coastal storms as it costs $3 million to $5 million just to mobilize for a big project. The next step is developing a matrix and identifying study profiles. The committee should be ready to report on the matrix at the next NROC meeting. One of the challenges to identifying sources for sand is that many of the potential locations are also prime fishing resources.

NROC Leadership Transition

NROC Co-Chairs Matt Nixon and Rick Bennett ‘passed the rock’ to incoming State Co-Chair Steve Couture, NH DES, and incoming Federal Co-Chair Regina Lyons, US EPA.

Meeting adjourned at approximately 3:00 PM

*Meeting summary prepared by Joan LeBlanc, NROC Coordinator*

*Briefing Packet and presentations are available under Council Meeting Materials at:* [http://northeastoceancouncil.org/library/](http://northeastoceancouncil.org/library/)