

**Northeastern University Marine Science Center (NUMSC)**  
**DRAFT Scope of Work: July 1, 2019 – June 30, 2020**  
**As Metro Boston Regional Service Provider for the MassBays National Estuary Program**

The Massachusetts Bays National Estuary Program's (MassBays') Workplan for Federal Fiscal Year 2019 is the first implementation workplan for MassBays' Comprehensive Conservation and Management Plan (CCMP). Actions for the coming year are driven by the following Goals and Strategies described in our Revised CCMP:

**Goal 1. MassBays provides new resources to support research and management in the Bays.**

- Strategy 1.1 Address data gaps
- Strategy 1.2 Support valid (QA/QC) data collection and use

**Goal 2. MassBays reaches all planning-area municipalities with actionable information about coastal habitats**

- Strategy 2.1 Support research to inform policy and actions
- Strategy 2.2 Technical support and communications
- Strategy 2.3 Increase influence of underserved communities on decisionmaking

**Goal 3. MassBays provides regular and locally informed State of the Bays reporting that reflects the unique characteristics of MassBays assessment units (embayments, rocky shore, barrier beach), and documents progress toward target conditions.**

- Strategy 3.1 Establish target conditions
- Strategy 3.2 Guide local action for expanded habitat and improved water quality

Through implementation of these strategies, MassBays anticipate achieving the following Outcomes:

- Sustainable NEP
- Improved habitat continuity and restored hydrology
- Improved water quality
- Resilient coastal habitat, including nature-based coastal protection
- Restored natural communities
- Robust interagency and interdisciplinary collaboration and partnerships
- Well-informed, multisector input to decisionmaking which includes underserved communities

NUMSC will implement the programs and projects below, developed and approved by the Metro Boston Local Governance Committee (LGC), to make progress toward these overarching outcomes. A Metro Boston Regional Coordinator (RC) will lead NUMSC's efforts.

In addition to the region-specific Actions below, the RC and NUMSC will assist MassBays' overarching efforts to implement the CCMP by:

- Attending quarterly MassBays Management Committee meetings, providing updates on progress under each Strategy prior to each meeting.
- Participating in periodic Regional Coordinators' meetings and conference calls
- Participating on at least one Management Committee Subcommittee
- Responding to requests for information from Central Staff in a timely manner.

Reporting requirements are listed under the final section below titled *Invoices, Reporting, and Deliverables*.

### Strategy 2.1 Support research to inform policy and actions

<b>Activity 1</b>	<b>Tide Gate Management and Outreach: Rumney Marsh – A Case Study (<i>ongoing</i>)</b>	
<b>Description/Objectives</b>	Conduct social-ecological study of tide gates in Rumney Marsh, including 1:1 municipal tide gate outreach and community engagement with local organizations.	
<b>CCMP Outcome</b>	Improved habitat continuity and hydrology	
<b>Project Partners &amp; Roles</b>	NUMSC: data collection and analysis	
<b>Project Budget &amp; RC LOE</b>	\$7500, 1.5 months	
<b>NUMSC Tasks</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Schedule and attend meetings with municipal staff	Presentation / technology transfer materials shared with municipalities, list of meetings	Q1-2
Gather information from local contacts re: tide gate conditions and management	Updated information for MA tide gate inventory	Q2-3
Meetings with key stakeholder agencies / organizations	List of meetings	Q4

### Strategy 2.2 Provide technical support and communications

<b>Activity 2</b>	<b>Support municipal and regional actions that promote resilient coastal habitats and communities through the use of nature-based solutions (<i>ongoing</i>)</b>	
<b>Task Description/Objective</b>	Connect NU researchers and other experts to communities interested in living shoreline projects. Support and collaborate on potential living shoreline projects in metro Boston, becoming a key partner in at least one project.	
<b>CCMP Outcome</b>	Resilient coastal habitat	
<b>Project Partners &amp; Roles</b>	NUMSC: data collection and analysis BHEN: co-organizers (additional partners to be determined)	
<b>Project Budget &amp; RC LOE</b>	\$5000, 1 month	
<b>NUMSC Tasks</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Organize at least 3 waterfront site visits	Dates and locations of visits, number of participants	Q1-Q3
Support efforts to conduct living shoreline projects	Letter of support for at least one proposal for design or implementation funding	Q3
Participate in at least one project	Article for MassBays e-newsletter re: project implementation	Q3-Q4

<b>Activity 3</b>	<b>Represent MassBays on relevant networks (<i>ongoing</i>)</b>	
<b>Description/Objective</b>	Convene and provide input to existing working groups on topics relevant to MassBays' desired outcomes	
<b>CCMP Outcome</b>	Robust interagency and interdisciplinary collaboration and partnerships	
<b>Partners</b>	Greater Boston Research Advisory Group, Municipal Vulnerability Preparedness, Ocean Science Advisory Council, and others as identified	
<b>Project Budget &amp; RC LOE</b>	\$2500, 0.5 month	
<b>NUMSC Tasks</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Join networks conducting work relevant to and/or with the potential to advance CCMP implementation	List of networks and outcomes	Q4

### Strategy 2.3 Increase influence of underserved communities on decisionmaking

<b>Activity 4</b>	<b>Expand the audience for MassBays' work in Metro Boston (<i>ongoing</i>)</b>	
<b>Description/Objective</b>	Engage diverse learners in watershed and coastal science education, bring new audiences to MassBays' mission	
<b>CCMP Outcome</b>	Well-informed, multisector input to decisionmaking which includes underserved communities	
<b>Project Partners &amp; Roles</b>	NUMSC Outreach Team, BHEN, CNC: co-organizers	
<b>Project Budget &amp; RC LOE</b>	\$5000, 1 month	
<b>NUMSC Tasks</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Continue to refine and develop components of the Boston Harbor Habitat Atlas	List of improvements made based on user feedback	Q1
For all outreach efforts, facilitate new participation by underserved communities	List of accommodations made, sample notices to new audiences	Q1-Q4
Host Metro Boston High School Marine Science Symposium	Participants' evaluation summary	Q4
Assist in organizing at least four science cafés	List of speakers, new subscribers to MassBays e-newsletter	Q1-Q4
Assist in organizing at least one coastal event for 2020 City Nature Challenge	Date and location of event, number of participants and species photographed	Q4

<b>Activity 5</b>	<b>Assist in organizing and hosting Boston Harbor &amp; Islands Science Symposium (<i>new</i>)</b>	
<b>Description/Objective</b>	Facilitate the communication of research and monitoring in coastal ecosystems in Metro Boston to a diverse audience	
<b>CCMP Outcome</b>	Well-informed, multisector input to decisionmaking, including underserved communities	
<b>Project Partners &amp; Roles</b>	Boston Harbor Ecosystem Network: co-organizers (additional partners to be determined)	
<b>Project Budget &amp; RC LOE</b>	\$10000, 2 months	
<b>NUMSC Tasks</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Start planning second symposium with potential partners	Convene planning group, identify date and venue	Q1
Identify presentation topics and activities, invite presenters, organize field trips	List of speakers and activities	Q2-Q3
Host second Boston Harbor & Islands Science Symposium	List of participants, summary of participant feedback	Q4

<b>Activity 6</b>	<b>Assess the nature of collaborations among organizations on restoration projects in MA (<i>new</i>)</b>	
<b>Description/Objective</b>	Conduct partnership network analysis of restoration projects in MA to determine how often different organizations collaborate and on which types of restoration	
<b>CCMP Outcome</b>	Robust interagency and interdisciplinary collaborations and partnerships	
<b>Project Partners &amp; Roles</b>	NUMSC: data collection and analysis	
<b>Project Budget &amp; RC Level of Effort</b>	\$2500, 0.5 month	
<b>NUMSC Tasks</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Conduct partnership network analysis, data analysis and synthesis	Results, tables, and figures from MS thesis	Q2

### Strategy 3.1 Establish target conditions

<b>Activity 7</b>	<b>Finalize estuary delineation assessment (EDA 2.1) and disseminate results via multiple outlets</b>	
<b>Description/Objective</b>	(Ongoing) Conduct additional analyses and prepare manuscript to be submitted to a peer-reviewed journal	
<b>CCMP Outcome</b>	All	
<b>Project Partners &amp; Roles</b>	NUMSC: data analysis	

<b>Project Budget &amp; RC Level of Effort</b>	\$5000, 1 month	
<b>NUMSC Tasks</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Finalize data analysis and summarize results	Final report to MassBays' STAC	Q1
Prepare manuscript for publication	Manuscript submitted to appropriate journal	Q2-Q3

### Strategy 3.2 Guide local action for expanded habitat and improved water quality

<b>Activity 8</b>	<b>Inform local scientists, practitioners, stakeholders, and policymakers about past and current seagrass restoration efforts in MA (new)</b>	
<b>Description/Objective</b>	Communicate and disseminate the results of a project surveying seagrass restoration and management projects in MA to inform future efforts	
<b>CCMP Outcome</b>	Restored natural communities	
<b>Project Partners &amp; Roles</b>	NUMSC: data analysis and Story Map generation	
<b>Project Budget &amp; RC Level of Effort</b>	\$5000, 1 month	
<b>NUMSC Tasks</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Analyze survey data and design Story Map to share results	Seagrass Restoration Story Map	Q1-Q2
Present the Seagrass Restoration Story Map to a variety of constituents to elicit feedback	List of at least 3 groups reached (Zosterapalooza, SeagrassNet, BHEN, etc.), comment themes compiled	Q3-Q4

### Invoices, Reporting, and Deliverables

**Invoices** on official letterhead detailing reimbursable expenditures for each line item included in the Budget should be submitted to MassBays Central Staff at least quarterly, and preferably monthly. Invoices should include accounting of match (estimated match associated with tasks below), with a running total (year-to-date) for both expenditures and match. NUMSC should retain records documenting sources of match to be provided in the case of a Federal audit.

**Reporting to EPA** on “leveraged funds” and “habitat protected/restored” is required twice yearly. These data are used to justify continued Congressional investment in the National Estuary Program. MassBays Central Boston staff will solicit relevant data from NUMSC as necessary; the scope of work includes responding to requests for this and other reporting information in a timely manner, and as completely as feasible.

**Deliverables** included in this scope should be provided as each task is completed, labeled for ready cross-reference to the task number.

**Status reports** on each task included here should be provided quarterly, along with descriptions of changes in scope, timing, or deliverables.

**Acknowledgment** of MassBays funding (including the NUMSC website) will cite “Massachusetts Bays National Estuary Program” or “MassBays,” and include relevant EPA grant number(s).