Margherita Pryor
U.S. Environmental Protection Agency, Region 1
5 Post Office Square
Boston MA 02109

July 17, 2026

Dear Margherita:

We are pleased to submit Massachusetts Bays National Estuary Partnership (MassBays') application for funding to implement our Federal Fiscal Year 2026 Section 320 Workplan. MassBays' Management Committee reviewed and endorsed the tasks and budget included here as important steps toward implementing our CCMP.

Please do not hesitate to contact us if you have any comments, suggestions, or concerns regarding the workplan.

Sincerely,

Prassede Vella, Director
Massachusetts Bays National Estuary Partnership
Prassede.Vella@umb.edu

Denise Ellis-Hibbett
Management Committee Chair

cc: Carol Thornber Dean, UMass Boston School for the Environment

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NOTE: The document below contains links to websites and publications. Reports, publications, meeting agendas and other pertinent documents are saved in this Google folder. Contact Prassede.Vella@umb.edu if you have any questions.

Acronyms and Abbreviations

ANEP	Association of National Estuary Programs
APCC	Association to Preserve Cape Cod
BCG	Biological Condition Gradient
BHEN	Boston Harbor Ecosystem Network
BU	Boston University
CC	Cape Cod (MassBays Region)
CCC	Cape Cod Commission
CCCD	Cape Cod Conservation District
CCMP	Comprehensive Conservation and Management Plan
CCS	Center for Coastal Studies
CCWRRP	Cape Cod Water Resources Restoration Project
CDS	Communications and Development Specialist
CPR	Coastal Pollution Remediation (CZM Grant Program)
CS	Central Staff (MassBays Boston Office)
CSO	Coastal States Organization *or* Combined Sewer Overflow
CWA	Federal Clean Water Act
CZM	MA Office of Coastal Zone Management
DBMS	Duxbury Bay Maritime School
DCR	MA Department of Conservation and Recreation
DEP	MA Department of Environmental Protection
DER	MA Department of Fish and Game, Division of Ecological Restoration
DFG	MA Department of Fish and Game
DMF	MA Department of Fish and Game, Division of Marine Fisheries
DPW	Department of Public Works
ED	Executive Director, MassBays
EDA	Estuary Delineation and Assessment
EPA	U.S. Environmental Protection Agency
ENHC	Essex Natural Heritage Commission
EO	Executive Order (specifically those signed between January and June 2025)
ESG	Ecosystem Services Gradient
ETT	Ecohealth Tracking Tool
FTE	Full-time Equivalent
GOMC	Gulf of Maine Council on the Marine Environment
IIJA	Infrastructure and Jobs Act of 2021
IRWA	Ipswich River Watershed Association
ISA	Interagency Service Agreement
LGC	Local Governance Committee
LID	Low Impact Development
LNS	Lower North Shore (MassBays Region)
LOE	Level of Effort
MC	Management Committee
Mass Audubon	Massachusetts Audubon Society
MassBays	Massachusetts Bays National Estuary Partnership
MassDOT	MA Department of Transportation
MassDPH	MA Department of Public Health
MassSMAP	Massachusetts Science and Monitoring Advisory Panel
MB	Metro Boston (MassBays Region)
MCCA	Massachusetts Coastal Condition Assessment
MIT Sea Grant	MIT Sea Grant College Program
MMC	Massachusetts Marine Collective
MOTN	Marine & Oceanographic Technology Network
MS4	Municipal Separate Storm Sewer Systems

MVP	Municipal Vulnerability Preparedness
MVPC	Merrimack Valley Planning Council
MWRA	Massachusetts Water Resources Authority
MRWC	Merrimack River Watershed Council
MyRWA	Mystic River Watershed Association
NEP	National Estuary Program
NEPORT	NEP On-line Reporting Tool
NERACOOS	Northeast Regional Association of Coastal and Ocean Observing Systems
NHDES	New Hampshire Department of Environmental Services
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NS	North Shore (LNS + UNS MassBays regions)
NSRWA	North and South Rivers Watershed Association
NU	Northeastern University
NUMSC	Northeastern University Marine Science Center
NWF	National Wildlife Federation
NWR	National Wildlife Refuge
O&M	Operations and Management Plan
OMSAP	Outfall Monitoring Science Advisory Panel
PFAS	Per- and PolyFluoroAlkyl Substances
PIE-Rivers	Parker-Ipswich-Essex Rivers Restoration Partnership
PRNWR	Parker River National Wildlife Refuge
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RC	Regional Coordinator
RCC	Restoration Coordination Center (Cape Cod)
RPA	Regional Planning Agency
RSP	Regional Service Provider
SFE	School for the Environment
SLL	Stone Living Lab
SS	South Shore (MassBays Region)
SSCW	Salem Sound Coastwatch
SSL	Sustainable Solutions Lab
SSU	Salem State University
STAC	Science and Technical Advisory Subcommittee, MassBays
TNC	The Nature Conservancy
UHI	Urban Harbors Institute
UMB	University of Massachusetts Boston
UNH	University of New Hampshire
UNS	Upper North Shore (MassBays Region)
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WAA	Watershed Action Alliance
WBNERR	Waquoit Bay National Estuarine Research Reserve
WHOI	Woods Hole Oceanographic Institution
WWTP	Wastewater Treatment Plant

A. Summary

2025-2026 Progress and Accomplishments

In our annual ***NEPORT reporting*** to EPA for October 2024 through September 2025, MassBays submitted documentation of *1,294 acres of habitat restored,* including eelgrass and salt marsh, and *leveraged funding of more than $3 million*. This translates to more than $3.50 cash and in-kind support secured for every $1 invested by EPA. Leveraged funds are in addition to the 1:1 non-federal resource committed as direct match to EPA's funding under CWA §320.

MassBays continues to take advantage of our status (marking three years in October 2025) as a Center in the School for the Environment at University of Massachusetts Boston to augment our capacity for fundraising, communications, and staffing. For example, during this past year MassBays:

1. With funding from a second successful proposal to Restore America's Estuaries under the National Estuary Program Grants, has launched a 3-year, MassBays-wide program to demonstrate restoration of eelgrass meadows using seeds. This first-of-its-kind restoration effort in Massachusetts is expected to result in more than four acres of new habitat at seven sites. This project, which includes robust community engagement, will put our meadows on a growth trajectory to meet CCMP goals.
2. Employed a Graduate Research Assistant, providing work experience and insights into the utility of applied research to affect change and improved environmental conditions. The student assisted with the analyses of eelgrass habitat data for a joint project with the Cape Cod National Seashore and has been a valuable addition to MassBays' field programs.
3. Received funding from MIT Sea Grant (with the Metro Boston Regional Coordinator) to conduct research on interactions between eelgrass and recreational/commercial shellfish aquaculture to inform policies that may enhance synergies among eelgrass restoration efforts, fisheries, and/or the aquaculture industry. The results will inform state and local permitting related to the siting of aquaculture farms in areas close to eelgrass habitat.
4. Entered its 3rd year of work on the project funded by Restore America's Estuaries to investigate tide gates to optimize their operation and identify habitat restoration opportunities. As a result of the findings and recommendations, the Town of Weymouth has received funding from MA Executive Office for Energy and Environmental Affairs' Coastal Habitat and Water Quality grant and is conducting a feasibility study to remove one of the prioritized tide gates, located on the Fore River in Weymouth, MA.
5. Conducted the first Annual Program Review which served as a check-in on MassBays' work in the past year while hosted with a new organization. Results show several mutual benefits for both UMB and MassBays from interdepartmental collaborations and the Annual Program Review Committee provided a setting to discuss work in this fiscal year.
6. Hired a new Director (position posted in September 2025). The hiring process was carried out by an *ad hoc* Search Committee consisting of the Management Committee Chair, a representative of UMB, a representative of EPA Region 1, and a representative of the Regional Service Provider Directors. The new director started in their position on January 25, 2026; a full-time Communications and Development Position was posted June 22 and estimated to be filled by September 2026; and developed a job description for an Environmental Scientist position (pending posting).

This year Central Staff and Regional Service Providers (RSPs) advanced many projects that are aligned with our CCMP goals. Detailed descriptions are provided in Section B. A few examples are summarized below:

- Central staff continued work on several projects. For example, through an ISA with DEP, we continued to successfully support state-wide eelgrass mapping through boat-based field groundtruthing of 750-1000 stations to document benthic communities and conditions. This year was year 4 of the 5-year cycle and included an expanded scope to conduct a geospatial QA/QC of DEP eelgrass polygons.
- With assistance from EPA Region 1's Chelmsford laboratory and the NS and SS RPS, Central staff launched a water quality monitoring program in Duxbury Bay, Danvers River/Salem Sound, and the Lower Merrimack River. Water samples and water column data were collected as part of a larger program to address water quality priority issues in these locations.
- The Cape Cod RSP (APCC) developed the Cape Cod River Herring Monitoring Dashboard, an interactive online tool that delivers near-real-time updates on volunteer counting efforts across the region. Additionally, APCC led the completion of two stormwater infrastructure projects constructed on Scargo Lake in Dennis, MA, planting a total of 90,000 *Spartina* plugs in spring of 2026. This replanting project is the largest effort of its kind in the MassBays program area.
- The South Shore RSP (NSRWA) continues working with towns, DER, MassBays, private dam owners and other stakeholders to holistically restore the health of the South River and its habitat for migrating and freshwater native species. It took 10 years but in winter 2025, the Veteran Memorial Park Dam was removed. Removal continued through this past year, resulting in the reopening of a fish way for thousands of herring that returned in May 2026. The park was reopened to the public in June 2026.
- The Metro Boston RSP (NU), which coordinates the Boston Harbor Ecosystem Network (BHEN), convened quarterly meetings of many stakeholders in this region. At the spring meeting (April 28, 19 participants) BHEN hosted a discussion on emerging AI use in coastal scientific research and public engagement; in June, BHEN field trip was organized to educate on and conduct monitoring for non-native Manila clams recently observed in Boston Harbor.
- The Lower North Shore RSP staff (SSCW) developed a public survey, encouraging the public to report on observed intertidal blue mussels in MassBays. Over the past 40 years this foundation species has been declining steadily, causing concerns about impacts on other ecologically and economically important species that depend on this important habitat. The survey will be shared by all 5 regional coordinators among their communities and with MassBays' many partners.
- The Upper North Shore RSP (MVPC) complete a three-pronged effort to improve habitat monitoring: Marsh Edge Erosion Monitoring using UAV-LiDAR and UAV-normal-color imagery, Marsh Wrack Evaluation and Mapping using UAVs, and identifying locations for possible eelgrass restoration based on bathymetry and other spatial parameters using UAV-normal color imagery.

See ***Section B, Completed Major Projects***.

2026-2027 Proposed Work

Selected highlights of proposed new work for the coming year include:

- Bring on board a Communications and Development Specialist to support implementation of the MassBays Communications Plan. The position will enhance outreach efforts highlighting MassBays' work to improve water quality, restore habitat health, and strengthen partnerships and collaboration with communities. Coordinate with UMB partners (University Advancement) to increase awareness of funding opportunities and pursue public and private investments to support healthy estuaries, resilient coastal communities, and a thriving blue economy in the MassBays region.
- Finalize a Finance Strategy to prioritize needs and to pursue funding for sustainable projects that will support communities and enhance.
- Conduct a comprehensive review of the MassBays Monitoring Plan to incorporate monitoring and research needs to inform decision-making related to priority issues.
- Pursue partnerships and funding to expand on the SECWQALS Monitoring Program to continue collecting baseline data and analysis to inform restoration, water quality improvement, reopening shellfish beds, etc., start taking action, and to address priority issues in other embayments.
- Pursue funding to complement monitoring and outreach work on intertidal blue mussel populations to be conducted in SS and LNS MassBays regions (see next items), to better understand historical and current population dynamics as well as regional conservation and restoration potential for this coastal habitat-forming sentinel species. (Multi-region)
- Pursue funding for much needed salt marsh monitoring and restoration initiatives on the North and South River watersheds (South Shore).
- Continue working with partners and communities to promote resilient coastal habitats, using nature-based solutions through restoration, stormwater mastication, and LID. Three components include collecting information and support coordination and communication on ongoing and potential restoration projects, updating existing dataset and maps to incorporate new data, and implementing restoration projects, providing degrees of support as needed for implementation. (Cape Cod).

Specific proposed MassBays-wide and regional tasks are described in ***Section C, New and Ongoing Projects***.

Staffing and Management

MassBays' Management Committee sets priorities for the program and fosters many partnerships for engagement in our work. Committee members for the period July 1, 2025, through June 30, 2026, are listed below in Table 1.

Table 1: MassBays Management Committee

Danielle	Boudreau	National Oceanic and Atmospheric Administration
Trevor	Burns (from 3/2026)	Massachusetts Department of Transportation
Harlan	Doliner	Marine & Oceanographic Technology Network
Rebecca	Dupont-Coutu	New England Civil Engineering
Denise	Ellis-Hibbett	Massachusetts Water Resources Authority
Whitney	Fenwick (from 5/2026)	MA Department of Environmental Protection
Kate	Frew	Massachusetts Division of Marine Fisheries
Elizabeth	Gorrill	Massachusetts Division of Ecological Restoration
Andrew	Gottlieb	Association to Preserve Cape Cod
Jon	Grabowski	Northeastern University Marine Science Center
Marissa	Grenon-Gutierrez	Anderson & Kreiger
Shannon	Hogan (from 4/2026)	Urban Harbors Institute
Stephen	Kirk	The Nature Conservancy
Lealdon	Langley (through 4/2026)	MA Department of Environmental Protection
Regina	Lyons	U.S. Environmental Protection Agency
Purvi	Patel (from 9/ 2025)	Executive Office of Energy and Environmental Affairs
Vandana	Rao (through 8/2025)	Executive Office of Energy and Environmental Affairs
Juliet	Simpson	MIT Sea Grant
Tyler	Soleau	Massachusetts Office of Coastal Zone Management
Carol	Thornber	School for the Environment at UMass Boston
Kristin	Uiterwyk (through 3/2026)	Urban Harbors Institute
Gitte	Venicx (from 4/2026)	Salem Sound Coastwatch
Barbara	Warren (through 11/2026	Salem Sound Coastwatch
Jerrard	Whitten	Merrimack Valley Planning Commission
Samantha	Woods	North and South Rivers Watershed Association

Director Pam DiBona was responsible for the overall management of the program, including reports to EPA and other funders, and staff supervision, including oversight of Regional Service Providers in line with contracts, through August 10, 2025. Between August 2025 and January 2026 Prassede Vella assumed these responsibilities as Interim Director, assuring a smooth transition at a very critical time, and later as Director (starting in 01/25/2026). In the coming year she will coordinate the hiring of a new full-time Communications and Development Specialist, and a full-time Environmental Scientist as well as conduct staff reorganization to adapt to the evolving needs of the program.

Senior Scientist Prassede Vella held this position through January 24, 2026. Until the Environmental Scientist position is filled, she will continue to lead our continuous water quality monitoring program and is the PI for our tide gate restoration projects. She continues to staff the Science and Technical Advisory Subcommittee to our Management Committee until June 30, 2026, and will continue to collaborate with institutional partners to generate data critical to MassBays CCMP implementation.

Coastal Habitat Restoration and Data Quality specialist Jill Carr led MassBays' eelgrass monitoring and restoration program, as well as MassBays' Monitoring Coordinators Network which provides resources, tools and communications to water quality and habitat monitoring program managers. Pending a decision by UMB Human Resources, in the coming year, Jill will take on responsibilities as *Habitat Program Manager*. This will include development and implementation of a robust **Habitat Program** that will expand MassBays' leading role in eelgrass management and expand management and restoration of other estuarine habitats (e.g. salt marsh, shellfish, SAVs). Jill will also staff the Science and Technical Advisory Subcommittee and will work with the Director and other staff on several critical projects in support of the CCMP.

Environmental Scientist. This position will be posted in July 2026, and we plan to have it filled this September. The Environmental Scientist provides technical assistance to MassBays community-based partners, state and local agencies, and regional staff to support implementation of CCMP priorities. This position is primarily responsible for implementation of the MassBays' water quality monitoring program (including revision of the MassBays Monitoring Program in coordination with the Director and with STAC), supporting community-based monitoring, and associated data analysis and reporting. They participate in State of the Bays reporting, tracking progress towards habitat and water quality targets in the CCMP.

Communications and Development Specialist. This new full-time position was posted on June 22, 2026 and will close on July 24, 2026. The incumbent will work closely with the Director and will develop a strategy for the implementation of the 2026 Communications Plan. They will (1) work closely with staff and regional coordinators to share MassBays' successful projects among its communities through streamlined and directed messaging, (2) communicate MassBays' goals and big ideas to potential funders (including grants and foundations) and identify opportunities to promote MassBays with decisionmakers. The Communications and Development staff will coordinate closely with University Advancement and benefit from tools and connections.

Regional Service Providers (RSPs) connect MassBays with planning area communities organized into five regions: Upper North Shore, Lower North Shore, Metro Boston, South Shore, and Cape Cod. Under cooperative grants from MassBays, each RSP designates a Regional Coordinator, in turn responsible for identifying regional priorities consistent with the outcomes articulated in the CCMP and implementing an annual workplan at the local level. For FFY2026, the following organizations will serve in this capacity:

- Merrimack Valley Planning Commission (MVPC)/MassBays Upper North Shore Region
- Salem Sound Coastwatch (SSCW)/MassBays Lower North Shore Region
- Northeastern University Marine Science Center (NUMSC)/MassBays Metro Boston Region
- North and South Rivers Watershed Association (NSRWA)/MassBays South Shore Region
- Association to Preserve Cape Cod (APCC)/MassBays Cape Cod Region

FFY2026 Budget Overview

A detailed budget request and narrative are included in ***Section D.***

Salary & fringe	**$229,844**
Travel	**$0**
Supplies	**$0**
Contractual	**$0**
Other Direct Costs	
RSPs	**$400,000**
Healthy Estuaries Grant (FFY27)	**$36,000**
Total Direct Costs	**$665,844**
Indirect Costs (35.7% on Direct Costs) *	**$184,156**
Total Request	**$850,000**

***Salary+Fringe, first $50k of subawards, travel, supplies)**

B. Completed Major Projects and Activities (July 1, 2025 to June 30, 2026)

MassBays' work for FFY2026 advanced the Goals and Strategies of our CCMP:

Goal 1. MassBays provides new resources to support research and management in the Bays
- Strategy 1.1. Make new data available, especially to address gaps in knowledge
- Strategy 1.2. Support valid (QA/QC) data collection and use
- Strategy 1.3. Analyze and present existing data in multiple formats to document baselines and trends

Goal 2. MassBays reaches all planning-area municipalities with actionable information about coastal habitats
- Strategy 2.1. Support and conduct research to address gaps in knowledge and inform policy and actions regarding ecosystem conditions and functions
- Strategy 2.2. Provide education, training, and technical support; share case studies (successful and not); and support collaboration and cooperation on specific topics
- Strategy 2.3. Facilitate access to decision making forums by impacted communities

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 to inform local action and progress toward target conditions.
- Strategy 3.1. Establish target (improved) water quality and habitat conditions tied to desired uses and ecosystem services, and document progress toward those targets.
- Strategy 3.2. Guide local action to expand habitat and improve water quality according to targets
- Strategy 3.3. Maintain MassBays' National Estuary Program status

Our work is closely aligned with the Clean Water Act Core Programs, which are:
(1) establishing water quality standards
(2) identifying polluted waters and developing plans to restore them (total maximum daily loads)
(3) permitting discharges of pollutants from point sources (National Pollutant Discharge Elimination System permits)
(4) addressing diffuse, nonpoint sources of pollution
(5) protecting wetlands
(6) protecting coastal waters through the National Estuary Program
(7) protecting Large Aquatic Ecosystems.

The following list of accomplishments is organized according to the CCMP Strategies included in our 2023 CCMP and completed by June 30, 2026. Each project description includes the following:

Title
CWA core program: Per list (1-7) above
Objective: project-specific objective
Partners: Collaborators not directly funded by MassBays/§320 funds
Status: as of June 2026
Accomplishments and Deliverables: completed products

Strategy 1.1 Make new data available, especially to address gaps in knowledge

Title	**Implement and manage MassBays Monitoring Plan - SECWQALS (Central Staff)**
CWA Core Program	(6) Protecting coastal waters through the National Estuary Program
Objective	Compile water quality for MassBays' delineated embayments for comprehensive and specific State of the Bays reporting.
Partners	STAC, USGS, MassDEP, MVPC, SSCW, SSU, CCS, DBMS, NSRWA, EPA Region 1, cities of Beverly, Salem, and Newburyport, towns of Plymouth and Duxbury.
Status	Year 1 (full year) completed; Monitoring at 3 locations (Salem Harbor/Danvers River, Duxbury Bay, Lower Merrimack River)
Accomplishments and deliverables	
SECWQALS MassBays Water Quality Monitoring Program	1) In collaboration with USGS deployed three continuous monitoring sensors (Danvers River, Lower Merrimack River, Duxbury Bay) in June 2025 to gather water quality data to answer embayment level priority questions. Data were collected through October 2026 and transmitted in real-time from Merrimack; DKP: and Danvers). All 2025 data are publicly accessible through USGS Water Data for the Nation. A storm at the end of September caused the system in Duxbury Bay to flip. Fortunately, although live transmission was interrupted, all data were saved within the system and no damages were found. Near the end of the season the pCO2 sensor software was not functioning properly and some data were lost. USGS contacted the manufacturer to resolve the issue. 2) Between June and October 2025, water samples were collected and water column profile measurements taken at five stations in each of Duxbury-Kingston-Plymouth Bays and Salem Harbor/Danvers River. Samples were analyzed for nutrients, chlorophyll, and total alkalinity. Profile measurements were conducted for pH, temperature, DO, salinity/conductivity down to 0.5-1 meter from the bottom using a YSI. Collaboration with partners: EPA Chelmsford Lab, SSCW, SSU & DEP (Danvers River/Salem Sound), Duxbury Bay Maritime School, Center for Coastal Studies, and NSRWA (Duxbury to Plymouth). Analysis of data collected in FFY25 is in progress.
Coastal Acidification Monitoring and Management	Incorporated pCO_2 and pH measurements as part of the continuous monitoring network with purchase of three pCO_2 sensors funded by NROC. Data were collected from three stations (Lower Merrimack River, Salem Sound/Danvers River, and Duxbury Bay). Analysis of data collected in FFY25 is in progress. When completed, these data will be shared with NECAN and with researchers to start looking at possible trends.

Title	**Establishment of a Massachusetts Science and Monitoring Assessment Panel (MassSMAP) (Central Staff)**
CWA Core Program	(2) Identifying polluted waters and developing plans to restore them; (6) Protecting coastal waters through the National Estuary Program
Description/Objective	When a new NPDES permit for the MWRA Outfall is issued, OMSAP will be dissolved. In anticipation of that event, EPA and DEP invited

	MassBays to convene a new panel (MassSMAP) to advise on ambient water quality monitoring and results including discharges. MassSMAP is a non-regulatory body and will provide advice as needed. All OMSAP members will be transitioning to MassSMAP (except those retiring). In addition, MassBays invited subject-matter experts who will provide additional input on water quality condition and how priority issues may be addressed.
Partners	MassSMAP members
Status	MassSMAP first meeting was scheduled for January 2026. However, it was decided that further discussion and revision of the draft Charter were needed and an agency/MassBays meeting was held in May 2026 to address any pending concerns and to make sure that the language was clear. MassSMAP's first meeting will be convened in Q2 of FFY26.
Accomplishments and deliverables	
Draft Charter	Developed a draft charter, recruited new members for a Science Advisory Panel to provide expert input for management of discharges in the Bays. Panel experts will assess results of ambient water quality and biological monitoring carried out by wastewater treatment plants pursuant to NPDES permits, along with other verified and reliable data sources. The work of MassSMAP will support permitting agencies' efforts to protect human and environmental health from adverse impacts of existing and future discharges into the coastal and ocean environment. Convening of the new panel is pending the issuing of new permits for wastewater treatment plants. Charter will be shared when approved by the Panel.

Title	**Healthy Estuaries Grant Program (Central Staff)**
CWA Core Program	(2) Identifying polluted waters and developing plans to restore them; (6) Protecting coastal waters through the National Estuary Program
Description/Objective	Five projects were selected for funding by an expert review committee. These included: *Hingham Harbor Shellfish Assessment* (Town of Hingham) *Castle Neck River Restoration Monitoring* (Ipswich River Watershed Association) *Using Unmanned Aerial Vehicle (UAV) Technology to Advance Long-term Monitoring Programs* (Merrimack Valley Planning Commission) *Legacy Nutrients in Salem Harbor Sediments: Assessment of Phosphorus and Nitrogen Recycling as a Significant Nutrient Influx* (Salem State University) *Mapping Selected Kelp Habitats of Massachusetts Bays* (UMass Boston Department of Biology)
Partners	Town of Hingham, MA; UMass Boston Department of Biology; Merrimack Valley Planning Commission; Salem State University; Ipswich River Watershed Association
Status	The five projects were wrapped up between December 2025 and March 2026.
Accomplishments and deliverables	

Final Reports	Each project provided a final report with findings and management recommendations. Data are also being shared.

Title	**Causes of eelgrass loss in Wellfleet, MA (Central Staff)**
CWA Core Program	(2) Identifying polluted waters and developing plans to restore them; (6) Protecting coastal waters through the National Estuary Program
Description/Objective	Partner on **National Parks Services -funded project** to investigate historic causes of eelgrass loss in eastern Cape Cod Bay and assess barriers to natural recovery.
Partners	NPS, CCS, BU
Status	Project is ongoing, report and outreach components are in final preparation
Accomplishments and deliverables	
Data mining and analysis	Identify, acquire and analyze over 20 datasets pertaining to temperature, nutrients, light irradiance, wind, waves, disease, fishing, boating, and other potential stressors.
Final Report	The MassBays deliverable, titled *Assessing drivers of historic eelgrass loss in eastern Cape Cod Bay, Massachusetts* will be a standalone Technical Report and will be included in overall project deliverables. The report was submitted in June 2026.

Title	**Host and manage #MassWrack iNaturalist challenge (Central Staff)**
CWA Core Program	(6) Protecting coastal waters through the National Estuary Program; (7) Protecting Large Aquatic Ecosystems
Description/Objective	Continued monitoring citizen science data entries. Shared opportunities to use data for graduate-level investigation to UMB SFE and Department of Biology students via a proposed joint application to the Massachusetts Environmental Trust (July 2025) that was not selected for funding.
Partners	UMass Boston
Status	Ongoing
Accomplishments and deliverables	
Continue to monitor and support the iNaturalist project	Bi-annual check-in of project status and operations. Continually seek opportunities to visualize and interpret the data and enhance the project.

Strategy 1.2 Support valid (QA/QC) data collection and use

Title	**Tools for Citizen Science Monitoring (Central Staff)**
CWA Core Program	(2) Identifying polluted waters and developing plans to restore them

Description/Objective	Funded by an **EPA Exchange Network grant**, this project aims to increase the value and use of citizen monitoring data for decision making across the region by increasing data quality, quantity, and public sharing.
Partners	Monitoring Coordinators Network, MassRivers Alliance, DEP, EPA EN, EPA Region 1
Status	*MassWateR* and *AquaSensR* tools are under development, to be completed by Oct 2027, coupled with training and technical support provided to user groups.
Accomplishments and deliverables	
MassWateR Shiny app	Expand upon MassBays' R package *MassWateR* to offer a Shiny app version of the popular tool that reduces technological barriers by providing a form-based rather than code-based user interface. The objective of the package is to automate and streamline quality control and exploratory analysis of data, and to format data for upload to the national Water Quality Portal via EPA's Water Quality Exchange (WQX). This project is funded by **EPA Exchange Network** in an award with four New England NEPs.
AquaSensR Shiny app	As part of the Exchange Network grant described above, a new tool named *AquaSensR* is under development to provide the same functionality as *MassWateR* but specifically as a tool to be used for continuous water quality data.
One-on-one tech support & training	Continued to provide training and technical assistance to water quality and habitat monitoring programs coastwide through the dedicated *MassWateR* Community of Practice web forum.

Title	**AquaQAPP management and improvements (Central Staff)**
CWA Core Program	(2) Identifying polluted waters and developing plans to restore them
Description/Objective	**Funded under the IIJA** to increase the value and use of citizen monitoring data for decision making across the region by assisting groups in QAPP development. AquaQAPP revision was to align with EPA's updated QAPP guidance.
Partners	CCS, Ethan Mick LLC, Monitoring Coordinators Network, DEP, EPA Region 1
Status	AquaQAPP is currently under revision, to be completed by Oct 2027.
Accomplishments and deliverables	
Provide AquaQAPP outreach & track use	Presented at local and regional venues to demonstrate AquaQAPP and promote its use in developing QAPPs.
Expand and improve AquaQAPP to meet new EPA standards	Retained two contractors to identify tool design changes necessary to be in compliance with new QAPP standard published by EPA in July 2023. Simultaneously address numerous wish list items to improve functionality of the tool. Anticipated to be beta tested and finalized by October 2027, with training provided to user groups.
One-on-one tech support and training	Continued to provide training and technical assistance to water quality and habitat monitoring programs coastwide.

Title	**Support state-wide eelgrass mapping (Central Staff)**
CWA Core Program	(2) Identifying polluted waters and developing plans to restore them (informs MassDEP's integrated listing); (7) Protecting Large Aquatic Ecosystems
Description/Objective	**Funded through an interagency service agreement (ISA) with DEP**, this project aims to conduct field work to ground-truth aerial surveys of eelgrass (*Zostera marina*) extent and density.
Partners	DEP, SSCW
Status	With four years completed, year 5 will be the final in the current ISA before a new ISA is established. Work includes boat-based field groundtruthing of 750-1000 stations using an underwater camera to document benthic communities and conditions. This year expanded scope to include conducting a geospatial QA/QC of DEP eelgrass polygons.
Accomplishments and deliverables	
Implemented 2025 eelgrass mapping in Buzzards Bay and Martha's Vineyard Island	Boat-based fieldwork for ground truthing of eelgrass maps generated by DEP with aerial imagery. Species presence and condition assessed at approximately 800-1000 stations in each project area, Annual reports and data transfers are completed after each field season.
Polygon QA/QC	New this year and upon request by DEP, MassBays developed and implemented a protocol for the review of aerial imagery and MassDEP's draft eelgrass polygons to conduct QA/QC. Deliverables include GIS layers of flag points where further attention is warranted, and a revised polygon shapefile of modified eelgrass delineations, reviewed and agreed upon by two photo-interpreters (MassBays' scientist Jill Carr and research assistant Aaron Shavitz). This new step in the workflow is expected to improve map quality and accuracy by XX%.

Strategy 2.1 Support and conduct research to address gaps in knowledge and inform policy.

Title	**Research seed-based eelgrass restoration (Central Staff)**
CWA Core Programs	(6) Protecting coastal waters through the National Estuary Program
Description/Objective	**With funding from WHOI Sea Grant**, this project fills scientific and regulatory gaps in seed-based eelgrass restoration by studying the timing and abundance of seeds, impacts of collections, develops best practices for collection and lab-based husbandry techniques, and coordinates with regulators on policy implications.
Partners	DMF, SSCW, WHOI Sea Grant
Status	Ongoing; Project slated to end by 1/31/27
Accomplishments and Deliverables	
Field and lab studies	Conducted first of two seasons of comprehensive field and lab studies investigating reproductive shoot density, seed maturity, and temperature.

Model development	Generated model predicting seed maturity based on temperatures
Reporting	Presented work at multiple conferences and meetings, manuscript is underway.

Title	**Research eelgrass-shellfish interactions (Central Staff, Metro Boston)**
CWA Core Program	(6) Protecting coastal waters through the National Estuary Program
Description/Objective	With **funding from MIT Sea Grant**, this project will conduct research on interactions between eelgrass and recreational/commercial shellfish aquaculture to inform policies that may enhance synergies among eelgrass restoration efforts, fisheries, and/or the aquaculture industry.
Partners	Northeastern University, MIT Sea Grant
Status	Ongoing; Selected for MIT Sea Grant funding
Accomplishments and deliverables	
Develop scientific approaches and establish partnerships	Developed a scientifically rigorous research design to answer questions pertaining to benefits and adverse effects of co-located seagrass and aquaculture.
Secure funding	Applied and selected for funding to MIT Sea Grant FY26-28 Core RFP. Contract set-up is underway. Preliminary field planning is underway.

Title	**Investigating eelgrass conditions and water quality in Duxbury-Kingston-Plymouth Bays (Central Staff, South Shore)**
CWA Core Program	(6) Protecting coastal waters through the National Estuary Program
Description/Objective	1) Implement the annual eelgrass rapid assessment with citizen scientists to monitor eelgrass extent and condition and inform efforts to determine the causes of local eelgrass loss. 2) Draw from results of water quality monitoring to collect information on physical conditions that may be contributing to the losses.
Partners	DMF, Town of Duxbury, Town of Plymouth, Volunteers, DBMS, CCS, NSRWA, STAC
Status	1) The 8th year of the volunteer-based rapid assessment of eelgrass in DKP at 119 stations was completed. Data were collected at 67 sites of the 119 sites where eelgrass has been observed to persist over the past 3-4 years. 2) Following sampling by MassBays and EPA Region 1 in 2023-2024, continued water quality monitoring to investigate eelgrass loss, and gathered data for other embayment level priorities. This was part of the SECWQALS monitoring program. The data served to provide preliminary information as part of the identification/confirmation of eelgrass seeding pilot sites in FFY26. Sampling was completed in partnership with DBMS, NSRWA, and CCS.
Accomplishments and deliverables	
Eelgrass rapid assessment survey	Successfully completed survey for the 8th year including collection and analysis of data. Data analyzed showing continued loss of eelgrass and changes in location of eelgrass beds (spatial distribution).
Water quality	Data from the 2025 samples were analyzed and a brief report for 2024-2025 was prepared.

Strategy 2.2 Provide education, training, and technical support; share case studies (successful and not); and support collaboration and cooperation on specific topics

Title	**Presentations & Publications**
CWA Core Programs	All
Objective	Share MassBays' findings, projects, and expertise with multiple audiences
Partners	multiple
Status	MassBays continues to share case studies, products, and findings with local, regional, and national audiences.
Accomplishments and deliverables	
Central Staff	*Presentations* • Presented at a workshop hosted by Mass Rivers Alliance on the Healthy Estuaries Grant program (Fall 2026) (PV). • Presented at the NEP Technical Transfer meeting in Mobile, AL (November 2025). *Water Quality Monitoring to Address Local Priorities in MassBays (PV); Seed*-based eelgrass restoration best practices (JC) • Presented at the annual EPA Eelgrass Symposium: *One Million Seeds, Countless Lessons: Planning for large-scale seed-based restoration in MA* (March 2026) (JC) • Presented at the 2026 Merrimack River Water Quality Roundtable on the *Continuous Water Quality Nearshore Sensor in the Lower Merrimack River* (April 2026). (PV) • Presented at a webinar hosted by MassRivers Alliance WQ Monitoring Coordinators monthly group meeting: *All about SAV: Submerged Aquatic Vegetation in MA (JC)* (3/11/26) • Present as guest lecturer at Brandeis University undergraduate Conservation Biology class: *Conservation Priorities in our Estuaries with a special focus on seagrass* (3/13/26) (JC) • Present tool updates during MA Water Quality Coalition workshop on QAPPs and Data Quality (2/10/26) (JC) • Present MassWateR tool demo at *MassWateR Data Tools: Community Needs Assessment Meeting* (2/27/26) (JC) • Co-hosted and presented at UMB Earth Day webinar titled: *Dive into Seagrass: Science, Careers, and Coastal Change* 4/23/26 (JC) • Presented two lightning talks at a workshop between MassBays, UHI, Stone Living Lab, and Northeastern on 5/3/26, titles: *MassBays' Tools for the Data Life Cycle* and *MassBays' Seagrass Initiatives* (JC). *Publications* • Published manuscript to *Geosciences* journal, special edition on seafloor mapping. Article titled: *An inter-method comparison of drones, side scan sonar, airplanes, and satellites for eelgrass (Zostera marina) mapping and management*. Accepted on

	12/12/24; link forthcoming. (JC) *Awards* • Coastal Habitat Restoration Program Manager Jill Carr received the Gulf of Maine Council on the Marine Environment's Visionary Award at the Annual Awards ceremony (June 2025)
Upper North Shore	*Presentations* • Organized and hosted the 2026 Merrimack River Water Quality Roundtable (June 2026) • Presented on *Healthy Estuary Grant Project: Using UAV Technology to Enhance Long-term Coastal Monitoring Projects* at the Spring Hampton-Seabrook Estuary Collaborative Meeting and the June MassBays STAC meeting
Lower North Shore	*Presentations* • Presented at the Underwater in Salem Sound Lecture Series: One Million Seeds, Countless Lessons: Preparing for Large-Scale Seagrass Restoration (1/21/2026) • Presented at the Jubilee Yacht Club on Environmental Impacts in Salem Sound (2/19/2026) *Publications:* • Published report *Monitoring and Analysis of Five Salt Marsh Tidal Restoration Projects on the North Shore, Massachusetts* authored by Alison Fry, Barbara Warren (SSCW) for DER. • Putnam, A.B., Bastidas, C., Nichols, O.C. Clements, J.C., Ferknekees Hartshorn, E., Chin, D.W., **Frye, A.** et al. *Completing the journey in the global north: the Manila clam (Ruditapes philippinarum) (Bivalvia: Veneridae) arrives in the Northwest Atlantic Ocean. Biol Invasions 28, 163 (2026).* https://doi.org/10.1007/s10530-026-03861-z
Metro Boston	*Presentations:* • Led BHEN semi-annual fall meeting: "Intersecting SEAs: Combining Storytelling, Ecology, and Arts for Public Engagement with the Coastal Environment" (with local and regional artists) and BHEN spring meeting: "Conversations About AI in Coastal Science and Engagement" (with Wheaton College and MIT) • Hosted workshops: "Examining stress, social disruption and trust in the Massachusetts lobster fishery" (with the Massachusetts Lobstermen's Association) and "Examining stress, social disruption and trust in the Maine lobster fishery" " (with the Maine Coast Fishermen's Association) • Presented to the Nahant Conservation Commission "Proposed eelgrass restoration pilot" (09/17/2025); "Proposed eelgrass restoration site" (02/18/2026), and "Seeding the future: Restoring eelgrass and building community engagement across the MassBays NEP" (4/15/2026)

	• Presented to the Northeast Trawl Advisory Panel (NTAP) (7/17/25): Congressman Moulton Taskforce Research Update *Publications:* • Putnam, A.B., Bastidas, C., Nichols, O.C. Clements, J.C., Ferknekees Hartshorn, E., **Chin, D.W.,** Frye, A. et al. *Completing the journey in the global north: the Manila clam (Ruditapes philippinarum) (Bivalvia: Veneridae) arrives in the Northwest Atlantic Ocean. Biol Invasions 28, 163 (2026).* https://doi.org/10.1007/s10530-026-03861-z • Schultz, K. M., S. B. Scyphers, A. Randall Hughes, D. L. Kimbro, S. Kirk, and **J. H. Grabowski**. 2026. *Coastal residents' perceptions and attitudes of the visual impacts of oyster aquaculture cultivation methods along the Atlantic coast of the US*. Ocean & Coastal Management 271:107951. https://doi.org/10.1016/j.ocecoaman.2025.107951 • McClenachan, L., B. Neal, M. McMahan, E. Batchelder, N. Villanueva-Galarza, and **J. H. Grabowski**. 2025. *Fishers' local ecological knowledge reveals complex food web dynamics with rapidly warming waters*. Fish and Fisheries 26:1122-1133. https://doi.org/10.1111/faf.70021
South Shore	*Presentations* • Presented *MassBays work on Saltmarshes and Horseshoe Crabs* at the Duxbury Beach Symposium (11/20/2025) • Presented *South Shore Horseshoe Crabs* at the Duxbury Free Library in partnership with Duxbury Beach Reservation's ecology lecture series (5/13/2026)
Cape Cod	*Presentations* • Participated in the NEIWPCC Non-Point Source Conference on April 7-9, 2026 and co-presented posters on Public Boat Ramp Stormwater Projects including Scargo Lake site supported with MassBays funding. • Presented at the Biannual Cape Coastal Conference (April 13-14, 2026) including day one focusing on restoration and restoration site tours on day two. April Wobst served on panel discussing lessons learned and challenges with restoration; APCC staff presented on bog restoration and had poster on salt marsh restoration. • Presented at NEERS conference (April 22-25, 2026) and presented poster on salt marsh restoration. • Presented on river herring science and monitoring efforts to: Small Boats. Big Science. Cape Cod Commercial Fishermen's Alliance. (3/5/2026); Counting on a Comeback. River Herring Monitoring on Cape Cod. (3/20/2026) • Presented on the Childs River restoration and brook trout at the Mass Audubon Cape Cod Natural History Conference (3/7/2026) *Publications*

	• Coordinated public outreach effort helped highlight the importance of river herring and the need for volunteer monitors through a press release. The effort generated media coverage in the *Cape Cod Times* (2/9/2026), the *Upper Cape Enterprise* (2/3/2026), and on WCAI public radio (2/3/2026). • Gave interview with project partners to WBUR to highlight the Sesuit Creek salt marsh project (5/20/2026).

Strategy 3.1 Establish target (improved) water quality and habitat conditions for each embayment tied to desired uses and ecosystem services

Title	**Develop targets for diadromous fish habitat extent and condition (Central Staff)**
CWA Core Program	Protecting coastal waters through the National Estuary Program
Objective	Establish habitat goals to support diadromous fish migration, spawning, and feeding for MassBays embayments.
Partners	EPA, STAC, DMF, River Herring Network, MIT Sea Grant, Comprehensive Environmental Inc.
Status	Targets identified and incorporated into the MassBays ETT.
Accomplishments and deliverables	
Diadromous fish habitat targets identified	STAC members and additional subject matter experts used DMF's 2024 diadromous fish layer and interactive map as the basis to set long-term targets for diadromous fish migratory habitat (miles) and spawning habitat (acres). Targets for each of the five regional habitats have now been established. Meeting these will require successful implementation, by 2050, of almost 50 restoration projects across MassBays, including fish passage improvement, fishway maintenance, and dam removal. The ETT was updated to incorporate these data.

Strategy 3.2 Guide local action to expand habitat and improve water quality according to targets

Title	**Seed-based eelgrass restoration across MassBays (Central Staff)**
CWA Core Program	(7) Protecting Large Aquatic Ecosystems
Description/Objective	With **EPA/Restore America's Estuaries funding**, this partnership led by MassBays Central Staff and subawards to four of our five Regional Coordinators will restore eelgrass at seven sites across MassBays, with community engagement.
Partners	MVPC, BU, SSCW, NU, NSRWA
Status	Ongoing; pilot plantings were installed at restoration sites in Fall 2025, and monitoring indicates sites are suitable for full-scale planting in summers 2026 and 2027.

Accomplishments and deliverables	
Project management and implementation	Held project planning and check-in meetings, procured outreach materials and field supplies, Finalized and distributed the EPA-approved QAPP. Finalized all permitting (local, state, and Federal), Presented project concepts at an EPA-hosted international eelgrass conference, at local planning boards, and at a public lecture series. Deployed light and temperature loggers, monitored pilot plantings, scoped out full-scale sites.

Title	**East coast eelgrass restoration (Central Staff)**
CWA Core Program	(7) Protecting Large Aquatic Ecosystems
Description/Objective	Form partnerships and develop proposals for large-scale eelgrass restoration across its growing range. Coordinate restoration BMPs among NEPs.
Partners	NEPs, NERRs, academic institutions, and agencies from Maine to North Carolina
Status	Unsuccessful application submitted to NFWF. Reduced follow-up proposal currently under review by the private Allen Family Philanthropies.
Accomplishments and deliverables	
Develop scientific approach and establish partnerships	Convened NEPs and other partners on several occasions. Led proposal development to NFWF and contributed to proposal to AFP.

Strategy 3.3 Maintain MassBays' National Estuary Program status

Title	**Communications implementation (Central Staff, Cape Cod)**
CWA Core Program	All
Description/Objective	APCC Communications staff person continued assisting MassBays Central Staff with communications implementation
Partners	Program partners
Status	Quarterly newsletters delivered to 1000+ subscribers; social media accounts (Facebook, Instagram, LinkedIn) more recently establish and becoming more active; expanding and updating website (massbays.org) as of June 2026 (in progress)
Accomplishments and deliverables	
Quarterly e-newsletters	Four quarterly newsletters posted: Summer 2025 (873 subscribers, 40.2% opening rate) Fall 2025 (72 subscribers, 46.6% opening rate) Winter 2026 (949 subscribers, 49.9% opening rate) Spring 2026 (900 subscribers, 48.2% opening rate)
Social media	Instagram: massbaysnep 35 posts; 39 followers; 19 following LinkedIn: MassBays National Estuary Partnership 87 posts; 227 followers Facebook: https://www.facebook.com/massbaysnep/ 87 posts; 200 followers
Website updates	MassBays updated all massbays.org pages to comply with EOs.

Title	**STAC convening and programming (Central Staff)**
CWA Core Program	All
Description/Objective	Convene and support the Chair and committee that provides input and assistance to MassBays on science and research matters.
Partners	State and federal agency representatives, research scientists from agencies and academia, RCs, NGOs
Status	Standard Operating Procedures revised and updated.
Accomplishments and deliverables	
Meetings	STAC meets three to four times a year or as needed. See below for a general summary of discussions. Examples of meeting agendas: January 2026, June 2026.
Reviewed SOPs	STAC SOPs were revised and updated to align with the 2024 MassBays Management Committee SOPs.
Compiled RSP/LGC input	At each STAC meeting, the agenda included a brief session for input, updates and/or questions from the RSPs to make sure they can benefit from STAC's guidance and expertise and at the same time share the work and findings that they collect from their respective region to gain input.
Provided regular updates on STAC meeting discussions at the MC meetings and invited the MC members to make requests on priority issues they want feedback or research on	During the MC meetings, the STAC Chair provided a detailed update on the discussions that take place during STAC meetings. STAC Chair solicited ideas on topics and emerging issues that they would need guidance and more information and work on. All agreed that STAC will focus on questions and research that has an end point in management, to advance toward the goals in the CCMP.
Provided input for ongoing work by Central Staff and RCs	STAC provided input to the development of the diadromous fish target for the ETT and CCMP, and the outline for EDA 3.0. STAC has also served as a forum to share best practices and lessons learned; for example, at the request of the RCs for information about shellfish management practices, July 2025 STAC hosted a Christian Petitpas (DMF) to talk about shellfish growing area classification and management, and at the June 2026 meeting provided valuable discussion and input on opportunities to expand work on SAVs beyond eelgrass.

Title	**Management Committee meetings (Central Staff)**
CWA Core Program	All
Description/Objective	Convene and support the Chair and Management Committee at quarterly meetings
Partners	State and federal agency representatives, research scientists from agencies and academia, RCs, NGOs

Status	Four meetings convened FFY25.
Accomplishments and deliverables	
Organized and led four meetings (9/18/2025, 12/18/2025, 3/24/2026, 6/17/2026)	Meeting agendas included: • Discussed and provided substantial input on committee business • Updates from the subcommittees • Presentations on latest work by RCs and partners • Discussed new Director position including established ad hoc Search Committee • Approved Communications Plan for submission to EPA • Approved proposed FFY26 320 and IIJA work plans • Quarterly updates from the Regional Coordinators
Subcommittees	The *Executive Committee* met before upcoming Management Committee meetings to go over the agenda and critical items. The *Communications Subcommittee* reviewed and finalized the draft Communications Plan before submitting it to the Management Committee for approval. The *Nominating and Governance Subcommittee* continued to work with partners to invite/nominate Management Committee members to fill vacant seats. A representative from the MA Department of Transportation was brought on board. *STAC* - see item above An *ad hoc Director Search Committee* was convened to hire a new Director. The tole of that Committee ended when the new Director came on Board in January 2026. An *Annual Program Review Committee* was convened to conduct the first Annual Program Review which was wrapped up in April 2026). The Committee was made up of the Executive Committee and EPA.

Title	**RSP meetings, convening and collaboration (Metro Boston, Central Staff)**
CWA Core Program	All
Description/Objective	Convene and support the RCs as they implement their scopes of work, and identify areas of cross-collaboration and efficiencies
Partners	RSPs
Status	Streamlined progress reporting, new opportunities identified and funded
Accomplishments and deliverables	
Met in person with each RSP	Director met in person with each RSPs to talk about needs, priorities, and work plans (March-April 2026).
Convened RCs	Metro Boston RC organized an in-person meeting of Central Staff and RCs at UMB on 6/18/2026 at which all RCs attended.
Identified cross-region "hot topics" as well as topics for IIJA funds	Topics include examining reduction in intertidal blue mussel populations and means for documenting and responding; opportunities for tide gate restoration based on results from study funded by RAE; expanding work on SAVs beyond eelgrass; finding faster ways for

	processing large environmental datasets (such as SECWQALS); developing guidance and engaging communities in revising beach assessment plans; salt marsh parcel ownership investigation to enhance restoration opportunities; using drones and other technology for habitat monitoring; strategy to manage Saugus River issues.

C. New and Ongoing Projects and Activities (July 1, 2026 to June 30, 2027)

Strategies and Outcomes

MassBays' work over the coming year will implement components of our Interim CCMP and contribute to the following Outcomes:

A. Sustainable NEP
B. Improved habitat continuity and restored hydrology
C. Improved water quality
D. Resilient coastal habitat, including nature-based coastal protection
E. Restored natural communities
F. Robust interagency and interdisciplinary collaboration and partnerships
G. Well-informed, multisector input to decision making

Our proposed work with funding under Federal Fiscal Year 2026 is aligned with and driven by the following Goals and Strategies described in the CCMP:

Goal 1. MassBays provides new resources to support research and management in the Bays.
- Strategy 1.1 Make new data available, especially to address gaps in knowledge
- Strategy 1.2 Support valid (QA/QC) data collection and use
- Strategy 1.3. Analyze and present existing data in multiple formats to document baselines and trends

Goal 2. MassBays reaches all planning-area municipalities with actionable information about coastal habitats
- Strategy 2.1 Support and conduct research to address gaps in knowledge and inform policy and actions regarding ecosystem conditions and functions
- Strategy 2.2 Provide education, training, and technical support; share case studies (successful and not); and support collaboration and cooperation on specific topics
- Strategy 2.3 Facilitate access to decision making forums by impacted communities

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 to inform local action and progress toward target conditions.
- Strategy 3.1 Establish target (improved) water quality and habitat conditions tied to desired uses and ecosystem services, and document progress toward those targets.
- Strategy 3.2 Guide local action to expand habitat and improve water quality according to targets
- Strategy 3.3 Maintain MassBays' National Estuary Program status

Our proposed tasks are also closely related to the Clean Water Act Core Programs, which are:
(1) establishing water quality standards
(2) identifying polluted waters and developing plans to restore them (total maximum daily loads)
(3) permitting discharges of pollutants from point sources (National Pollutant Discharge Elimination System permits)
(4) addressing diffuse, nonpoint sources of pollution
(5) protecting wetlands
(6) protecting coastal waters through the National Estuary Program
(7) protecting Large Aquatic Ecosystems.

The tables of proposed activities below, organized according to MassBays' CCMP Strategies, include the following:

Title (Region), Budget/LOE: Activity name and MassBays geographic region in which it will be carried out, and non-s.320 funding and/or LOE (hours) to be committed by Central Staff or RSP (for region-specific projects)
Description*:* Status (New or Ongoing), project activities and objectives
CWA Core Program*:* Per list (1-7) above
CCMP Outcome*:* Per list (A-G) above
Partners*:* Collaborators not directly funded by MassBays/§320 funds
Timeline & Deliverables*:* Product(s) expected, and the quarter (Q1-Q4) projected for their completion

Strategy 1.1: Make new data available, especially to address specific gaps in knowledge

Title (Region), Budget + LOE	Description	CWA core program CCMP outcome	Partners	Timeline & Deliverables
Revise Monitoring Plan (Central Staff) 120h CS	***New*** Revise and update the monitoring plan to reflect habitat targets established in the 2023 CCMP. Reframe as a Monitoring Framework and Science Plan that includes research needs.	(6) Protecting coastal waters through the National Estuary Program (C) Improved water quality	STAC	(Q3) Draft revised and updated Monitoring Framework and Science Plan; (Q4) Final revised document incorporating input from STAC and others as needed.
MassBays Water quality monitoring program – SECWQALS (Central Staff) 200h ED & ES	***Ongoing*** CS: With FFY26 IIJA funding, maintain continuous monitoring buoys in three locations (details provided in FFY26 IIJA workplan) CS: Oversee grab sampling and water column profile monitoring including overall program management in sites near the continuous monitoring buoys to augment the sampling program, supervising RSP teams, and training staff, grab samples and profile sampling	(6) Protecting coastal waters through the National Estuary Program (C) Improved water quality	USGS, DEP, CCS, EPA Lab Chelmsford, SSU	(Q2-Q4) Volunteer monitoring completed. (SS) (Q3-Q4) Technical support to sampling in the bays (SS, LNS, UNS) (Q3-Q4) Report on water quality sampling for 2026 season (CS)
MassBays Water Quality Monitoring Program - SECWQALS (Lower Merrimack River) (Upper North Shore) (1.1, 1.2, 1.3)	***New*** UNS RC will help to coordinate regular sampling of water quality in the Lower Merrimack. RC will assist in scheduling and supporting seasonal sampling within lower Merrimack Basin and maintenance of the sensor.	(F). Robust interagency and interdisciplinary collaboration and partnerships; (G). Well-informed, multisector input to decision making	MassBays, Newburyport Harbor Master, MVPC	(Q3-Q4) Sampling schedule; date and plan; sampling schedule; volunteer list; field sheets; samples collected twice a month (9 events) Q2-Q4) Volunteer monitoring completed. (Q3-Q4) Technical support to sampling in the bays

50h UNS		(C). Improved water quality		
MassBays Water Quality Monitoring Program - SECWQALS (Salem Sound/ Danvers River) (Lower North Shore) 200h LNS	***Ongoing*** SECWQALS continuous WQ monitoring project and grab samples to better understand the nutrients and water quality in the Danvers River estuary and Salem Sound. RC and staff assist with water grab samples for better understanding of nutrients and water quality.	(6) Protecting coastal waters through the National Estuary Program (C) Improved water quality	USGS, MassBays central staff, Beverly Harbormasters, SSCW volunteers	(Q1, Q3, Q4) Sampling schedule (Q2) Report on MassBays and SSCW newsletters/website (Q2-Q4) Volunteer monitoring completed. (Q3-Q4) Technical support to sampling in the bays
MassBays Water Quality Monitoring Program - SECWALS (DKP) (South Shore) 200h SS	***Ongoing*** Assist with grab samples for better understanding of nutrients and water quality in Duxbury-Kingston-Plymouth Bays.	(6) Protecting coastal waters through the National Estuary Program (C) Improved water quality	USGS, MassBays CS, DBMS, CCS, Towns of Duxbury, Kingston, Plymouth,	(Q1, Q3, Q4) Sampling schedule Q2-Q4) Volunteer monitoring completed. (Q3-Q4) Technical support to sampling in the bays
Water Quality Monitoring Riverwatch Program (South Shore) 200h SS	***Ongoing*** Continue citizen monitoring in coastal waters to identify potential for remediation and source control, through the Riverwatch program in the North and South Rivers. Support existing water quality monitoring programs in Duxbury, Kingston, and Plymouth Bays (CWA 2)	(C) Improved water quality	Volunteers, Towns of Duxbury, Kingston, Plymouth, Hanover, Norwell, Scituate, Marshfield	(Q2-Q4) Volunteer monitoring completed. Bi-weekly reporting of results (Q3-Q4) Support water quality sampling for MassBays (SECWQALS), Duxbury Bay Management Commission, and Duxbury Bay Maritime School - Provide staff and technical support to sampling in the bays

Bacteria Monitoring Programs: Clean Beaches & Streams / Water Quality and Tributaries (Lower North Shore) 40h LNS	***Ongoing*** Identify sources of pathogen pollution to Massachusetts' waters, specifically Salem Sound and its tributaries, particularly illicit sewage discharges and faulty sewer and stormwater systems, and promote their remediation	(6) Protecting coastal waters through the National Estuary Program (B) Improved habitat continuity and restored hydrology	Manchester Coastal Stream Team, Volunteers	(Q3-Q4) (1) Copy of the training presentation and number of technicians trained; (2) Bacterial levels for 20-30 outfalls or streams under approved 2026 QAPP (Q1-Q4) Data results published to SSCW website and distributed to municipalities and volunteers (Q1-Q2) All data including past years will be uploaded to WQX
Cyanobacteria data analysis development to determine localized site-specific patterns based on community needs (Cape Cod) 105h RC	***Ongoing*** APCC will develop automated tools using the R programming language to enhance efficiency for data quality checks and basic summaries, trend analysis, and reports. The data visualization outputs could be used for communicating risks with health agents, developing reports, and on an as-needed basis for other presentations and management proposals. The underlying, quality-assured dataset will be used to inform Task 2 State of the Waters Annual Report.	(B). Improved habitat continuity and restored hydrology; (C) Improved water quality; (E). Restored natural communities; (F). Robust interagency and interdisciplinary collaboration and partnerships; (G). Well-informed, multisector input to decision making	Barnstable County, 15 Towns on Cape Cod, and watershed and pond organizations.	(Q1-Q4) (1) Tool that converts daily Survey123 exports into QAQC-ed reports for review by health agents, including plotted cyano data. (2) Tool that builds data plots for visualizing results from the most commonly requested data analyses. (3) Tool that incorporates deliverables from #1 and #2 into a final report. (Q1-Q4) Outreach to regional networks including the Cape Cod Ponds Network in order to share updates on monitoring, restoration, and the improved data analysis capacity (e.g., presentations, information, reports, etc.).

Coastal Acidification Monitoring and management (Central Staff) 20h ES	***Ongoing*** Year 2 - Incorporating the measurement of pCO_2 and pH as part of a continuous monitoring network.	(6) Protecting coastal waters through the National Estuary Program (C) Improved water quality	Towns of Duxbury, City of Beverly, towns along the Lower Merrimack River, EPA Region 1, USGS, NROC (funder NOAA IIJA)	(Q1-Q2) pCO_2 sensors deployed near the mouth of the Danvers River, in DKP, and in the Lower Merrimack River. (Q3) Data analysis and sharing to inform scientists and the shell fishing community. (Q4) Results will inform the coastal acidification monitoring plan developed by NECAN.
Coordinate the Outfall Monitoring Science Advisory Panel (MassSMAP) (Central Staff) 50h ED	***Ongoing/New C***onvene MassSMAP to track ambient monitoring data collected and conduct the tasks outlined in the draft Charter. Finalize research questions with MassSMAP to help MassBays to address gaps in understanding about cross-system boundary impacts.	(6) Protecting coastal waters through the National Estuary Program (C) Improved water quality	MassSMAP members	(Q2) Date/agenda of first meeting of MassSMAP to finalize Charter (Q2) 1-2 meetings to discuss research questions, set parameters, etc. (Q3-Q4) First meeting of MassSMAP to look at annual data from monitoring programs as well as discharges
Investigate causes of eelgrass loss in Wellfleet, MA (Central Staff) 40h CS	***Ongoing*** Support NPS to study causes of eelgrass loss and potential for recovery along the outer cape shoreline around Wellfleet, analyzing water quality data and of historic stressors. Completed data analysis of historic trends related to nutrients, temperature, oxygen, weather, fishing pressure, boating impacts, and eelgrass health. Final report is in preparation.	(2) identifying polluted waters and developing plans to restore them; (6) Protecting coastal waters through the National Estuary Program	National Park Service, Center for Coastal Studies, Boston University, UMB	(Q1) Technical Report on historic stressors (Q3) Final project report deliverables to NPS (Q4) outreach and public dissemination

Host and manage #MassWrack iNaturalist challenge (Central Staff) 24h CS	***Ongoing*** Continued monitoring citizen science data entries. Shared opportunities to use data for graduate-level investigation to UMB SFE and Biology students via a proposed joint application to the Massachusetts Environmental Trust (July 2025) that was not selected for funding. Continuing to look for funding.	(6) Protecting coastal waters through the National Estuary Program; (7) Protecting Large Aquatic Ecosystems	UMB	(Q2) Contact UMass faculty regarding students interested in a research project using the #MassWrack database (Q3) work with student to develop project and monitor progress
Assessing water quality and presence of Sea Brook Trout (Lower North Shore) 40h LNS	***Ongoing*** SSCW continues working with members of the Manchester Coastal Stream Team (MCST) to record temperature at Sawmill & Cat Brooks and sample eDNA for sea brook trout, herring, and rainbow smelt. Support cold water fisheries DEP efforts.	(6) Protecting coastal waters through the National Estuary Program (E) Restored natural communities	MCST volunteers	(Q1-Q4) List of meetings attended (Q3-Q4) Summary of results of temperature HOBOs
Salt Marsh Vulnerability Assessment and Restoration (Lower North Shore) 175h SS	***Ongoing*** Building on results of 2023-25 “South Shore Salt Marsh Restoration Prioritization" project, engage community to initiate plans for pilot-scale saltmarsh restoration projects. Pursue funding and complete conceptual design and initiate permitting at 1 to 3 sites. Work with volunteers to monitor salt marsh vegetation changes	Resilient coastal habitat, including implementation of nature-based coastal protection measures	Towns of Scituate and Marshfield. Cohasset Center for Student Coastal Research, Scituate High School, Dock owners, Salt Marsh Working Group	(Q3-Q4) (1) Implement targeted assessments of 1-3 local saltmarsh parcels; (2) Recruit and support dock owners in collection of salt marsh data - Report on findings and project participation in outreach materials; (3) Develop photo stations for long term saltmarsh change assessment through citizen science (Q1-Q4) MassECAN Salt Marsh Working Group

	through the Salt Marsh Sentinels program (ongoing). Participate in the Saltmarsh Working Group. ***New*** Develop saltmarsh Photo stations and protocol for Citizen Science.			
Horseshoe Crab Spawning Surveys (Lower North Shore, South Shore) 100h LNS 75h SS	***Ongoing*** Conduct horseshoe crab spawning surveys in Salem Sound and Duxbury Bay to assess the population (CWA 7)	(6) Protecting coastal waters through the National Estuary Program (E) Restored natural communities	DMF, Town of Duxbury, Duxbury Beach Reservation Inc., Mass Horseshoe Crab Advocates Steering Committee, volunteers, municipalities	(Q1-4) Number of sightings reported through survey; list of monitoring days and number of volunteers (Q3-4) International Horseshoe Crab Day on June 20; website, newsletter, social media; survey and monitor training (Q4) Survey and monitoring results
Monitor and restore blue mussels (Lower North Shore, South Shore) NOTE in SS WP under 1.2 100h SS 100h LNS	***Ongoing*** RC develop and implement blue mussel monitoring at select intertidal areas throughout summer and revisit old (2005) tidepool surveys South shore multi-year monitoring of mussels in the near subtidal and low intertidal to benefit migratory shorebirds and restore a crucial hard-bottom species at the mouth of the North and South Rivers ***New*** In conjunction with other MassBays regions,	(6) Protecting coastal waters through the National Estuary Program (E) Restored natural communities (G) Well-informed, multisector input to decision making	Mass Audubon, US Air Force (Hanscom/4th Cliff), Citizen Science MassBays LNS volunteers	(Q1-Q4) (1) Memo of methods explored and preferred protocols for long-term intertidal monitoring (2) Number of sightings reported through blue mussel survey using iNaturalist; (3) Conduct mussels surveys at 4th and 3rd cliffs - Data: Mussel bed extent, density, and size ranges; (4) Survey and monitoring results of local population monitoring; list of days monitor (Q4) Final report on 2027 surveys

	develop and share community science mussel survey, develop and implement blue mussel monitoring at select intertidal/dock areas throughout summer.			
Marine Invasive Monitoring and Management (Upper North Shore) 75h UNS	***Ongoing*** Conduct seasonal monthly monitoring of marine invasive species as part of the state MIMIC program. 5 sites in Ipswich, Essex, Gloucester, and Rockport. Participation in other invasive species management efforts including green crab management through the Green Crab Task Force; and other coastal invasives (e.g. Pepperweed and phragmites)	(E). Restored natural communities; (F). Robust interagency and interdisciplinary collaboration and partnerships; (G). Well-informed, multisector input to decision making	MA EEA, CZM; Senator Tarr's Office; Governor's Academy; Mass Audubon; Parker River National Wildlife Refuge; municipalities	Electronic datasheet delivered to CZM, cc: MassBays, field data integrated into MVPC internal 8TGM Fieldmap [Q1 (2026 report), Q3, Q4 (fieldwork)] Monitoring and management of other coastal invasives (Q1-Q4) Data including maps, photos and data sheets; management areas integrated into MVPC internal 8TGM Fieldmap; meeting notes from Green Crab Task Force and deliverables produced through Task Force Meetings
Marine Invasive Species Monitoring (Lower North Shore) 145h LNS	**New, Ongoing** Monitoring of marine invasive species at established field sites in cooperation with MIMIC program. Monitor non-native Manila clam (*Ruditapes sp.*) along North Shore (northern-most Atlantic extent).	(6) Protecting coastal waters through the National Estuary Program (E) Restored natural communities (G) Well-informed, multisector input to decision making	CZM, *Ruditapes* working group, volunteers	(Q1, Q3-Q4) List of outreach materials (Q3-Q4) Date of MIMIC training, data submitted to CZM (cc MassBays) (Q3-Q4) Monitor Manila clam (*Ruditapes*) along North Shore and participate in working group - List of monitoring dates and findings, list of working group meetings attended

Monitoring Marine and Wetland Invasive Species (South Shore) 105h SS	***Ongoing*** Monitor established field sites for non-native species in cooperation with CZM	(E). Restored natural communities;	CZM, DBNS	(Q3) Number of volunteers (Q4) Data submitted to CZM and included in outreach materials Annual Science Monitoring Report
Monitor diadromous fish runs (South Shore, Cape Cod) 150h SS 200h CC	**Ongoing** Since 2007 this citizen monitoring program provides local, state and federal fisheries managers with population estimates of river herring at monitored runs to inform protection, restoration and management efforts. SS RC Support citizen monitoring of fish runs by training, data management, QA/QC, reporting, and other assistance. Support Fish School herring outreach program. (CWA7) CC RC will provide partners and volunteers with training, data management, QA/QC, reporting, and other assistance.	(B). Improved habitat continuity and restored hydrology; (E). Restored natural communities; (F). Robust interagency and interdisciplinary collaboration and partnerships; (G). Well-informed, multisector input to decision making which includes underserved communities	DMF, NOAA Fisheries, River Herring Network, South Shore towns NOAA Restoration Center, River Herring Network, Cape Cod Conservation District (CCCD), Cape Cod Cooperative Extension/WHOI Sea Grant, Cape, towns, and NGOs	SS: (Q1-Q4) Outreach and training: number of participants (Q2) Reconnaissance of SS herring runs for potential blockages. List of activities and number of attendees (Q3) Volunteer effort reported for Spring 2027; (Q4) Final data report for 2027 herring counts submitted to DMF and MassBays CC: (Q1-Q4) Summary of communications number of volunteers. (Q1) Final data report for 2026 herring counts submitted to DMF, cc: MassBays (Q2-Q3) Training dates and number of volunteers trained in Spring 2027; training and outreach materials. (Q3) Number of volunteers, copy of e-newsletters (Q4) Draft data report for 2027 herring submitted to DMF, cc: MassBays (Q1) River Herring Ne Event agendas, number of participants (Q1-Q4) (1) Provide annual update to the River Herring Network and to

				the public Annual meeting held in the fall. (2) Provide annual update to the River Herring Network and to the public, Presentation or outreach materials to the river herring network; press releases
Winter Birding Surveys (Lower North Shore) 40h LNS	***New*** Reinvigorate long-term monitoring of winter waterfowl that was started in 1988 in response to a gap in survey locations. Volunteer data helps track long-term trends, indicating ecosystem health.		SSCW Board, volunteers	(Q1-Q3) Number of volunteers trained and copy of training presentation, copies of public outreach material (Q1-Q2) Dates, locations, and number of volunteers per survey (Q1-Q3) Spreadsheet of data

Strategy 1.2: Support valid (QA/QC) data collection and application

Title (Region), Budget + LOE	**Description**	**CWA core program CCMP outcome**	**Partners**	**Timeline & Deliverables**
Tools for Citizen Science Monitoring: AquaQAPP, MassWateR, and AquaSensR (Central Staff) 300h CS (external funding) 20h CS (S.320)	***Ongoing*** This suite of tools increase the quality and quantity of community-science data accessible and usable by decisionmakers. AquaQAPP ***(IIJA funding***) is currently being revised to meet new EPA standards and fulfill wish list improvements based on user feedback. MassWateR and AquaSensR (***EN funding*** *for development, and* ***S.320***	(2) Identifying polluted waters and developing plans to restore them	Center for Coastal Studies, Ethan Mick LLC, Monitoring Coordinators Network, DEP, EPA Region 1, ASACAK LLC, EnviroDev LLC	(Q1-Q4) provider technical assistance to users on existing tools, (Q1-Q2) new tool functionality development, (Q3) beta-testing versions of tools, (Q4) tool refinement based on beta testing feedback

	funding *for long-term oversight in out-years*) are being developed to reduce technological barriers by creating Shiny App user interfaces.			
Support state-wide eelgrass mapping (Central Staff) 280h CS (external funding)	***Ongoing*** Funded through an **interagency service agreement** with MassDEP, this project aims to conduct field work to ground-truth aerial surveys of eelgrass extent and density.	(2) Identifying polluted waters and developing plans to restore them (informs DEP's integrated listing); (7) Protecting Large Aquatic Ecosystems	DEP, SSCW	(Q1) Boat-based field surveys, approximately 15 days, (Q2) Data management and reporting, (Q3-Q4) Polygon QA/QC and final reporting
Seeding the future: Restoring eelgrass and building community engagement across the MassBays NEP (RAE Grant) (Upper North Shore) 449h UNS (Y1:229, Y2:165, Y3:55)	Implementing seed-based eelgrass restoration approaches across the MassBays NEP service areas to jump-start the recovery of eelgrass, increase community engagement, test the success of emerging restoration approaches, and build awareness and momentum for this work.	(B). Improved habitat continuity and restored hydrology; C. Improved water quality; D. Resilient coastal habitat, including nature-based coastal protection	MassBays, SSCW, Northeastern, NSRWA, RAE	(Q1-Q4) Attend second Advisory Committee meeting to provide overview of project status and get feedback; Data management, semi-annual reporting, bi-weekly team meetings, development of RAE Viewer for data collection (Q1) Complete 1-month monitoring and removal of BuDS anchors where used; Plant "Treatment 2"; finalize Year 1 data management & analysis; Process and maintain shoots and seeds in tanks, assess viability. (Q3) Monitor Y1 planting sites, monitor collection sites for seed maturity; data management; Collect flowering shoots, transport, process and maintain shoots and seeds in

				tanks, assess viability, build planting units. (Q4) Collect flowering shoots, transport, process and maintain shoots and seeds in tanks, assess viability, build planting units; Plant "Treatment 3"; Clean/download/ relaunch HOBOs (Q2) Conduct outreach and engagement programming, implement lesson plans
Riparian Habitat Monitoring and Restoration (Upper North Shore) 100h UNS	RC will advance local restoration projects in the Lower Merrimack River watershed. This will include identifying and assessing barriers (bridges, dams, culverts) and building local capacity for this work, as well as identifying and supporting ongoing stream barrier removal projects. RC will continue to develop technology-based data collection systems and inventory tools with MVPC's GIS team.	(B). Improved habitat continuity and restored hydrology (C). Improved water quality; (E). Restored natural communities; (F). Robust interagency and interdisciplinary collaboration and partnerships; (G). Well-informed, multisector input to decision making	local communities, DER, EEA	(Q1-Q4) (1) Total number and location of barriers assessed, link to NAACC database with all field data and MVPC's Culvert viewer (2) MVPC's Culvert Viewer and integration with other MVPC GIS products (3) Summary of projects supported, list of groups/meetings attended, deliverables (e.g. plans, grant applications, surveys, reports, etc.)
Coastal Habitat Monitoring and Restoration (also 3.2**) (Upper North Shore)**	Continue to advance long-term coastal monitoring projects, including exploration of drone use in	(D). Resilient coastal habitat, including nature-based coastal protection;	MassBays, CZM, SSCW, NSRWA, PRNWR, Mass Audubon, TTOR	(Q1-Q4) Datasheets, site maps, aerial and LiDAR imagery, collected field data integrated into MVPC internal 8TGM Field map

125h UNS	saltmarsh habitat monitoring; marsh wrack mapping; mussel surveys; and supporting other coastal projects as they arise (e.g. dune planting, etc.)	(F). Robust interagency and interdisciplinary collaboration and partnerships; (G). Well-informed, multisector input to decision making		(Q4) List of orgs/communities engaged, meeting notes, major project deliverables

Strategy 1.3 Analyze and present existing data in multiple formats to document baselines and trends

Title (Region), Budget + LOE	**Description**	**CWA core program CCMP outcome**	**Partners**	**Timeline & Deliverables**
Supporting use of AquaQAPP and WQX templates (South Shore) 20h SS	(Ongoing) Support monitoring groups in the use of online QAPP generator and data upload tool	(C). Improved water quality	DEP, EPA, CSCR, DBMS	(Q1-Q4) (1) Details on usage of AquaQAPP and WQX data upload tool to CSCR and DBMS on how to upload their WQ data; (2) Saltmarsh monitoring QAPPs
Data Integration (and 2.1) **(Upper North Shore)** 30h UNS	Work to improve digital data collection platform for coastal datasets to integrate all efforts into a comprehensive online data tracking and management system. Additionally, create a new public-facing viewer to share efforts and data with communities, including municipal reps and decision-makers.	(G). Well-informed, multisector input to decision making	MVPC GIS dept; 8TGM	(Q1-Q3) Advancement of internal data collection and tracking platform - MVPC Eight Towns and the Great Marsh Inspector (online Fieldmaps platform); Coastal Data Viewer for public (online platform link shared) (Q3-Q4) Meeting agenda and materials showcasing public coastal data viewer to 8TGM committee

Strategy 2.1 Support research to inform policy and actions

Title (Region), Budget + LOE	**Description**	**CWA core program CCMP outcome**	**Partners**	**Timeline & Deliverables**
Externally funded eelgrass research projects (Central Staff) • WHOI Sea Grant • MIT Sea Grant 500+h CS (external funding)	***Ongoing*** Two eelgrass research projects will address scientific and management gaps pertaining to restoration and conservation issues. Topics include seed-based eelgrass restoration and eelgrass-aquaculture interactions.	(6) Protecting coastal waters through the National Estuary Program	DMF, NU, SSCW, WHOI Sea Grant, MIT Sea Grant	(Q1-Q2) Field and lab studies (Q3-Q4) data analysis and progress reporting
Health Estuaries Grant Program (Central Staff) 200h ED/ES	***New*** FFY2024 and FFY2025 funding will be applied to another round of small grants in 2026, making a total of $$90,600 available.	(6) Protecting coastal waters through the National Estuary Program (E) Restored natural communities (C) Improved water quality	New grantees TBD	(Q2) Post RFR for new round of grants; select awardees by review committee. (Q2) Scopes of work and subawards set up. (Q3) Post a PR and update online information
Investigating eelgrass conditions, water quality in Duxbury-Kingston-Plymouth Bays (South Shore) 190h SS	***Ongoing*** In coordination with DMF and MassBays Central Staff, and informed by an expert group, implement a rapid assessment protocol with citizen scientists to conduct more frequent monitoring	(E) Restored natural communities	DMF, DBMS, Town of Plymouth, Town of Duxbury, Town of Kingston, Island Creek Oysters	(Q3-Q4) Volunteer training materials, number of volunteers trained (Q2-Q4) Eelgrass restoration - Conducting seed collection, germination, planting, and monitoring

	and understand the causes of eelgrass loss. (CWA 7) ***New*** conduct seed-based eelgrass restoration in DKP Bay funded by RAE with in-kind support from local organizations			
Salt Marsh & Living Shoreline Monitoring on the North Shore, MA (Lower North Shore) 312h LNS	***Ongoing*** Conduct monitoring to observe and document changes in salt marsh vegetation, salinity, and erosion	(6) Protecting coastal waters through the National Estuary Program	Friends of Good Harbor, City of Salem, other local stakeholders, Ramboll & USACE	(Q1, Q4) Conduct vegetation and salinity monitoring, bank erosion - Enter data; field notes, photos; Photodocumentation - From marsh and living shoreline monitoring
Coastal habitat research (Metro Boston) 320h MB	***New*** Collaborate with partners to expand data collection around coastal habitat-forming and/or aquaculture bivalve species, including the RAE-funded seed-based eelgrass restoration project and MIT Sea Grant-funded eelgrass-aquaculture interactions project. Additional projects may include research on Manila clam populations and predation, complementing ongoing monitoring by partners, to better understand ecological	Robust interagency and interdisciplinary collaboration and partnerships	NUMSC, SSCW, MassBays, UMB, DMF, EPA, municipal staff (Conservation Commissions, harbormasters, shellfish constables), MIT Sea Grant, aquaculture farmers, CZM, Stone Living Lab, or other project partners as identified	(Q4) Coordinate RAE eelgrass restoration project at Metro Boston and Lower North Shore sites - Dates of field work; List of outreach events and numbers of participants (Q4) Begin MIT Sea Grant eelgrass-aquaculture project - List of permissions and permits obtained; Dates of field work (Q4) Convene a meeting of interested potential project partners to refine Manila clam research priorities - Summary of potential collaborative research

	dynamics and potential economic implications of an emerging invasive aquaculture species.			or research proposals generated from Manila clam research meeting
Implementation and Monitoring of Dam Removals and Fish Passage (South Shore) 120h SS	***Ongoing*** Work with regional communities and other partners to assess feasibility and seek funding for removal of dams and other barriers and collect ecological data pre- and post-restoration (CWA 7)	(B). Improved Habitat Continuity and Hydrology	Sea Run Brook Trout Coalition, Trout Unlimited, DFG, Hanover Mall, NOAA Fisheries, US FWS, DER, Town of Norwell, Town of Marshfield, Town of Duxbury, Town of Hanover and Pembroke, Audubon, Wildlands Trust	(Q1-Q4) (1) Design and permit summary for fish ladder at Jacob's Pond (Norwell, MA); (2) Temple Street Dam, Chandler Pond Dam (South River) – Outline of next steps based on initial data collection; (3) Continue public engagement in future effort to remove Indian Head River Dams. – Annual progress report; (4) Initiation of Feasibility study for Pudding Brook Cranberry Bog Restoration

Strategy 2.2 Provide education, training, and technical support; share case studies (successful and not); and support collaboration and cooperation on specific topics

Task Title (Region) Budget + LOE	**Description**	**CWA core program CCMP outcome**	**Partners**	**Timeline & Deliverables**
Conduct Watershed and Coastal Science Education and Outreach (Cape Cod)	***Ongoing*** Communicate about Cape Cod-based activities to the public, including MassBays communities, LGC members and other partners, featuring	(A).Sustainable NEP; (B). Improved habitat continuity and restored hydrology;	Barnstable County Coastal Resources (Sub)Committee (LGC), Cape Cod Commission, EPA SNEP, Cape Cod Cooperative Extension,	(Q1-Q4) (1) List of outreach and recipients (e.g., towns), (2) List of accommodations made, sample notices to new audiences and communities, networks, organizations, volunteers, etc.)

70h CC	MassBays' support. The goal is to inform and motivate public action and support collaboration and cooperation to restore and protect coastal ecosystems and water quality. Project descriptions will be disseminated via multiple outlets, including presentations, newsletters, and websites. Traditionally underserved communities contribute to local decision-making regarding resource management.	(C). Improved water quality; (D). Resilient coastal habitat, including nature-based coastal protection; (E). Restored natural communities; (F). Robust interagency and interdisciplinary collaboration and partnerships; (G). Well-informed, multisector input to decision making	River Herring Network, DMF, Mashpee Wampanoag Tribe, NOAA Restoration Center, WBNERR, and others.	(3) Website URLs and content (Q3-Q4) Conference agenda, including MassBays' logo, list of new subscribers to MassBays newsletter
Advancing stormwater remediation (South Shore) 25h SS	***Ongoing*** Provide outreach and technical support re: stormwater management, including LID (CWA 4), nutrient reduction, green infrastructure	(C) Improved water quality	DEP, South Shore Towns	(Q1-Q4) MS4 Outreach - Documentation of support provided for stormwater improvement projects and NPDES compliance Documentation of grant scoping and writing support provided
Conducting Watershed and Coastal Science Education (South Shore) 50h SS	***Ongoing*** Engage diverse learners in watershed and coastal science education, bring new audiences to MassBays' mission, participate in classroom and field professional development for teachers (CWA 6)	(G) Well-informed, multisector input to decision-making	Marshfield Community Television, Norwell Community Television, CCSCR, Mass Audubon, Scituate High School, UMB, CCS	(Q1-Q4) list of accommodations made, sample notices to new audiences (Q2) Publication of annual report on monitoring focused on citizen science

				(Q4) Documentation of education and outreach efforts on coastal topics (Q4) List of publications and presentations by title, venue or publication, and date
Representing MassBays to relevant networks (South Shore) 100h SS	***Ongoing*** Convene and provide input to existing working groups on topics relevant to MassBays' desired outcomes (CWA 6)	(F) Robust Interagency and Interdisciplinary Collaboration and Partnerships	New England Estuarine Research Society, MassRivers, South Shore Climate Network, Coastal and Estuarine Research Federation, River Herring	(Q1-Q4) List of networks that include MassBays as a member
Boston Harbor Habitat Atlas (Metro Boston) 320h MB	***Ongoing*** Update and add to the Boston Harbor Habitat Atlas (BHHA), including data migration and updates to species cards.	(6) Protecting coastal waters through the National Estuary Program (G) Well-informed, multisector input to decision making	NU: project partners BHEN: feedback	(Q1-4) New and updated content available online at BHHA website
Support municipal and regional actions that promote resilient coastal habitats and communities using nature-based solutions (Lower North Shore, South Shore)	***Ongoing*** LNS RC continues to work with partners and communities to encourage planning for climate change and adoption of adaptation measures that promote resilient coastal habitats, and use of nature-based solutions for coastal resilience ***new/ongoing***	(6) Protecting coastal waters through the National Estuary Program Resilient coastal habitat, including implementation of nature-based coastal protection measures	Municipalities in LNS BHEN groups and municipalities (e.g. Saugus River Watershed Council, Rumney Marsh Conservancy, City of Lynn, City of Quincy, Town of Weymouth) as identified	(Q1-Q4) List of outreach events and other actions taken to assist communities in implementation of coastal resilience projects (UNS) (Q2) Letter of support for at least one proposal for implementation (UNS)

300h LNS 120h MB 50h SS	MB RC Support municipal and regional groups that promote resilient coastal habitats and communities using nature-based solutions in the Metro Boston region ***Ongoing*** SS RC Coordinate South Shore Climate Group for joint outreach and education efforts, support MVP. (CWA 6). ***New*** SS RC Support towns of Scituate and Cohasset in their Gulf River Comprehensive Restoration Planning Project		South Shore towns, CZM, MAPC, UMB	(Q1-Q4) Dates and locations of two site visits; Numbers of participants (MB) (Q4) Assist low-capacity municipal and community-based groups in exploring conservation and restoration needs in their watersheds (MB) (Q4) Documentation of MVP community support provided (SS) (Q1-Q4) SSCG meeting agendas (SS)
Greenscapes Program (Lower North Shore) 200h LNS	***Ongoing*** Create and disseminate outreach information, activities, and materials on stormwater management to Greenscapes member communities.	(6) Protecting coastal waters through the National Estuary Program	Ipswich River Watershed Association, Merrimack Valley Planning Commission, 28 municipalities in Essex County	(Q1 - Q4) (1) List of participating communities; (2) Links to/copies of outreach products; (3) Number of schools, students, parents, and teachers reached through the Keeping Water Clean (KWC) school program
Cleanups and Coastsweep (Lower North Shore) 100h LNS	***Ongoing*** Host cleanup events with volunteers and local organizations to reduce marine debris, promote awareness, and institute behavior changes	(6) Protecting coastal waters through the National Estuary Program	Volunteers, local organizations, local schools	(Q1-Q4) List of cleanup events, number of volunteers, and amount of trash removed. Submit tabulated Coastsweep counts and number of volunteers to CZM.

				(Q1, Q3-Q4) (1) Documentation of litter reduction projects other than cleanups; (2) List of publications (newsletter, social media, tabling)
Upper North Shore Local Governance Committee: 8TGM (Upper North Shore) 40h UNS	***Ongoing*** RC will continue to convene and advance work of the 8TGM Committee. Particular effort will be spent building a forum for regional information sharing and collaboration, as well as identifying and advancing projects that address interests and needs of the region.	(F). Robust interagency and interdisciplinary collaboration and partnerships	MassBays, MVPC, Communities of: Amesbury, Salisbury, Newburyport, Newbury, Rowley, Ipswich, Essex, Gloucester, and Rockport	(Q1-Q4) (1) 8TGM meetings agendas; (2) 8TGM project initiatives (e.g. website improvements, updated signage, explore training opportunities for municipal boards/committees). Deliverables will be specific to project advanced; (3) List of Representatives serving on LGC
Upper North Shore Specific Program Development (Upper North Shore) 30h UNS	***Ongoing*** Partnership building and project development and implementation with organizations on the upper north shore. E.g. PIE-Rivers Steering Committee, ECAN SMWG, NECC, NS Water Resilience Task Force, Green Crab Task Force, Greenscapes.	(F). Robust interagency and interdisciplinary collaboration and partnerships	Federal, State, and municipal entities, nonprofits, businesses, and government agencies with environmental and coastal-related jurisdiction or management on the north shore and the Great Marsh	(Q1-Q4) (1) List of networks that include MassBays RC as a member; (2) Quarterly updates to the MassBays Management Committee regarding local initiatives and progress

Strategy 2.3 Increase and maintain input from many partners for CCMP implementation and updates, through MassBays' organizational structure and operations

Title (Region), Budget + LOE	Description	CWA core program CCMP outcome	Partners	Timeline & Deliverables
Increase awareness of MassBays' work in the Metro Boston region (Metro Boston) 240h MB	***Ongoing*** Expand the audience for and increase awareness of MassBays' mission and work in the Metro Boston region, especially by engaging low-capacity communities	(6) Protecting coastal waters through the National Estuary Program (G) Well-informed, multisector input to decision making,		(Q1-4) Monthly newsletters distributed via email to the entire BHEN network; (Q4) Dates and locations of meetings; Numbers of participants; Meeting materials made available to BHEN
Merrimack River Water Quality Improvements and Conservation (Upper North Shore) 100h UNS	***Ongoing*** Advance regional goals to improve water quality and health of the Merrimack River and its tributaries. Oversee and provide administrative and technical support to the Merrimack River Collaborative in collaboration with MVPC, MRWC and Northern Middlesex Council of Governments (NMCOG). Support other parallel Merrimack River efforts focused on water quality, and water conservation (e.g. Merrimack River Water Quality Roundtable; Early Alert Tool; MVPC Regional Infrastructure and Stormwater Collaborative; Net Zero Water Conservation, WWTP, etc.)	(C). Improved water quality; (G). Well informed, multisector input into decision making	MVPC, MRWC, NMCOG, Merrimack River communities, Upper North Shore Legislative Delegation, Northern Essex Community College, Municipal Wastewater Utilities, Merrimack River recreational users	(Q1-Q4) Coordinate and host bi-annual MRC meetings - Meeting agenda; MRC Annual Report Support annual Merrimack River Water Quality Roundtable (Q2-Q3) Agenda and meeting materials (Q1-Q4) Advance local and regional water quality goals and conservation planning along the Merrimack - MRC water quality monitoring, Project reports, Water conservation project reports; Agenda and slides for annual Merrimack River Water Quality Roundtable

Strategy 3.1 Establish target (improved) water quality and habitat conditions for each embayment tied to desired uses and ecosystem services

Title (Region), Budget + LOE	Description	CWA core program CCMP outcome	Partners	Timeline & Deliverables
Review, update and expand utility of EDA: EDA 3.0 (Central Staff) 200h CS	***New*** Conduct comprehensive revision and update of EDA to develop EDA 3.0.	(6) Protecting coastal waters through the National Estuary Program All CCMP outcomes	STAC, EPA	(Q1) Finalize list of metrics and associated datasets, new and existing as needed; design and build a WebApp to organize and display these layers (Q2-Q3) Statistical analyses of estuarine resources and stressor metrics for all 68 assessment areas. Results will include a geospatial resource-stressor analysis for each assessment area.
Develop Data Visualization Tool (Central Staff) 100h CS	***Ongoing (pending funding)*** Select a platform to improve accessibility to quality data about embayments for internal and external users	(6) Protecting coastal waters through the National Estuary Program All CCMP outcomes	STAC, EPA OST	(Q1) (Q2-Q3) Phase 2: Develop a WebApp to host EDA 3.0 as well as a stressor analysis tool. Same look and feel as the ETT and include links to transition between EDA 3.0 and ETT.

Strategy 3.2: Guide local action to expand habitat and improve water quality according to targets

Title (Region), Budget + LOE	Description	CWA core program CCMP outcome	Partners	Timeline & Deliverables
Promote Low-Impact Development	***Ongoing*** Promote and implement Low Impact Development (LID) and	(6) Protecting coastal waters through the National Estuary Program	Greenscapes North Shore Coalition; LNS municipalities	(Q4) List of outreach materials and communities reached to promote LID

(Lower North Shore) 40h LNS	stormwater green infrastructure in MassBays communities.	All CCMP Goals		and stormwater management projects (Q1-Q4) Photo documentation of Commercial Street and Winter Island rain gardens in Salem
Identify and implement coastal restoration, stormwater mitigation, and low-impact development projects ("restoration projects") (Cape Cod) 260h CC	***Ongoing:*** CC RC will continue to work with partners and communities to encourage planning and promote resilient coastal habitats, and use of nature-based solutions for coastal resilience through restoration, stormwater mitigation, and low-impact development projects ("restoration projects"). 3 components: 1) Collect information and support regional coordination and communication on ongoing and potential restoration projects; 2) Update the existing GIS-based dataset and map(s), incorporating APCC monitoring and assessment data (e.g., State of the Waters: Cape Cod) and other sources, to identify regional program priorities (e.g., areas for restoration, preservation,	B. Improved habitat continuity and restored hydrology; C. Improved water quality; D. Resilient coastal habitat including nature-based coastal protection; E. Restored natural communities; F. Robust interagency and interdisciplinary collaboration and partnerships; G. Well-informed, multisector input to decision making	Buzzards Bay Coalition, Cape Cod Commission, CCCD, Barnstable County Coastal Resources (Sub)Committee, Mass Audubon, DER, CZM, DMF, Mashpee Wampanoag Tribe, Natural Resources Conservation Service, and 15 Cape Cod Towns	Ongoing: List of new staff and interns. New training materials and templates as available Part1 (Q1-Q4) (1) Semi-annual regional planning meetings with partners to support collaboration and communication for existing projects and identification and prioritization of future project needs. (2) Regular meetings with partners to discuss and support collaboration on specific restoration types including salt marsh, river and bog, fish passage, stormwater and others. (3) Semi-annual Barnstable Coastal Resources Committee meeting participation as LGC, as scheduled. <u>Deliverables</u>: List of restoration partners, meeting agendas/notes Part 2. (Q1) Continue reviewing

	research or monitoring, etc.). 3) Implement restoration projects, including grant writing, project development, monitoring, assisting with and/or managing restoration projects, and other activities that support implementation.			and update to Cape Cod restoration project inventory. (Q1-Q3) Update GIS-based dataset with revised restoration data and new Part 3 (Q1-Q4) (1) List of projects and type of technical assistance provided; reports produced; (2) List of communities assisted, and type of assistance provided to each.
State of the Waters: (SOTW) Cape Cod Report & Data Management (Cape Cod) 125h CC	The "State of the Waters: Cape Cod" reports on the condition of the Cape's coastal and fresh waters. Progress towards improving water quality and successes is highlighted in the report and website. In 2025, APCC updated data management and processing methods to streamline index calculations and outputs, removing human error and improving efficiency. Used R to generate scores for ranking as well as collaborating with the Cape Cod Commission to acquire long-term datasets (2015-2024) from data sources across Cape Cod. In FY27 are	C. Improved water quality; F. Robust interagency and interdisciplinary collaboration and partnerships; G. Well-informed, multisector input to decision making	CCS, Buzzards Bay Coalition, Cape Cod Commission, UMass-Dartmouth, towns, WBNERR, and environmental organizations conducting monitoring.	(Q1) (1) Report including updates from 2026 data management and processing efforts. (2) Maintenance and updates to R script (text file and rmd file) (3) Exported ArcGIS Pro maps (pdf/jpeg) for individual monitoring categories showing acceptable/ unacceptable ranking status (4) Link(s) to updated web content at https://capecodwaters.org (Q2-Q4) R script (text file and rmd file) (Q3-Q4) Final list of data

	to 1) update the 2026 SOTW Report and 2) continue developing the R scripts to generate summary plots to review data and provide comparisons and trends over time for the 2027 SOTW Report.			sources incorporated into 2027 update report (Q4) (1) Combine and format acquired datasets; (2) Run program scripts to generate updated index scores and ranking: draft results from R script (Excel or pdf)
Regional Resilience (Upper North Shore) 50h UNS	UNS RC will advance various regional resiliency initiatives aimed at bolstering local preparedness for and response to intensifying impacts. Projects will depend on funding.	(F). Robust interagency and interdisciplinary collaboration and partnerships; (G). Well-informed, multisector input to decision making	MassBays, CZM, EEA, Local municipalities	(Q1-Q4) (1) List of communities engaged, meeting notes, shared project deliverables (reports, plans, photos, data, etc.) If funded, advance MVP Action Grants: Going with the Flow' and 'Cooling the Valley' (Q1-Q4)
Maintaining Adequate Streamflow (South Shore) 30h SS	***Ongoing*** Support the Town of Scituate to provide adequate streamflow in the First Herring Brook. (CWA 7) ***New*** Support the Town of Kingston and JRWA to provide adequate stream flow to the Jones River	(6) Protecting coastal waters through the National Estuary Program (B) Improved Habitat Continuity and Hydrology	Town of Scituate, Town of Kingston, JRWA	(Q4) Report on previous year's data on outreach materials (Q1-Q4) Monthly check-ins with JRWA, especially during key migratory fish periods
Salem Greening Gateway Cities Program (Lower North Shore) 40h LNS	***Ongoing*** Outreach partner for Salem's Greening Gateway City program (2400 trees)	(6) Protecting coastal waters through the National Estuary Program	Salem Tree Commission, MA DCR	(Q1, Q3-Q4) Number of trees planted within the designated planting zone on public and private land (Q4) List of activities and social media

Invasive Plant Control (Lower North Shore) 100h LNS	***Ongoing*** Remove pepperweed, bittersweet, dodder, and other invasive plants at sites in LNS communities' living shorelines, rain gardens, and conservation areas		Volunteers, local organizations	(Q1-Q4) Dates and number of volunteers, list invasive species removed and location
Eelgrass Habitat Protection (Lower North Shore) 600h LNS	***Ongoing*** Mapping extent of eelgrass habitat across MA coastline, piloting a new seed-based approach for large-scale eelgrass restoration, and piloting restoration of eelgrass habitat	(6) Protecting coastal waters through the National Estuary Program	Local Conservation Commissions, MassBays, DMF, DEP, RAE, SSCW volunteers	(Q1. Q4) Eelgrass ground truthing schedule (Q1-Q4) List of outreach events and number of volunteers, days of field work
Oyster Pilot Project (Lower North Shore) 100h LNS	***New*** Educate community on oyster benefits with upweller along Marblehead waterfront. Conduct water quality monitoring of potential habitats and pilot oyster research to determine ideal locations for oyster restoration		Mass Oyster Project, Sustainable Marblehead, local schools, volunteers	(Q1-Q4) (1) List of outreach events; (2) Spreadsheet of water quality data collected; (3) Oyster pilot research project (pending DMF approval) - Spreadsheet of data collected

Strategy 3.3 Maintain MassBays' National Estuary Program Status

Title (Region), Budget + LOE	Description	CWA core program CCMP outcome	Partners	Timeline & Deliverables
Overall management of MassBays Program 2000h ED	***Ongoing*** The ED is responsible for the overall management of the program as required under section 320. Includes staff supervision and hiring, overall project management communicating and collaborating with RSPs, SFE, EPA, and managing Management Committee	All	EPA, RSPs, Management Committee, UMB SFE, UMB UA, UMB ORSP	***Include:*** (Q1-Q4) Overall staff supervision and program coordination; Manage quarterly MC meetings; regular check-in with EPA program coordinator; attend SFE Directors & Faculty meetings as well as staff meetings/retreats; attend EPA and ANEP meetings

	and Ex Com; developing annual work plans, annual reports; leading activities to highlight MassBays' work including funding, attending meetings (ANEP, SFE, RSP, partners), represent MassBays in various settings, etc.			(Fall and Spring); (Q1) Develop scopes of work for RSPs; Finance Strategy; (Q2) Lead hiring process for two new staff; (Q2-Q4) Program Eval.; (Q3) one-on-one visits to RSPs; (Q4) Work plan development w/ORSP; (Q2) Annual Report
MassBays Program Evaluation (Central Staff, UNS for field trip, All) 200h ED 50h CS 20h UNS	***New*** In May 2027 MassBays will be undergoing Program Evaluation led by EPA.	All CCMP Goals	MassBays, RSPs, Management Committee members, partners	(Q2) (1) Convene ad hoc committee and start planning; meet with EPA HQ coordinator and *ex ufficio* NEP Director (Q2-Q3) Reporting prepared (Q4) Host meeting and site visit

MassBays Communications implementation (Central Staff) 150h CS 2000h CD	***New*** With IIJA funding, new MassBays Communications and Development Specialist position will implement elements of the Communications Plan to enhance MassBays' outreach, education, and support its communities and partners to reach its CCMP goals; work with UA at UMB to engage funders and legislators; convene communications subcommittee	(6) Protecting coastal waters through the National Estuary Program All CCMP Goals	MassBays program partners	(Q1) Communications and Development Specialist hired. (Q2) Meet with key partners and stakeholders including UMB UA, MC, RSPs, identify legislators' staff and priorities (Q3) Calendar of events (Q1-Q4) Quarterly e-newsletters; social media posts; expand and grow the MassBays website (Q2-Q4) Assist ED with planning for PE.
Assist MassBays with program activities and CCMP implementation (All regions) 400h All RCs	***Ongoing:*** In addition to the region-specific Actions above, RCs assist MassBays' overarching efforts to implement the CCMP and assist with FFY26 MassBays-wide projects	All CCMP Goals	UMB, EPA, MassBays Management Committee, STAC, Communications Subcommittee, Finance Subcommittee, etc	(Q1-Q4) (1) Attend quarterly MC meetings, providing updates on progress; (2) Participate in RC meetings and conference calls; (3) Participation on subcommittees; (4) Annual NEPORT report; quarterly reports and submission of deliverables; quarterly newsletter content (Q1-Q4) Provide technical support and consultation to MassBays Healthy Estuary Program Grant

				(Q1-Q4) Assist ED with PE planning and implementation.
MassBays Regional Coordinator Workshop (Metro Boston, Central Staff) 160h MB 40h CS	***Ongoing*** Convene MassBays RCs and central staff to facilitate extended information exchange on current projects and identify potential cross-region collaborations and/or joint proposals	(6) Protecting coastal waters through the National Estuary Program All CCMP Goals	RSPs	(Q2, Q4) List of potential collaborations and/or joint proposals, including grant program and project partners
Convene and support the Local Governance Committees for input on MassBays workplans, and provide input for reporting to EPA (All Regions) 100h All RCs	***Ongoing*** Meet the requirements of S.320 Funding Guidance provided by EPA, soliciting community stakeholder input to prioritize yearly workplans to implement the CCMP.	(6) Protecting coastal waters through the National Estuary Program All CCMP Goals	LGCs	(Q1-4) Updates on activities and progress, attendance at quarterly MC meetings; (Q2-3) NEPORT submissions to MassBays; (Q1-4) Acknowledgement of EPA/ MassBays support noted on RSP websites and (as relevant) outreach materials and publications; (Q4) End-of-year reports on progress and proposed ongoing and new activities developed with input from communities and LGCs
Convene STAC and support the Chair and committee that provides input and assistance to MassBays on science and research matters. 20h ED	***Ongoing*** Convene quarterly meetings of STAC and topic subgroups as needed to provide discussion and input on topics that support MassBays work in its estuaries.	(6) Protecting coastal waters through the National Estuary Program All CCMP Goals	STAC	(Q1-Q4) (1) Meeting plans, agenda and materials; list of participants.

Represent MassBays on relevant networks (Central Staff, all RCs) 300h CS+All RCs	***Ongoing*** Lead and/or provide input to existing working groups and networks conducting work on topics relevant to MassBays' desired outcomes and/or with the potential to advance CCMP implementation.	(6) Protecting coastal waters through the National Estuary Program (7) Protecting large aquatic ecosystems Robust interagency and interdisciplinary collaboration and partnerships All CCMP Goals	MA Seagrass Group, MassECAN Salt Marsh Working Group, MA Ocean Science Advisory Council, *Ruditapes* working group, NERACOOS, Eastern SAV, NROC, etc.	(Q4) List of networks that include MassBays as a member, along with specific outputs of those networks
MassBays regionwide initiatives (All regions) 200h RCs	***Ongoing W***ork collaboratively with the MassBays program including the central staff and other regional coordinators to advance region-wide efforts and initiatives.	(A) Sustainable National Estuary Partnership (NEP)		(Q1-4) Attendance at meetings, quarterly updates, social media content, committee/task specific deliverables; Participation in ongoing meetings, task specific deliverables (e.g. data, photos, reporting, etc.); Participation at meetings, support in plan or deliverable development

D. Budget

MassBays is requesting reimbursement of pre-award costs, up to 90 days, for the work included in this plan.

Narrative
These notes refer to **Table 1, MassBays National Estuary Program Proposed Budget, FFY2026**.

Assumptions
Section 320 funding allocation to MassBays will be $850,000.

Proposed Spending
Salaries for three staff: Director (0.334FTE), Habitat Program Manager (0.300FTE), Communications and Development Specialist (0.500FTE) and Environmental Scientist (0.500FTE). The remainder of staff salaries will be funded under IIJA, as described in a separate workplan, and other supplemental funding (RAE, WHOI Sea Grant, and an ISA with DEP).

Fringe benefits: Fringe benefits are negotiated annually between the Commonwealth of MA, UMB and the Department of Health and Human Services (DHHS). Fringe benefits are costs associated with employee related expenses including health plans, pension plans, and workman's compensation expenses, among others. UMB has four fringe rates in accordance with the University's projected FY2027 Fringe Benefits and Payroll Tax Rates and NICRA.

Rate #1 General Fringe, 43.99%
Rate #2 Health and Welfare, $33 Bi-weekly/FTE
Rate #3 Payroll Tax, 2.12%
Rate #4 Worker's Compensation Insurance, 0.17%

These rates are applied based on the personnel appointment type, benefitted/non-benefitted status, period of service, and salary rates. In this case the appointment, benefits status, period of service and applicable rates are as follows:

Personnel	Appointment	Period of service	Applicable Rates
PI Prassede Vella	Professional Benefitted	Calendar	Rates 1, 2, 3, 4
Coastal Habitat Manager & Data Scientist Jillian Carr	Professional Benefitted	Calendar	Rates 1, 2, 3, 4
Environmental Scientist	Professional Benefitted	Calendar	Rates 1, 2, 3, 4
Communications and Development Specialist	Professional Benefitted	Calendar	Rates 1, 2, 3, 4
Program Assistant	Graduate Student	Academic	none

Travel: No funds requested.

Supplies: No funds requested.

Contractual: No funds requested.

Other Expenses

- Subawards (Regional Service Providers). This year we request $80,000 to fund each of the five Regional Coordinators for a total of $400,000. These funds will be expended by the RSPs from October 1, 2026, to September 30, 2027. Subawardee budgets and justifications are in Table 2.
- Healthy Estuaries Grants. MassBays is setting aside $36,000 for the next round of our small-grant program to be announced in the first quarter of 2027.

Indirect Charges

The University of Massachusetts Boston has a Facilities and Administrative overhead rate of 35.7%, which is a federally negotiated indirect cost rate agreement between University of Massachusetts Boston and the Department of Health and Human Services. The indirect rate is charged to expenditures relating to direct costs. For FFY26, indirect costs are charged against the first $50,000 for each of the RSP subawards. Funds set aside for Healthy Estuaries Program awardees will be subject to indirect because they will most likely be awarded to new partners and will be for amounts less than $50,000 each.

Matching Funds

Grantee match. MassBays will apply $78,034 matching funds to cover the following expenses:

- Travel to conferences, including the National Estuary Program Tech Transfer Conference in Corpus Christi, TX in Fall 2026 and the annual Spring meeting in DC; and regional conferences.
- Supplies, including monitoring and meeting supplies as well as light refreshments for in-person Management Committee and RSP meetings.
- Web-based services, including web application hosting, website content management system, and tools to support monitoring communities of practice.
- Lab support for water quality monitoring program.
- Unrecovered indirect costs of 35.7% on the above.

Subawardees. Regional partners, in their scopes of work to serve as RSPs to MassBays, identify sources of non-federal match for the program. Match of at least 50% is required; this year a total of $435,966 is offered by the RSPs (Table 3). In addition, Healthy Estuaries grantees will be required to provide match, expected to be $36,000 the $36,000 to be awarded from this year's funds. Sources of match from subawardees offered include revenue from organizational membership dues, state and local grants, private foundation grants, etc., as well as the work of staff within these organizations on projects specifically related to our estuarine restoration and conservation efforts.

State in-kind spending. MWRA has committed $200,000 in-kind match from their own expenditures on monitoring in Massachusetts Bay.

Total match offered is $850,000, or 100% match, comprised of the following non-Federal categories:

Match amount		**Source**
$	78,034	applicant
$	200,000	state
$	571,966	other
$	**850,000**	**Total**

Table 1. MassBays National Estuary Program Proposed Budget, FFY2026

FFY26 Section 320 Grant Application Massachusetts Bays National Estuary Program Proposed Expenditures		
	Request ($)	**Match ($)**
Personnel		
total, salaries+fringe	**229,844**	
Travel		
total, travel	**-**	**4,350**
Supplies		
total, supplies	**-**	**6,424**
Contractual		
total, contractual	**-**	**46,731**
Other (Subawards)		
Healthy Estuaries Grant Program	36,000	
Regional Service Providers (5 subawards, 10/1/26 - 9/30/27)	400,000	
Subawardees		571,966
State (MWRA)		200,000
subtotal, other	**436,000**	**771,966**
Total Direct	**665,884**	**829,471**
Indirect		
35.7% (salaries+fringe, HE grants, travel, supplies, contracts)	184,156	
Rate varies		20,529
subtotal, indirect	**184,156**	**20,529**
Total Indirect	**184,156**	**20,529**
Subtotal request; Subtotal match	**850,000**	**850,000**
Total Request; Total Match	**850,000**	**850,000**
Grand total (request + match)	**1,700,000**	

Table 2. Total matching funds

Matching funds	
Direct match (Travel, Supplies, MWRA match)	$ 278,034
Subawardees' match	$ 571,966
Total Match, FY26	**$ 850,000**

Table 3. Subawardee match offered

MVPC Task	**Amount**	**Type of match (non-federal)**
Cost share	$ 40,000	MVPC salaries, indirect
Total MVPC match	**$ 40,000**	

SSCW Task	**Amount**	**Type of match (non-federal)**
Cost share	$ 58,000	indirect, operating
Greenscapes	$ 80,000	Essex County municipalities
Clean beaches and streams	$ 5,000	corporate donation for bacterial analyses
Total SSCW match	**$ 143,000**	

NUMSC Task	**Amount**	**Type of match (non-federal)**
All	$ 48,000	indirect fees not charged
Grabowski Lab	$ 5,372	PI salary (1% time)
Total NUMSC match	**$ 53,372**	

NSRWA Task	**Amount**	**Type of match (non-federal)**
Cost share	$ 43,078	salaries, indirect, travel, supplies
Watersmart South Shore	$ 59,972	DCR funding
North River Commission	$ 50,000	town funding
YouthCAT Battelle	$ 19,384	private education funding
Total NSRWA match	**$ 172,434**	

APCC Task	**Amount**	**Type of match (non-federal)**
Cyanobacteria monitoring program	$ 68,310	Grants and contracts with organizations and towns; APCC dues and donations
Herring monitoring, volunteers	$ 38,850	In-Kind volunteer labor at $42/hr for Massachusetts
Chase Garden Creek Contractual Expense	$ 20,000	Lavori Sterling Foundation
Total APCC match	**$ 127,160**	

MassBays National Estuary Partnership

S. 320 Work plan

Attachment 1

Regional Service Provider and Staff Updates for FFY25

Regional Service Provider & Staff Updates
June - September 2025

Regional Service Provider Updates

Upper North Shore – Merrimack Valley Planning Commission

Contact: Hanna Mogensen

Gather data on conditions and trends

- RC conducted second year of pilot program to assess the impact of chemical herbicide on non-target plant species during phragmites treatment in the Great Marsh. RC will be working to analyze results over the fall and winter and will share results with MassBays.
- Resumed regional culvert and stream crossing assessments, completing a total of 10 assessments this summer/fall in collaboration with Haverhill Municipal Staff.
- Continued drone flights for our 2024 Healthy Estuary Grant to advance drone integration for long-term salt marsh monitoring efforts. Flights this quarter focused on mapping eelgrass habitat and marsh wrack. Final flights are anticipated to occur this fall.
- Completed 2025 microplastic sample collections in surface waters across the Great Marsh.
- Collected monthly water samples in the Merrimack River in association with Merrimack River Watershed Council to assist with their regional water quality monitoring program and expanded CSO program.
- Completed MIMIC Marine Invasive Species monitoring June-September in partnership with CZM.
- Advanced eelgrass restoration efforts in addition to preparation for upcoming regional restoration project.

Inform state policy and local action.

- MVPC along with collaborators resubmitted legislation to establish the Merrimack River Collaborative, a group focused on advancing water quality in the Lower Merrimack River through planning, policy, collaboration, and implementation efforts.
- MVPC is partnering with Senator Tarr's Office and the Green Crab Task Force to plan a Green Crab symposium to be held on October 24th. The event will bring together scientists, researchers, policy makers, municipal staff, clammers, and those working in established or emerging industries to discuss the challenges of the invasive green crabs and explore sustainable market pathways for future management.
- MVPC advanced a local Priority Growth Strategy for the Merrimack Valley, focused on identifying locations for smart, sustainable growth that protect critical ecosystems and habitat.
- Advanced the Merrimack River Clean-up Initiative, supporting 5 communities in the Merrimack to deploy booms for regular servicing, coordinate community river shoreline cleanups, and make improvements to the Early Alert Tool for CSO predictive modeling and public notification.
- Continued to work with MAPC and partners to develop Energy Managers Training Curriculum and Peer Learning Network. MVPC was also awarded additional funding for implementation effort (following planning grant) to advance over the next 3 years.

Provide Education, training, and technical support.

- MVPC granted $270,000 in funding to six different organizations and municipalities in the Lower Merrimack to advance water quality initiatives. Funding was made available through Chapter 102 State Earmark Funding.

- MVPC assisted collaborators to map and track invasive Perennial Pepperweed within the Great Marsh. Over 300 acres were assessed and mapped, and education and information was provided to landowners in the area.
- RC gave talk on microplastic trends in local coastal waters following five years of data collection.
- Ongoing support of Groveland following Dam Reconnaissance Study to identify next steps in dam removal process for Johnsons Creek Dam.
- Involvement with Newburyport Sustainability Committee/ACES to plan for Zero Waste Workshops.

Key meetings attended:

- 8TGM Monthly Meeting (8.28.2025)
- Merrimack River Collaborative Meetings (9.4.2025)
- Hampton-Seabrook Estuary Collaborative Meeting (7.15.2025)
- MassBays STAC Quarterly Meeting (7.22.2025)
- Greenscapes Monthly Meetings (7.31.2025, 8.28.2025)
- Regional Dam removal assessment Meetings (8.21.2025)
- Collaborative MA/NH Coastal Conservation Commission Roundtable (7.22.25)
- Merrimack River Clean Up Initiative Meeting (7.24.2025, 7.29.2025, 8.18.2025, 8.23.2025)
- Green Crab Task Force Meeting (7.28.2025, 8.19.2025, 8.25.2025)
- Essex County Community Foundation Resiliency Meeting (7.29.2025, 8.13.2025)

Lower North Shore – Salem Sound Coastwatch

Contact: Barbara Warren and Alison Frye

Gather data on conditions and trends

- WHOI Sea Grant seed study with MA DMF and MassBays: Modeling and piloting a new seed-based approach to large-scale eelgrass restoration in Massachusetts. Analyzed data for field germination experiment.
- Completed water quality bacterial monitoring under Clean Beaches & Streams and began water quality sampling of Salem Sound tributaries
- Conducted biweekly SECWQALS noncontinuous water quality grab samples and profiles of Danvers River and Salem Sound.
- Selected sites, developed protocols, and piloted intertidal blue mussel monitoring.
- Collected data on eelgrass habitat for over 800 unique sites in Buzzard's Bay and Martha's Vineyard for MassDEP eelgrass mapping project with MassBays.

Climate Change

- As project manager with the City of Salem's FY25-26 MA CZM Coastal Resilience Grant Phase 2 of the Winter Island Park Pathway and Bank Restoration Project. https://publicinput.com/d3486, held a walk and talk event to introduce preliminary designs for shoreline stabilization, three invasive plant removal events, Story Map made public, and in the final MEPA comment period.
- Completed Marblehead's FY25 MA CZM Coastal Resilience Grant for State Street Landing and Harbormasters Resilience Plan. FY26 CZM application was submitted to continue the project.
- As project team member on Salem's Resilient Together: Collins Cove Park Neighborhood Resilience Project FY25-26 MA CZM Coastal Resilience Grant, hosted second public meeting and provided support in developing appropriate resilience strategies. https://publicinput.com/a72475.

Reduce Stormwater Discharge

- Applying for a MassDEP MS4 grant to continue working on pet waste.
- Stenciled 120 storm drains in downtown Salem with volunteers.
- Completed bacterial monitoring under our Clean Beaches & Streams program at streams and outfalls across the watershed; sampling tributaries with the EPA Stormwater Toolbox.
- Maintained rain gardens at Commercial Street and Winter Island Park, Salem.

Manage Invasive Species

- Completed 15 MIMIC surveys of marine invasive species across 5 long-term locations and published report on long-term trends of marine invasives in Salem Sound
- Removed Pepperweed across the watershed
- Removed Dodder from the Commercial Street rain gardens all summer
- Removed bittersweet and other invasive plants from Winter Island Park

Education and Outreach

- Hosted two adult education boat trips introducing the public to the local environment and mission
- Hosted 11 community cleanup events, removing would-be marine debris.

Technical assistance: RC - BW involved in the following:

- Continued working with Manchester Coastal Stream Team and cold-water fisheries resource
- ECCF Climate Resilience Coalition member
- Member of the Manchester Hazard Mitigation Planning Group member
- Jefferson Avenue Working Group, Salem member

Metro Boston – Northeastern University Marine Science Center

Contact: Diana Chin

Address Data Gaps

- MassBays BIL Funding: We began work on an award from MassBays to NU and Emerald Tutu for a 2025-2026 research project to build and test a simple nursery system in East Boston for propagating salt marsh cordgrass from seeds within biomass-based mats, which could be deployed as urban living shoreline prototypes.
- Restore America's Estuaries NEP Watersheds: We are preparing for a collaborative 2025-2027 project with the MassBays central staff and three other regions to conduct pilot-scale seed-based eelgrass restoration and outreach.
- MIT Sea Grant: We have been selected for funding and are preparing for a 2026-2027 research project in collaboration with MassBays and MIT Sea Grant staff regarding interactions of shellfish aquaculture and seagrass, aimed at informing aquaculture siting and management.
- TNC: We are wrapping up a project examining the degree to which oyster aquaculture provides important ecosystem services, including enhancing water quality and providing habitat for fish and crustaceans. We are also conducting surveys of coastal communities throughout Massachusetts and the eastern seaboard to examine barriers to aquaculture.

Gather Data on Conditions and Trends

- Sea Grant American Lobster Initiative: We are finishing a project investigating the impacts of the range expansion of black sea bass and blue crabs on lobsters and the lobster fishery in the Gulf

of Maine. This research uses experiments, field monitoring, and surveys of the lobster industry to assess their ecological knowledge.

- Eelgrass Reproduction Research: We assisted MA DMF with processing of sediment cores and flowering shoots associated with research on seed-based eelgrass restoration.
- Intertidal Blue Mussel Population Research: We continued to coordinate with other MassBays regions about intertidal blue mussel population trends, including scoping literature review and potential data sources.

Technical Support and Communication

- Letters of Support: We wrote letters of support for a proposal to the MA CZM Coastal Habitat and Water Quality grants by the City of Newton and Charles River Watershed Association focused on green stormwater infrastructure, and for a proposal to NFWF by MassBays focused on improvements to priority tide gates, 3 of 5 of which are in the Metro Boston region.
- Invasive Species Research: We joined a working group examining evidence for potential recent invasion of Manila clam (*Ruditapes philippinarum*) in the MassBays region.

Education and Outreach

- Boston Harbor Ecosystem Network (BHEN): We 1) Held BHEN Steering Committee meetings to look ahead to fall activities and beyond; 2) Began planning a fall BHEN meeting centered around combining science and art for public engagement with the coastal environment; 3) Organized a summer field trip to Fisherman's Beach and Cat Cove Marine Laboratory (June 30) to talk about eelgrass habitat and seed-based restoration in collaboration with EPA R1, MassBays, and MA DMF (39 attendees); 4) Organized a summer field trip to Spectacle Island (July 17) to talk about intertidal biodiversity monitoring and invasive species in collaboration with Save the Harbor/Save the Bay, UMass Amherst, and UMass Boston (20 attendees); 5) Continued output of monthly newsletters compiling resources, events, funding, and job opportunities from across BHEN and related networks.

Other

- We continued hosting regular discussion meetings for the MassBays RCs.
- We began introducing and coordinating with the Interim RC for Metro Boston while the RC is on parental leave during the winter.

South Shore – North and South Rivers Watershed Association

Contact Alex Mansfield

1.1 Make new data available, especially to address specific gaps in knowledge

1.1.1 Monitor Diadromous Fish Runs:

- Compiled the 2025 volunteer herring run data from 5 sites. Data was submitted to MA DMF to determine run size estimates. Results were reported in NSRWA eNews https://www.nsrwa.org/2025-river-herring-count-results/ . This year 106 individual volunteers participated in the herring counts contributing approximately over 450 hours of effort.
- Participated in a meeting with MA DMF and APCC to identify improvements in herring count procedures and reporting.

1.1.2 Water Quality Monitoring

- Conducted 6 rounds of Citizen-Science "RiverWatch" water quality monitoring. This program is in its 34th year of monitoring bacterial concentrations throughout the summer at 10 sites. The program uses volunteers to collect water samples and water-quality data. NSRWA interns, in collaboration with Cohasset Center for Student Coastal Research (CCSCR), conduct the analysis of bacteria concentrations in the samples. The results are reported to

the community through NSRWA eNews, web posts, and social media. A recent eNews article was published to summarize the 2025 program https://www.nsrwa.org/2025-riverwatch-water-quality-monitoring-recap/

- Conducted multiple rounds of water quality sampling in Duxbury/Plymouth Bay to support EPA's SECWQALS program.

1.1.3 Salt Marsh Vulnerability and Assessment

- Conducted high resolution (RTK) mapping of a Scituate saltmarsh to advance restoration planning.
- Submitted proposals to MA CZM and MA DEP for saltmarsh restoration funding.

1.1.4 Horseshoe Crab Surveys

- In Duxbury, MassBays and NSRWA completed their seventeenth year of Horseshoe crab monitoring. Duxbury is one of sixteen sites across the state that are part of the Massachusetts Horseshoe Crab Spawning Surveys managed by the Massachusetts Division of Marine Fisheries.
- At least 56 individual volunteers participated in the surveys contributing approximately 240 hours of volunteer time.
- The Horseshoe crab data was analyzed and submitted to MA DMF in July. Results were also shared with the public through NSRWA eNews https://www.nsrwa.org/2025-horseshoe-crab-survey-results/

1.1.5 Marine Invasive Species

- NSRWA interns conducted 10 surveys across 4 sites as part of CZM's Marine Invader Monitoring and Information Collaborative (MIMIC) program. Results were provided to CZM on September 5th.

2.1 Research to Inform Policy & Actions

2.1.7 Dam Removal Monitoring and Implementation

- Weekly monitoring of Veteran's Park Dam removal. https://www.nsrwa.org/south-river-reconnected-dam-removed/

2.1.8 Eelgrass

- Successfully completed the 8th year of eelgrass monitoring in Duxbury/Kingston/Plymouth Bays.

2.1.9 Blue Mussels

- Continued the summer survey of blue mussels on 3rd and 4th cliffs in Scituate. This is ongoing work with Mass Audubon to support assessment of habitat conditions for the federally listed Red Knots (*Calidris canutus*) who stopover on this federally owned property.
- Conducted surveys of mussel distribution, density, and growth during the low tides of July, August, and September. Reporting deliverables will be submitted in October

2.2 Technical Support & Communications

2.2.11 Represent Mass Bay in Networks

- Panelist for the UMass Boston Harbor Boot Camp Watershed Panel 8/27/2025.
- Mass Rivers Connects- Scientists/Monitors Group 7/9/2025, 9/10/2025.
- "Eastern Massachusetts Coalition for Water Quality Monitoring and Regional Standardization" Working Group Meeting 8/25/2025
- Visual Counting Coordinator Meeting with MA DMF 8/5/2025
- River Herring Network Steering Committee

2.2.12 Watershed and Coastal Science Education

- Saltmarsh educational field trip for Scituate High School students 9/18/2025.

3.2 Local Action for Habitat & Water Quality

3.2.15 Resilient Coastal Habitats and Communities

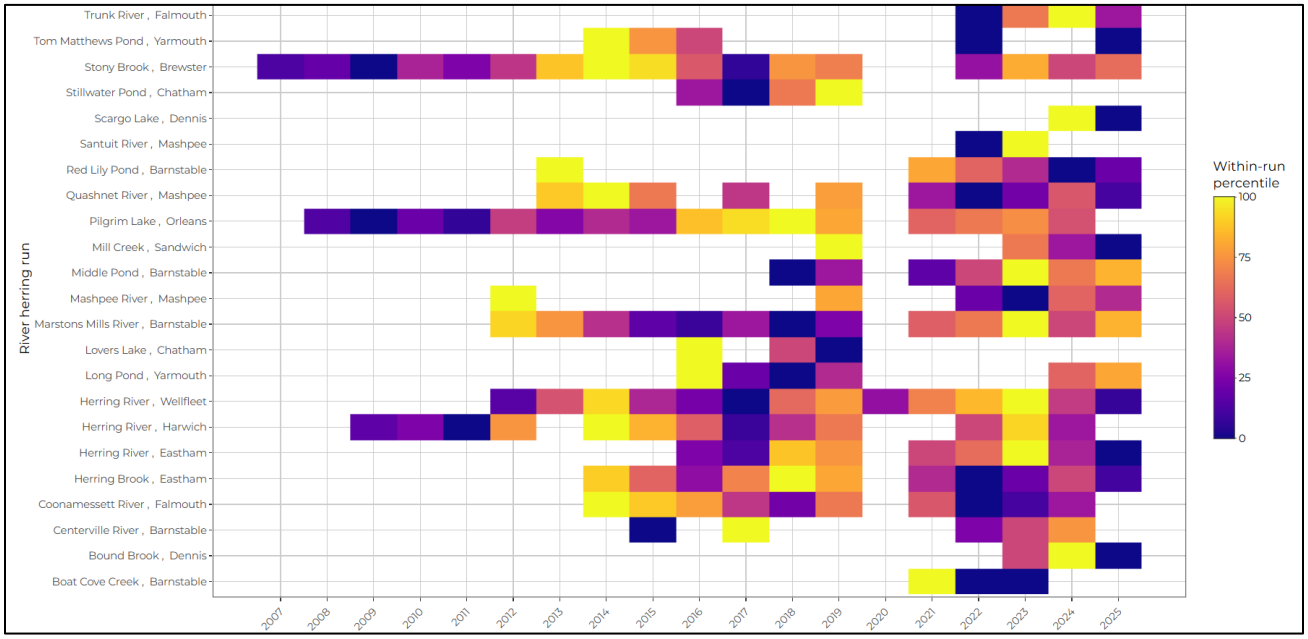
- Advanced priority tide gate restoration projects in Kingston and Scituate.

Cape Cod – Association to Preserve Cape Cod

Contact: April Wobst and Dee Marsh

Make new data available

- **River herring monitoring coordination**: 20 Cape Cod runs for spring migration
    - Updated the Cape Cod River Herring Monitoring Dashboard (https://apccorg.shinyapps.io/herring_monitoring/) with output of 2025 count and run size estimates from DMF downloadable and to be shared at River Herring Network Meeting in October
    - Updates include the following heat map to visualize change within runs overtime. This heatmap displays the relative strength of each Cape Cod river herring run over time, expressed as percentiles within each run. Each year is ranked relative to the other years for the same run, so lighter colors indicate years with stronger runs compared to that run's historical data.



- **Cyano, freshwater, and restoration database development**
    - Work is ongoing to integrate GIS-based cyanobacteria, freshwater water quality, herring, and restoration program datasets to help inform priorities for restoration and protection.
    - The combined APCC program layers can now be queried based on GIS information. For example, queries have been run for project planning and prioritization, such as how many and which subwatersheds contain freshwater ponds with unacceptable water quality (based on State of the Waters results).

Habitat and Water Quality Improvement Restoration

- **Sesuit Creek Salt Marsh**: APCC and Woods Hole Group wrapping up data collection to inform a 2026 planting of *Spartina alterniflora* in persistent bare areas in this tidally restored salt marsh. Woods

Hole Group distributed a summary background memo and presented to the project team for comment field data and proposed matrix and criteria for prioritizing areas for planting. Underway is design alternatives development for priority areas.

- **Chase Garden Creek:** Based on advice and recommendations gained from regional collaboration meetings (i.e., Cape and Islands Restoration Action Team) and networking conferences (i.e., New England Estuarine Research Society and Mass Audubon Cape Cod Natural History Conferences), APCC completed summer 2025 monitoring to inform restoration planning. First, sediment samples from the salt marsh surface were extracted by APCC and processed for bulk density and organic content by the Center for Coastal Studies with additional grain size analysis to be completed this fall. The 2025 surface sediment data will be combined with 2024 sediment trap information to better understand sedimentation dynamics in three sections of the salt marsh system with varying degrees of degradation. Second, a crab monitoring survey was completed in early September to assess presence/absence of various crab species including green crab, blue crab, purple marsh crab, and fiddler crab. This survey was conducted in accordance with methodology provided by partners at the Cape Cod National Seashore and the Waquoit Bay National Estuarine Research Reserve. All data gathered over the last three years of data collection will be used to develop a consultant scope for Phase 1 of Chase Garden Creek salt marsh platform restoration designs to be completed in 2026.

Outreach and Education, Collaboration and Technical Support

- **Barnstable County Commissioner Meeting:** Michael Palmer presented a summary of the River Herring Count Program at the Barnstable County Commissioners meeting on July 9.
- **Scargo Lake Stormwater Maintenance Training:** On September 10, APCC and the Horsley Witten Group hosted a stormwater maintenance training for the town of Dennis for the two Scargo Lake sites completed in the spring.
- **One Cape Summit:** On September 16, April Wobst presented a summary of the regional public boat ramp stormwater project highlighting the Scargo Lake stormwater project as a case study and example of management to improve habitat, water quality and our coastal resources.
- **MassBays Comms Updates:** APCC Outreach Specialist working on MassBays newsletter and webpage updates.

Regional Service Provider & Staff Updates
October-December 2025

Regional Service Provider Updates

Upper North Shore – Merrimack Valley Planning Commission
Contact: Hanna Mogensen
Gather data on conditions and trends

- Completed final drone flights for our 2024 Healthy Estuary Grant to advance drone integration for long-term salt marsh monitoring efforts. Flights this quarter focused on mapping eelgrass and marsh edge erosion. Data analysis and final reporting are underway this winter.
- Collected monthly water samples in the Merrimack River in association with Merrimack River Watershed Council to assist with their regional water quality monitoring program and expanded CSO program.
- Conducted pilot planting and monitoring of eelgrass bed in Gloucester in anticipation of regional RAE restoration grant to kick off spring 2026.

Inform state policy and local action.

- MVPC along with collaborators finalized the Merrimack River Collaborative's annual report summarizing advancements in water quality related initiatives over the last year.
- MVPC assisted with organizing and leading the Green Crab summit held on October 24th. The event brought together scientists, researchers, policy makers, municipal staff, clammers, and those working in established or emerging industries to discuss the challenges of invasive green crabs and explore sustainable market pathways for future management.
- Continued to advance the Merrimack River Clean-up Initiative, supporting 5 communities in the Merrimack to deploy booms for regular servicing, coordinate community river shoreline cleanups, and make improvements to the Early Alert Tool for CSO predictive modeling and public notification.

Provide Education, training, and technical support.

- Ongoing support of Groveland following Dam Reconnaissance Study to identify next steps in dam removal process for Johnsons Creek Dam.
- Involvement with Newburyport Sustainability Committee/ACES to plan for Zero Waste Workshops.
- MVPC hosts Peer Learning Network virtual meetings. As part of the Municipal Energy and Sustainability Mangers Program lead by the Metropolitan Area Planning Council, MVPC has held three Peer Learning Network meetings which aim to continue conversations of technical trainings provided for new Energy and Sustainability Managers throughout the State.
- MVPC reconvened Stormwater Collaborative under the newly branded Regional Infrastructure and Stormwater Collaborative through hosting an in-person meeting featuring spotlights by the City of Haverhill and the Municipal Vulnerability Program.
- MVPC submitted two Expressions of Interest to the Municipal Vulnerability Preparedness (MVP) Action Grant program. We received positive feedback and are planning to move forward to advance both ideas, one focused on flooding, the other extreme heat.

Lower North Shore – Salem Sound Coastwatch
Contact: Alison Frye
Gather data on conditions and trends

- WHOI Sea Grant eelgrass seed study with MA DMF and MassBays: Modeling and piloting a new seed-based approach to large-scale eelgrass restoration in Massachusetts. Conducted second phase of seed viability testing, processed sediment cores for seeds with MA DMF and MassBays.
- Restore America's Estuaries grant with MassBays: Seeding the future: Restoring eelgrass and building community engagement across MassBays NEP. Planted over 20,000 eelgrass seeds in 416 planting bags between two 26m^2 restoration plots in Beverly, MA with the assistance of 25 community volunteers, and monitored plots the following month.
- Completed Clean Beaches & Streams water quality bacterial monitoring and water quality sampling of Salem Sound tributaries with the EPA Stormwater Toolbox, final reports in progress for each. Met with MA DMF shellfish supervisor to share long-term water quality data to begin exploring opening conditional shellfishing in Salem Sound. Shared WQ data with Manchester Coastal Stream Team to support restoration of brook trout habitat.
- Completed SECWQALS noncontinuous water quality grab samples and profiles of Danvers River and Salem Sound.
- Piloted intertidal blue mussel monitoring at Willows Beach, Salem.
- As part of a Bruce J. Anderson Foundation grant, monitored salt marsh vegetation and salinity, creek erosion, marsh island area, and invasive crab burrows at the Good Harbor marsh, Gloucester.
- *Monitoring and Analysis of Five Salt Marsh Tidal Restoration Projects on the North Shore, Massachusetts (May 2025)* report published by MA Division of Ecological Restoration.

Climate Change

- As project manager with the City of Salem's FY25-26 MA CZM Coastal Resilience Grant Phase 2 of the Winter Island Park Pathway and Bank Restoration Project. Held two invasive plant removal events, published StoryMap to City of Salem website and SSCW website/newsletter, permitting for coastal bank stabilization designs underway.
- As project team member on Salem's Resilient Together: Collins Cove Park Neighborhood Resilience Project FY25-26 MA CZM Coastal Resilience Grant, provided support in developing appropriate resilience strategies.

Reduce Stormwater Discharge

- MassDEP MS4 grant to continue working on pet waste under review.
- Greenscapes: Created 3 newsletters and 4 social media posts that were disseminated to Greenscapes communities, led 9 Keeping Water Clean activities for Greenscapes community schools, hosted dog waste cleanup and installed pet waste signs in Gloucester, and provided two MS4 communities with informational stormwater materials (flyers/rack cards).
- Maintained rain gardens at Commercial Street, Salem.

Manage Invasive Species

- Surveyed non-native manila clams in Salem Sound/Gloucester, ongoing participation in manila clam working group
- Removed bittersweet and other invasive plants from Winter Island Park (Salem) and Gillis Park (Beverly). Removed dodder from Commercial Street Rain Garden (Salem).

Education and Outreach

- Finalized and promoted upcoming Underwater in Salem Sound lecture series schedule (January-May 2026)
- Hosted 9 community and corporate cleanup events, removing would-be marine debris.

Metro Boston – Northeastern University Marine Science Center
Contact: Kelsey Schultz (Interim RC)

Address Data Gaps

- MassBays BIL Funding: We began work on an award from MassBays to NU and Emerald Tutu for a 2025-2026 research project to build and test a simple nursery system in East Boston for propagating salt marsh cordgrass from seed within biomass-based mats, which could be deployed as urban living shoreline prototypes.
- Restore America's Estuaries NEP Watersheds: We began work on a collaborative 2025-2027 project with the MassBays central staff and three other regions to conduct pilot-scale seed-based eelgrass restoration and outreach. Two test plots near existing eelgrass beds were chosen off Black Rock Beach in Nahant, Massachusetts to assess two different planting methods including burying bagged seeds and randomly broadcasting seeds. ~10,000 seeds were planted within each test plot for a total of 20,000 seeds planted at the site.
- MIT Sea Grant: We have been selected for funding and are preparing for a 2026-2027 research project in collaboration with MassBays and MIT Sea Grant staff regarding interactions of shellfish aquaculture and seagrass, aimed at informing aquaculture siting and management.
- TNC: We are wrapping up a project examining the degree to which oyster aquaculture provides important ecosystem services, including enhancing water quality and providing habitat for fish and crustaceans. We also wrapped up our survey work of coastal communities throughout Massachusetts and the eastern seaboard to examine barriers to aquaculture and have published the work in Ocean and Coastal Management.

Gather Data on Conditions and Trends

- Sea Grant American Lobster Initiative: We are finishing a project investigating the impacts of the range expansion of black sea bass and blue crabs on lobsters and the lobster fishery in the Gulf of Maine. This research uses experiments, field monitoring, and surveys of the lobster industry to assess their ecological knowledge.
- Eelgrass Reproduction Research: We assisted MA DMF with processing of sediment cores and flowering shoots associated with research on seed-based eelgrass restoration.
- Intertidal Blue Mussel Population Research: We continued to coordinate with other MassBays regions about intertidal blue mussel population trends, including scoping literature review and potential data sources.

Technical Support and Communication

- Letters of Support: We wrote letters of support for a proposal to the MA CZM Coastal Habitat and Water Quality grants by the City of Newton and Charles River Watershed Association focused on green stormwater infrastructure, and for a proposal to NFWF by MassBays focused on improvements to priority tide gates, 3 of 5 of which are in the Metro Boston region.
- Invasive Species Research: We joined a working group examining evidence for potential recent invasion of Manila clam (*Ruditapes philippinarum*) in the MassBays region.

Education and Outreach

- Boston Harbor Ecosystem Network (BHEN): We 1) Held a fall BEHN meeting (October 2) centered around combining science and art for public engagement with the coastal environment (26 attendees); 2) Held a community open house at the Emerald Tutu's work site (October 21) to showcase project using waste biomass substrates to grow saltmarsh cordgrass from local seeds to make pre-grown deployable living shoreline mats 3) Continued output of monthly newsletters compiling resources, events, funding, and job opportunities from across BHEN and related networks.

Other

- We continued hosting regular discussion meetings for the MassBays RCs.
- Interim RC for Metro Boston took over for the RC while on parental leave during the winter

South Shore – North and South Rivers Watershed Association
Contact Alex Mansfield
Make new data available, especially to address specific gaps in knowledge

- **Monitor Diadromous Fish Runs:**
  - Participated as steering committee member for the 2025 River Herring Network meeting in Lowell, MA.
- **Water Quality Monitoring**
  - Submitted "Boston-South Shore Water Quality Monitoring Coalition Sampling Program and Partnership" proposal to DEP's WATER QUALITY MONITORING GRANTS PROGRAM - STATE FISCAL YEAR 2026. NSRWA is acting as the fiscal agent and lead entity for this year's funding.
  - Supported Duxbury Bay Maritime School in their application to the same DEP grant.
- **Salt Marsh Vulnerability and Assessment**
  - Submitted regional proposal in partnership with APCC and Mass Audubon to Restore America's Estuaries for saltmarsh restoration funding.

Research to Inform Policy & Actions

- **Dam Removal Monitoring and Implementation**
  - Weekly monitoring of Veteran's Park Dam removal. https://www.nsrwa.org/south-river-reconnected-dam-removed/
- **Eelgrass**
  - Successfully completed pilot eelgrass seed planting at two sites in Duxbury and one site in Plymouth. The effort included eight volunteers plus lab and boat support from Duxbury Bay Maritime School and Island Creek Oysters.
- **Blue Mussels**
  - Continued the monthly survey of blue mussels on 3rd and 4th cliffs in Scituate. This is ongoing work with Mass Audubon to support assessment of habitat conditions for the federally listed Red Knots (Calidris canutus) who stopover on this federally owned property.
  - Reporting deliverables for 2025 summer surveys were submitted in October.
  - Began working with a new volunteer to develop citizen science methods for intertidal mussel monitoring.

Technical Support & Communications

- **Represent Mass Bay in Networks**
  - Presented MassBays work on Saltmarshes and Horseshoe Crabs during the Duxbury Beach Symposium 11/20/2025
  - Mass Rivers Connects- Scientists/Monitors Group 11/12/2025.
  - River Herring Network Steering Committee
- **Watershed and Coastal Science Education**
  - Published a two-year Citizen Science monitoring report to the public https://www.nsrwa.org/get-involved/citizen-science/

Local Action for Habitat & Water Quality

- **Resilient Coastal Habitats and Communities**
  - Advanced priority tide gate restoration projects in Kingston and Scituate.

Cape Cod – Association to Preserve Cape Cod
Contact: April Wobst and Dee Marsh

Make new data available

- **River herring monitoring coordination**:
  - Attended the River Herring Network meeting on October 23rd and shared update on Cape Cod river herring runs for 2025.
  - Final data are available from APCC's Cape Cod River Herring Monitoring Dashboard developed earlier this year as a new data portal for the public.
- **Cyano, freshwater, and restoration database development**
  - Cyano and pond sampling completed for 2025 and data analysis completed for annual reporting including the updated State of the Waters Report.
- **State of the Waters Cape Cod Report**
  - Released the seventh annual State of the Waters Cape Cod report on December 10 available at www.CapeCodWaters.org. For coastal embayments, 94% of monitored waterbodies (48 of 51) received unacceptable status. For freshwater ponds, 27% (43 of 158) received unacceptable grade, which aligns with observation of roughly 1/3 of ponds found to unacceptable every year. For public drinking water suppliers 21 of 23 received excellent scores and 2 good due to total coliform detected and addressed.
  - Included this year is a new State of the Waters Data Viewer which allows users to explore grades and underlying data for individual coastal embayments and ponds.

Habitat and Water Quality Improvement Restoration

- **Sesuit Creek Salt Marsh**: Restoration planting design alternatives were reviewed with the project team and design plans and memo finalized by Woods Hole Group. APCC finalized and released a request for proposals (RFP) to hire ecological landscape contractor for spring 2026 planting. Permit documentation and written approvals from landowners completed in December for NOI filing and review with Conservation Commission in January of 2026.
- **Chase Garden Creek:** APCC completed summary of all 2025 data and organized a partners meeting to review status of project and data collected over the first three years. Gathered input on approach for restoration design including ditch remediation and runneling, and prioritization of areas within the marsh with the focus to be on the most degraded areas. APCC worked with NSRWA, Mass Audubon, and MassBays on a joint LOI for RAE NEP grant including funding for design and permitting for phase one of work at Chase Garden Creek. This joint application would include collaboration amongst partners seeking to advance similar salt marsh platform restoration projects with opportunity to share lessons learned as each project advances through different phases of work.

Outreach and Education, Collaboration and Technical Support

- APCC partnered with WBNERR to present results of DER funded three-year post-restoration report on the Childs River restoration: www.apcc.org/childs-river
- APCC is part of the planning committee for WBNERR's Biannual Cape Coastal Conference. First meeting held in December to advance planning for late spring conference including focus on restoration and resilience.

MassBays Staff Updates

Prassede Vella

Interim Director

Administration

- Federal Fiscal Year 2025 S.320 workplan (continuation of FFY2024) was submitted to EPA Region 1 in July 2025. Awarded in September 2025. Worked with UMB to prepare subawards for all five regional coordinators.
- Worked with UMB to prepare subawards for IIJA funds to dedicated projects in the regions.
- Participated in regular School for the Environment Faculty and Directors meetings.
- Participated in Association of National Estuary Program's discussion focused on administration/advocacy needs, and dues rates. Participated in person at the ANEP Directors meeting in Mobile Bay (November 2025) where dues were revised and increased for one year pending the issuance of a search for ANEP advisor/consultant. Currently engaging ESP Advisors.
- Worked closely with the SSCW Board during leadership transition as it pertains to the MassBays Regional Service Provider.
- Participated in UMass Boston School for the Environment strategic planning meetings.

Senior Scientist

Address data gaps

- Diadromous Fish Habitat BCG and target: The 2050 targets (migratory habitat miles and spawning habitat acres) will be available on the ETT app before the end of the month.
- SECWQALS – continuous monitoring: Three systems were deployed and gathered data over the summer in Duxbury, at the mouth of the Danvers River, and in the Lower Merrimack River. Data collection went well except for a couple of hiccups: (1) the pCO2 in Danvers developed a software issue. Due to the data being available in real time, the team was able to respond relatively quickly. Unfortunately, we lost some data, and the sensor had to be sent to the manufacturer for repair. (2) During the storm in the final days of September, the system flipped. Because of the government shutdown it took a few days before this issue was noticed and several more days before the company could go out to retrieve it, fortunately there was no damage, and all data were saved. We are currently (1) reviewing how this year went to improve for next season; (2) planning and budgeting for next season; and (3) starting to work on the data cleanup and analysis. Findings will be made available.
- SECWQALS – grab sampling: Seasonal monitoring was conducted from June to October in Danvers/Salem (Lower North Shore RC and SSCW, Salem State U., Beverly and Salem Harbor Masters, and DEP make up the Danvers/Salem team); and in Duxbury Bay (South shore RC, NSRWA interns, DBMS. And Center for Coastal Studies made up the Duxbury team). Data have been shared and we will be working on data analysis in the coming weeks. Because of the government shutdown, the samples from Danvers/Salem could not be sent to the EPA lab in Chelmsford. CCS kindly stepped up to analyze those samples for us.
- EPA 3.0: with supplemental funding from EPA Headquarters ($30k) plus savings from another project using IIJA funds ($15k) we now have a solid team and work has started.

Applied research for decisionmaking

- Optimizing local tide gate operations & management to improve salt marsh health: Preparing to start the outreach piece of the project that will include conversations with operators/owners for the top five priority tide gates (Kingston, Scituate, Revere, Sandwich) plans and discuss next steps. Developed O&M template and associated app; a

next-gen TideGateway app is also underway. Project should be completed by June 2026 and we will share with the management committee. Unfortunately we did not receive funding from NFWF but will continue to seek alternate funding to advance work on the top five priority tide gates. In fact, one of the priority tide gates (Weymouth) received funding from the Coastal Habitat and Water Quality Grant (CZM) to improve and restore the tide gate and restore the salt marsh thanks to the data and recommendations made by MassBays with the RAE grant. We then selected Sandwich as the fifth priority tide gate to replace Weymouth for further work.

Program support

- MassSMAP: Following selection of a new panel for MassSMAP, we will be convening a meeting in January 2026. This process was delayed as we await for federal government to issue the new permits for NPDES WWTPs. In the meantime, we are getting ready to be able to proceed when that happens.

Convene and partner with others to support and improve monitoring outputs.

- Next STAC is scheduled for January 2026.
- Worked with a community (Weymouth) to submit a proposal to a CZM Coastal Habitat and Water Quality Grant. This was successful.
- Attended NERACOOS Annual meeting and Board meeting December 4-5. Most of the conversation was on funding and sustainability of programs, and the strategic plan which will be finalized and released.

Communications

- Working with Dorria Marsh on the MassBays website to bring in all the work that MassBays does in the coming months.
- Supervised the development and publication of the Fall newsletter.

Presentations and publications

- Presented at the ANEP Tech Transfer meeting hosted by Mobile Bay NEP in November, on the SECWQALS monitoring program.
- Presented at a workshop of Mass Rivers Alliance on the Healthy Estuaries Grant program.
- Represent MassBays on NROC's Ocean and Coastal Ecosystem Health Committee which is currently working on how to implement the NECAN monitoring plan for ocean acidification as well as working to reinvigorate its SAV working group.
- Participated in NROC's fall meeting in Rhode Island.

Program Manager, Habitat Restoration and Data Quality

Jill Carr (Jillian.Carr@umb.edu)

Support valid (QA/QC) data collection and use

1. Continue progress on EPA Exchange Network project to expand MassWateR R tool with new functions to increase use in other states and develop a Shiny App to increase access for users not interested in using R code. Project will also build a Shiny App for QC/analysis of continuous data. This is a partnership of four New England NEPs with Casco Bay NEP as the lead, and subawards to MassBays, PREP, and NBEP. Note, funding is not yet in hand due to backlogs at EPA. Currently conducting needs assessments across all four states.
2. Kicked off project with subcontractor Center for Coastal Studies to update AquaQAPP to meet new EPA QAPP Standards. Currently developing a list of

specific changes that must be integrated into the coding to reformat QAPP outputs, along with other improvements like integrating maps and streamlined tables/figures.
3. Provided one-on-one support to groups on QAPP development, data upload to WQX, and use of MassWateR. Oversaw and responded to questions in the MassWateR Community of Practice.
4. Circulate and provide training on MassBays-EPA protocol for eelgrass phenology monitoring.
5. Finalize data visualization for diadromous fisheries data in the Ecohealth Tracking Tool, launch updated tool.

Address data gaps

1. Develop and/or submit proposals to Massachusetts Environmental Trust (#MassWrack project, not selected), NFWF (east-coast-wide eelgrass restoration project, not selected), MA EEA (eelgrass site selection mode, not selected), MassDEP (TBD, in prep), and The Allen Foundation (TBD, in prep). Awaiting updates on an MIT SG proposal that was selected for funding in 2026.
2. Kick off new Restore America's Estuaries grant for a cross-region eelgrass restoration project that will plant 0.5-1 acre restoration sites in Gloucester, Beverly, Marblehead, Nahant, Duxbury and Plymouth, in partnership with the Regional Coordinators. Project started in Oct 2025 but the team successfully install test plots in all locations from Sept-Nov 2025. Permitting, QAPP, supplies procurement, and planning are currently underway.
3. Complete data analysis for a study led by National Park Service to investigate eelgrass loss and barriers to recovery along the outer Cape (Wellfleet / Billingsate area). Collect and analyze numerous datasets of historic stressors (water quality, weather and climate, fishing pressure, disease, predation). Final report will be submitted to the project team by 1/31/26. Supervise grad student Aaron Shavitz's work on water quality data analysis.
4. Continue data analysis, modeling, and reporting for WHOI Sea Grant study looking at seed-based approach to large-scale eelgrass restoration. Completed BACI harvest impact experiment and processing of samples in the lab, in partnership with SSCW and DMF. Supervise grad student Aaron Shavitz's work on analyzing remote sensing SST datasets to integrate into a model of eelgrass seed maturity.
5. Continued oversight of IIJA-funded project titled *Building infrastructure to support seed-based eelgrass restoration* which built dedicated tank infrastructure to support an eelgrass seed bank at DMF's Cat Cove Marine Lab. Interviewed, trained and continue to oversee two lab technicians (SSU Co-Op students) who completed their work at the lab (~2 hours a day throughout the summer and fall) at the end of October.

Convene and partner with others to support and improve monitoring outputs.

1. Finalize eelgrass groundtruthing for MassDEP aerial mapping project. Sampled >800 stations across Buzzards Bay & Marthas Vineyard from August to October 2025. Next year, the program will map Cape Cod Bay. Final field report and data have been submitted to MassDEP. Remaining MassBays tasks include conducting QA/QC of DEP polygons and making revision suggestions before a new layer is released to the public via MassGIS.
2. Co-hosted the fall 2025 Massachusetts Seagrass Working Group meeting with DMF at Cat Cove Marine Lab.
3. Oversee MassBays' Community of Practice forums for MassWateR and the Massachusetts Seagrass Working Group.

4. Represent MassBays on the steering committees for: East Coast Submerged Aquatic Vegetation Collaborative, DKP Cit Sci eelgrass monitoring project, Merrimack River living shoreline project, STAC.

Presentations and publications

1. Travel as a presenter to CERF (Richmond, VA) and the ANEP Tech Transfer (Mobile, AL). Present on seed-based eelgrass restoration best practices.
2. Attend and represent MassBays at MA SMWG and UMB School for the Environment strategic planning meetings.

Other

1. Manage setup and spending on 4 grants, oversee subawards, and track budgets.
2. Train and supervise UMB graduate research assistant.
3. Assist with social media planning.
4. Manage and track annual retainer contracts for software developer Ethan Mick.
5. Participate in UMass cross-campus committee that is establishing a Scientific Boating Policy and safety program.

Regional Service Provider & Staff Updates
January-March 2026

Regional Service Provider Updates

Upper North Shore – Merrimack Valley Planning Commission
Contact: Hanna Mogensen

Gather data on conditions and trends

- Final deliverables for the Healthy Estuary Grant Project: Using UAV Technology to Enhance Long-term Coastal Monitoring Projects was submitted to MassBays. Public viewer for project was also finalized and shared.
- Collected monthly water samples in the Merrimack River in association with Merrimack River Watershed Council to assist with their regional water quality monitoring program and expanded CSO program.

Local Action for Habitat & Water Quality

- Continued to advance RAE project for eelgrass seeding on the UNS through submitting project NOI to MassDEP and Gloucester ConCom and filing information with National Heritage.

Inform state policy and local action.

- MVPC continued to advance Green Crab management efforts through the Green Crab Task Force. Over the winter, MVPC begin working with students from the Tufts Urban and Environmental Policy Program to explore sustainable market pathways for future management.
- Co-developed and submitted application with Town of West Newbury to participate in TNC's Living Shoreline Training Program.
- Continued to advance the Merrimack River Clean-up Initiative, supporting 5 communities in the Merrimack to deploy booms for regular servicing, coordinate community river shoreline cleanups, and make improvements to the Early Alert Tool for CSO predictive modeling and public notification.
    - The newest iteration of the Early Alert Tool can be found here: The Early Alert Tool | MVPC
    - Initial discussions with DMF also kicked off this winter to explore further updates and integration of the tool to amplify DMF shellfish closure sites at the mouth of the river.

Provide Education, training, and technical support.

- Began assisting three coastal communities with CZM Coastal Habitat grant by developing community forums around beach management.
- Kicked off initial planning for the Merrimack River Water Quality Roundtable (4/29/2026).
- Attended and provided support for regional Zero Waste Workshops
- Continued to host Peer Learning Network virtual meetings as part of the Municipal Energy and Sustainability Mangers Program.
- Provided technical support to communities with roll out of DOER's new Small Clean Energy Siting and Permitting Regulations
- Convened regional planners, Stormwater Collaborative, and 8TGM Committee.
- Continued to develop two proposals for the Municipal Vulnerability Preparedness (MVP) Action Grant program to address local flooding and extreme heat.

Lower North Shore – Salem Sound Coastwatch

Contact: Alison Frye; ***Carole McCauley, billing@salemsound.org***

Gather data on conditions and trends

- WHOI Sea Grant eelgrass seed study with MA DMF and MassBays: Modeling and piloting a new seed-based approach to large-scale eelgrass restoration in Massachusetts. Completed data analyses for crab trapping experiment, wrote field germination experiment Best Management Practices guide.
- Restore America's Estuaries grant with MassBays: Seeding the future: Restoring eelgrass and building community engagement across MassBays NEP. Completed permitting for two restoration locations in Marblehead (Riverhead Beach) and Beverly (Lynch Park).
- Final Clean Beaches & Streams Report and Tributaries & Water Quality Summaries submitted to towns, MassBays, MassDEP, and EPA, and posted on SSCW website.
- Developed anecdotal/historical blue mussel surveys and distributed to Lower North Shore community and MassBays network.
- Completed Winter Waterfowl/Bird surveys in seven Salem Sound communities (1x per month, Jan – March), adding to long-term data that started in 1988 in response to a gap in state/Mass Audubon surveys in Salem Sound. Over 6,000 birds and 31 species were recorded this winter.

Climate Change

- Project manager with the City of Salem's FY25-26 MA CZM Coastal Resilience Grant Phase 2 of the Winter Island Park Pathway and Bank Restoration Project. Received Ch. 91 minor modification approval. All permitting is now complete for coastal bank stabilization. Planning next phase of the project.
- Project team member on Salem's Resilient Together: Collins Cove Park Neighborhood Resilience Project FY25-26 MA CZM Coastal Resilience Grant. Continued to provide technical support in developing appropriate resilience strategies, held public meeting to introduce conceptual designs and gather community feedback (2/26/26).

Reduce Stormwater Discharge

- MassDEP MS4 grant to continue working on pet waste under review.
- Greenscapes: Created 5 newsletters and 6 social media posts that were disseminated to Greenscapes communities, led 17 Keeping Water Clean activities for Greenscapes community schools (<45 volunteers, <600 students), hosted dog waste cleanup and installed pet waste signs in Gloucester, and provided two MS4 communities with informational stormwater materials (flyers/rack cards). 1600 Scoop rack cards to Rowley, 1000 to Marblehead. Surveyed municipal partners to determine desired outreach materials and messaging. Attended MAPC focus group meeting to discuss LID and municipal barriers in installation.
- Maintained rain gardens at Commercial Street, Salem.
- Attended Salem Tree Commission Meetings, promoted GGCP (Greening the Gateway Cities Program) winter site visits for homeowners. Attended two Salem State University tree committee meetings and Arbor Day planning meetings. 500 "trees protect our health" rack cards to Rowley.

Manage Invasive Species

- Submitted manuscript with *Ruditapes* working group on Manila Clam introduction and extent in Massachusetts (2/9/26)

Education and Outreach

- Hosted three Underwater in Salem Sound lectures: WHOI Eelgrass (1/21), Winter Bird Surveys (2/18), and Ghost Lobster Trap Removal (3/18). Upcoming lectures: SSU's Healthy Estuaries Grant on Salem Harbor's sediment nutrients (4/15) and Drifters Ocean Currents (5/20).

- Presented to Jubilee Yacht Club on climate change impacts to their property, including flooding from sea level rise and storm surge.

Metro Boston – Northeastern University Marine Science Center
Kelsey Schultz, Interim Regional Coordinator
Diana Chin, Regional Coordinator
Address Data Gaps

- MassBays BIL Funding: We are wrapping up work on an award from MassBays to NU and Emerald Tutu for a 2025-2026 research project to build and test a simple nursery system in East Boston for propagating salt marsh cordgrass from seed within biomass-based mats, which could be deployed as urban living shoreline prototypes.
- Restore America's Estuaries NEP Watersheds: We have begun a collaborative 2025-2027 project with the MassBays central staff and three other regions to conduct pilot-scale seed-based eelgrass restoration and outreach.
- Allen Family Philanthropies: With other NU, MassBays, MA DMF, Boston University, and TNC partners, we submitted a proposal to expand regional seed-based eelgrass restoration and conduct related ecological and socioecological research.
- MIT Sea Grant: We were selected for funding and are preparing for a 2026-2027 research project in collaboration with MassBays and MIT Sea Grant staff regarding interactions of shellfish aquaculture and seagrass, aimed at informing aquaculture siting and management.
- TNC: We are wrapping up a project examining the degree to which oyster aquaculture provides important ecosystem services, including enhancing water quality and providing habitat for fish and crustaceans.

Gather Data on Conditions and Trends

- Sea Grant American Lobster Initiative: We are finishing a project investigating the impacts of the range expansion of black sea bass and blue crabs on lobsters and the lobster fishery in the Gulf of Maine. This research uses experiments, field monitoring, and surveys of the lobster industry to assess their ecological knowledge.

Technical Support and Communication

- Invasive Species Research: We continued participation in a Manila clam working group and contributed to submission of a manuscript to a peer-reviewed journal to report evidence for its establishment in the MassBays region.
- Conferences, meetings, and workshops: We 1) Represented MassBays and the Metro Boston region at a meeting of the MassECAN Salt Marsh Working Group; 2) Participated in MassBays' tide gates advisory committee; 3) Discussed potential future collaborations with regional partners such as Emerald Tutu and the EPA Urban Waters Partnerships Mystic Ambassador at the Mystic River Watershed Association.

Education and Outreach

- Boston Harbor Ecosystem Network (BHEN): We 1) Held a BHEN Steering Committee meeting; 2) Began planning a spring BHEN meeting to discuss issues with integrating AI productively into coastal scientific research and public engagement; 3) Began planning two summer field trips around shellfish monitoring and restoration topics in Metro Boston; 4) Continued output of monthly newsletters compiling resources, events, funding, and job opportunities from across BHEN and related networks.

Other

- **We continued hosting regular discussion meetings for the MassBays RCs.**
- **The Interim RC for Metro Boston took over for the RC while on parental leave during the winter.**

South Shore – North and South Rivers Watershed Association
Contact Alex Mansfield

1.1 Make new data available, especially to address specific gaps in knowledge

1.1.1 Monitor Diadromous Fish Runs

- Recruiting of the 2026 herring counts volunteers for five South Shore sites. Seventy-five volunteers registered as of 3/17/2026. Counts begin on March 23rd at early run sites, remaining counts begin March 30th.
- Worked with a new group (Island Creek, Duxbury) to facilitate volunteer recruitment, scheduling, and data analysis at this new fish counting site.

1.1.2 Water Quality Monitoring

- Hired summer interns for WQ testing.
- Organized a coalition and "summit" of interested entities for Duxbury/Plymouth/Kingston Bay. Summit held at Duxbury Bay Maritime School on March 10, 2026. Participants included: Duxbury Bay Maritime School, Jones River Watershed Association, MA Coastal Zone Management, MassBays National Estuaries Partnership, North and South Rivers Watershed Association, Provincetown Center for Coastal Studies, Southeastern Massachusetts Pine Barrens Alliance, Town of Duxbury, Town of Kingston, Town of Plymouth, Wildlands Trust, Eel River Watershed Association, Trout Unlimited, Mass Audubon, Cape Cod Cooperative Extension, Manomet Conservation Sciences, Woods Hole Oceanographic.

1.1.3 Salt Marsh Vulnerability and Assessment

- Pursing funding for pilot-scale salt marsh restoration in Scituate and Marshfield.
- Supported MassBays tidegate prioritization project focusing on South Shore sites.

1.1.4 Horseshoe Crab Surveys

- Participated in the DMF Horseshoe crab science meeting (3/20/26)
- Initiated planning and scheduling for 2026 HSC surveys at Duxbury Bay

2.1 Research to Inform Policy & Actions

2.1.7 Dam Removal Monitoring and Implementation

- Kicked off Temple Street Dam removal on the South River in Duxbury.
- Advanced Chandler Pond Dam removal plans on the South River through meetings with property owners and DER.
- Monitoring of Veteran's Park Dam removal.

2.1.8 Eelgrass

- Permitting in the towns of Duxbury and Plymouth for "Seeding the future: Restoring eelgrass and building community engagement across the MassBays NEP".

2.1.9 Blue Mussels

- Developed scope of work and budget for monitoring mussel beds at 4th Cliff Scituate. This is ongoing work with Mass Audubon to support assessment of habitat conditions for the federally listed Red Knots (*Calidris canutus*) who stopover on this federally owned property.
- Developing a citizen science-based protocol for intertidal mussels.

2.2 Technical Support & Communications

2.2.11 Represent Mass Bay in Networks

- Participated in quarterly Saltmarsh Working Group meetings.
- Participated in the quarterly Seagrass Working Group meetings
- Participated in the NOAA BWET Community of Practice
- Participated in monthly "Mass Rivers Science Connects" meetings
- Participated in MassBays Science and Technical Advisory Committee meetings.

3.2 Local Action for Habitat & Water Quality

3.2.15 Resilient Coastal Habitats and Communities

- Supported Town of Duxbury's grant proposal to MA CZM for nutrient loading modeling to Duxbury Bay.

Cape Cod – Association to Preserve Cape Cod
Contact: April Wobst and Dee Marsh
Make new data available

- **River herring monitoring:**
  - **Coordination for 2026 river herring monitoring is underway with advertisement for volunteers, scheduling of trainings, and communication with run coordinators.**
    - **Annual run coordinator meeting held on March 6th.**
  - **APCC staff are serving as run coordinator for the Stony Book herring run.**
  - **Developed an interactive educational game and simulation that shows users how scientists estimate the size of a river herring migration from limited sampling data. The application reflects a real-world challenge faced by fisheries scientists and volunteer monitors: only a small portion of a fish run can be directly observed, yet managers still need to estimate the total number of fish migrating upstream. https://apccorg.shinyapps.io/river_herring_run_estimation/**
- **Cyano, freshwater, and restoration database development**
  - Planning for monitoring is underway with sampling of ponds to begin in March or April for the freshwater initiative and in May and June for cyanobacteria.
  - APCC was awarded contract by the Cape Cod Commission for another three years of monitoring under the freshwater initiative with an expanded list of 75 ponds (50 existing and 25 additional under development).
  - APCC provided recommendations for 25 additional ponds to include based on past, current and proposed restoration projects on freshwater ponds.
- **State of the Waters Cape Cod**
  - APCC is developing a 2025 State of the Waters brochure to expand outreach and education related to the quality of public drinking water, freshwater ponds, and coastal embayments.

Habitat and Water Quality Improvement Restoration

- Sesuit Creek Salt Marsh: APCC contracted SumCo for completion of spring planting of *Spartina alterniflora* in this tidally restored marsh. The proposed design developed by Woods Hole Group in tandem with APCC and partners includes planting of 90,000 plugs over 1.8 acres in three prioritized bare areas in the marsh. The restoration will be monitored for a minimum of three years following implementation to measure the impact of this planting including survival, percent cover, area of revegetation, changes in marsh elevation, and changes in sediment accretion. The results of this will help inform adaptive management measures for similar large-scale restoration projects like the Herring River Restoration in Wellfleet.
- Chase Garden Creek: APCC is working on RFP development to hire consultant(s) to complete design and permitting for priority areas of the marsh to be hydrologically restored through "trio" techniques including ditch remediation, runneling, and microtopography islands.
- Map of Restoration Needs: APCC has developed a draft map and database overlaying restoration project inventories with pond and cyano monitoring locations and data, State of the Waters Report data as well as other data layers including EJ communities and open space. This map will be refined and data updated to identify and prioritize areas for restoration and protection on Cape.

Outreach and Education, Collaboration and Technical Support

- APCC staff presented updates on the Chase Garden Creek project on January 14th as a follow on to a salt marsh restoration and resilience talk given on December 10th. These talks were part of a series of restoration talks to APCC members and general public.
- A coordinated public outreach effort helped highlight the importance of river herring and the need for volunteer monitors through a press release. The effort generated media coverage in the *Cape Cod Times* (February 9), the *Upper Cape Enterprise* (February 3), and on WCAI public radio (February 3).
- APCC gave presentations on river herring science and monitoring efforts to:
  - **Small Boats. Big Science. Cape Cod Commercial Fishermen's Alliance. March 5th.**
  - **Counting on a Comeback. River Herring Monitoring on Cape Cod. March 20th. Association to Preserve Cape Cod.**
- APCC provided a presentation on the Childs River restoration and brook trout at the Mass Audubon Cape Cod Natural History Conference on March 7
- APCC will participate in the NEIWPCC Non-Point Source Conference on April 7-9 and co-present posters on our Yarmouth and Public Boat Ramp Stormwater Projects.
- APCC has continued to work with WBNERR on planning for the Biannual Cape Coastal Conference to be held April 13-14 including day one focusing on restoration and site restoration tours on day two. Featured sessions will include Mashpee Wampanoag keynote, salt marsh restoration, eelgrass/kelp restoration, dredging and beneficial reuse of sediment and wetland/bog restoration as well as coastal resilience planning and projects.

MassBays Staff Updates

Prassede Vella

Director (starting 1/25/2026)

Administration and Program Support

- Finalized the 2026 Communications Plan (which UHI had developed) and shared with Communications Subcommittee and then with Management Committee for comments.
- Revised job description for the Communications and Development Specialist in collaboration with UMass Boston HR Department to include "Development" tasks and bringing the position up to FT. Job position has been submitted to HR (posting TBD).
- Met with Assistant Dean to discuss staffing (fill vacant position and make some organizational changes in MassBays).
- Developing strategy to conduct an Annual Program Review per the MC SOPs. Reviewers will mainly be the Executive Committee. Meeting to discuss scheduled for 4/9.
- Met with three RSPs (Director, RC, staff) in person to have one-on-one discussions on how things are going as RSPs, their roles with MassBays, and what they may like to see improved; program priorities and the upcoming workplans; and working together into the future to keep making MassBays stronger and increase support to communities. Two meetings (Cape Cod RSP and Metro Boston RSP scheduled in the next few weeks).
- Contributed to and edited MassBays' winter newsletter
- Attended the EPA NEP meeting in DC (March 17-19). Workshops focused on guidance and tools developed by EPA for the NEPs, revision of guidance for Program Evaluation, how NEPs track progress towards their CCMP, and the Artist-in-Residence program.
- Participate in monthly NEP Directors' meetings as well as monthly GOM Directors' meetings where we are mainly discussing the possibility of establishing a GOM geographic program.

- Participated in regular School for the Environment Faculty and Directors meetings. These included discussions on a revision of space for Centers' staff and Faculty currently going on within SFE.
- Participated in monthly SFE Faculty and Directors' meetings.
- Have weekly check-ins with staff and with communications staff.
- Transitioned into new role on 1/25/2026.

Communications

- Working with communications staff on the MassBays website to bring in all the work that MassBays does in the coming months.
- Supervised the development and publication of the Winter newsletter.

Science

Address data gaps

- Diadromous Fish Habitat BCG and target: The 2050 targets (migratory habitat miles and spawning habitat acres) are now available on the EcoHealth Tracking Tool.
- SECWQALS – Started planning with USGS and partners for summer monitoring (2026) including deployment of continuous monitoring sensors (expected in May) and the start of the grab sampling (expected in May).
- EPA 3.0: with supplemental funding from EPA Headquarters ($30k) plus savings from another project using IIJA funds ($15k) we now have a solid team and work has started.

Applied research for decision-making

- Optimizing local tide gate operations & management to improve salt marsh health: Meetings have been scheduled for the outreach stage of the project that will include conversations with operators/owners for the top five priority tide gates (Kingston, Scituate, Revere, Sandwich) plans and discussing next steps. Developed O&M template and associated app; a next-gen TideGateway app is also underway. Project should be completed by September 2026 and will share with the management committee. Met with NFWF contractors to discuss reviewers' comments and we will be submitting an updated proposal (pre-proposal due 3/31).

Program support

- MassSMAP kickoff meeting scheduled for January 2026 was canceled pending discussions relating to WWTP permit appeals which need to be addressed before the MassSMAP meets. A new date will be scheduled in the coming weeks. In the meantime, OMSAP remains the entity reviewing MWRA's Outfall data and a meeting is scheduled for April 2026.

Convene and partner with others to support and improve monitoring outputs.

- Next STAC is scheduled for May 2026.
- Contributed to the NERACOOS Board as Secretary; participated in monthly Ex Com meetings as well as Finance Committee meetings as needed,

Program Manager, Habitat Restoration and Data Quality

Jill Carr (Jillian.Carr@umb.edu)

Support valid (QA/QC) data collection and use

- Continue progress on EPA Exchange Network project to expand MassWateR R tool with new functions and improved accessibility. In this reporting period, MassBays led a needs assessments web-survey across all four states followed by a regional virtual needs assessment meeting (1/27/26) with >50 NGO users across the project area weighing in on project output designs.
- Continued supervision and coordination of subcontractors Center for Coastal Studies and Ethan Mick to update AquaQAPP to meet new EPA QAPP Standards. A new "master QAPP"

has been developed to reflect changes, which will now undergo programming to integrate into the tool's user experience.
- Provided one-on-one support to groups on QAPP development, data upload to WQX, and use of MassWateR. Oversaw and responded to questions in the MassWateR Community of Practice.

Address data gaps

- Set up subawards, purchase supplies, and kick off Restore America's Estuaries grant for a cross-region eelgrass restoration project that will plant 0.5-1-acre restoration sites in Gloucester, Beverly, Marblehead, Nahant, Duxbury and Plymouth, in partnership with the Regional Coordinators. In this reporting period, the team conducted permitting (all state and federal permitting complete; some sites still under review at the town level) and received approval from EPA on the project QAPP.
- Complete data analysis for a study led by National Park Service to investigate eelgrass loss and barriers to recovery along the outer Cape (Wellfleet / Billingsate area). Collect and analyze numerous datasets of historic stressors (water quality, weather and climate, fishing pressure, disease, predation). Final report will be submitted to the project team this spring. Supervise grad student Aaron Shavitz's work on project data analysis.
- Continue data analysis, modeling, and report writing for WHOI Sea Grant study looking at seed-based approach to large-scale eelgrass restoration. Supervise grad student Aaron Shavitz's work on analyzing in situ temperature and remote sensing SST datasets to integrate into a model of eelgrass seed maturity.
- Continued oversight and planning of IIJA-funded project titled *Building infrastructure to support seed-based eelgrass restoration* which built dedicated tank infrastructure to support an eelgrass seed bank at DMF's Cat Cove Marine Lab. Redesign and addition of an IIJA-funded outdoor tank space currently underway.
- Co-developed proposal submitted to Massachusetts DEP titled *Underwater carbon vaults: Spatial mapping and storage assessment of SAV ecosystems.* The project would investigate blue carbon potential of natural and restored eelgrass meadows, and other natural SAV meadows (widgeongrass, freshwater tapegrass). This project would include a strong partnership with several UMB's faculty (K. Dafforn, J. Byrnes) and would significantly advance our SAV conservation work.
- Co-developed proposal submitted to The Allen Foundation titled *Advancing seagrass restoration as a natural climate solution through scientific and technological solutions in a collaborative, place-based approach* (led by R. Hughes, Northeastern). The project would look at barriers to eelgrass restoration as a natural climate solution. Among many other components, it would fund the MassBays/RC team for an additional year of restorations at the active RAE sites, and the hosting of tech transfer workshops with and for other NEPs and partners across the region.
- Awaiting updates on an MIT SG proposal that was selected for funding in 2026 to look at aquaculture and eelgrass interactions (led by D.Chin, Northeastern).

Convene and partner with others to support and improve monitoring outputs.

- As a new component of the MassDEP-MassBays Eelgrass Mapping Interagency Service Agreement (ISA), MassBays (Carr and Shavitz) will provide a QA/QC review of MassDEP's eelgrass polygons and make revision suggestions before a new layer is released to the public via MassGIS. MassBays developed a protocol for conducting the QA/QC which is under review and expected to be implemented in late March 2026.
- Oversee MassBays' Community of Practice forums for MassWateR and the Massachusetts Seagrass Working Group.

- Represent MassBays on the steering committees for: East Coast Submerged Aquatic Vegetation Collaborative, DKP Cit Sci eelgrass monitoring project, Merrimack River living shoreline project, STAC

Presentations and publications

- Present to MassRivers Alliance WQ Monitoring Coordinators monthly group meeting: *All about SAV: Submerged Aquatic Vegetation in MA* (3/11/26)
- Present as guest lecturer at Brandeis University undergraduate conservation biology class: *Conservation Priorities in our Estuaries with a special focus on seagrass* (3/13/26)
- Present tool updates during MA Water Quality Coalition workshop on QAPPs and Data Quality (2/10/26)
- Present MassWateR tool demo at *MassWateR Data Tools: Community Needs Assessment Meeting* (2/27/26)
- Attend and represent MassBays at MA SMWG and UMB School for the Environment strategic planning meetings.

Other

- Manage setup and spending on 4 grants, oversee subawards, and track budgets.
- Train and supervise UMB graduate research assistant A. Shavitz; onboard new eelgrass volunteer Ed Sheldon who is assisting with field work app development.
- Assist with social media planning.
- Work with contractors (CEI, Mick) on EDA 3.0 layers and assessment methods.
- Manage and track annual retainer contracts for software developer Ethan Mick.
- Participate in UMass cross-campus committee that is establishing a Scientific Boating Policy and safety program.

Regional Service Provider & Staff Updates
April-June 2026

Regional Service Provider Updates

Upper North Shore – Merrimack Valley Planning Commission
Contact: Hanna Mogensen
Gather data on conditions and trends

- Collected monthly water samples in the Merrimack River in association with Merrimack River Watershed Council to assist with their regional water quality monitoring program and expanded CSO program.
- Mapped chronic marsh wrack locations across the Great Marsh
- Completed pilot flight of ~50 acres of saltmarsh for conditions analysis in Salisbury

Local Action for Habitat & Water Quality

- Finalized permitting for RAE project for eelgrass seeding on the UNS and begin fieldwork through site selection and HOBO deployment at two locations in Gloucester
- Continued to advance the Merrimack River Clean-up Initiative, supporting 5 communities in the Merrimack to deploy booms for regular servicing, coordinate community river shoreline cleanups, and make improvements to the Early Alert Tool for CSO predictive modeling and public notification. The project website can be viewed here: Merrimack River Cleanup Initiative | MVPC

Inform state policy and local action.

- Worked with Tufts Urban and Environmental Policy Program to finalize their semester-long project, resulting in a comprehensive report on sustainable market pathways for future management. Report was shared with Green Crab Task Force and will be posted on MVPC's website.
- Awarded funding from DEP to advance Stormwater Planning and Management in the region! MVPC is working with communities to refine and update the Low Impact Development (LID) Viewer and identify stormwater Best Management Practices to advance.
- Supported City of Haverhill with submitting ECO-ONE Stop application for Water Conservation Planning

Provide Education, training, and technical support.

- Presented on Healthy Estuary Grant Project: Using UAV Technology to Enhance Long-term Coastal Monitoring Projects at the Spring Hampton-Seabrook Estuary Collaborative Meeting and the June MassBays STAC meeting
- Assisted the communities of Salisbury, Newbury, and Newburyport in planning for, promoting, and holding two community forums to share results from the regional beach sediment management study and gather feedback from community members. Forums were held on June 4th and 5th. Study will be posted on the project website (MAMRBA.gov) in July.
- Hosted the 5th annual Merrimack River Water Quality Roundtable on Wednesday, April 29th with over 70 registrants and 13 speakers who provided diverse and informative updates of their work along the river.
- Continued to host Peer Learning Network virtual meetings as part of the Municipal Energy and Sustainability Mangers Program. Worked to develop Mentorship program to kick off in Fall 2026.
- Provided technical support to communities with roll out of DOER's new Small Clean Energy Siting and Permitting Regulations and collaborated with DOER to hold regional informational session on 6/8.

- Convened regional planners, Stormwater Collaborative, and 8TGM Committee.

Metro Boston – Northeastern University Marine Science Center
Diana Chin, Regional Coordinator
Address Data Gaps

- MassBays BIL Funding: We are wrapping up work on an award from MassBays to NU and Emerald Tutu for a 2025-2026 research project to build and test a simple nursery system in East Boston for propagating salt marsh cordgrass from seed within biomass-based mats, which could be deployed as urban living shoreline prototypes.
- Restore America's Estuaries NEP Watersheds: We coordinated pilot site monitoring, additional permitting, collection site phenology, restoration site scoping, and sensor deployments for sites in the Metro Boston (Nahant) and Lower North Shore (Beverly, Marblehead) regions as part of a MassBays-led 2025-2027 project to conduct seed-based eelgrass restoration and outreach.
- MIT Sea Grant: We are starting up a 2026-2027 research project in collaboration with MassBays and MIT Sea Grant staff regarding interactions of shellfish aquaculture and seagrass, aimed at informing aquaculture siting and management.

Gather Data on Conditions and Trends

- Sea Grant American Lobster Initiative: We are finishing a project investigating the impacts of the range expansion of black sea bass and blue crabs on lobsters and the lobster fishery in the Gulf of Maine. This research uses experiments, field monitoring, and surveys of the lobster industry to assess their ecological knowledge.

Technical Support and Communication

- Invasive Species Research: As part of the *Ruditapes* (Manila clam) working group, we are anticipating publication of a peer-reviewed paper (accepted to *Biological Invasions*) and are facilitating a new research priorities and tracking document.
- Conferences, meetings, and workshops: We 1) Represented MassBays and the Metro Boston region at a MassECAN Salt Marsh Working Group meeting and Zosterapalooza conference; 2) Discussed potential future collaborations with regional partners, including Emerald Tutu, Save the Harbor/Save the Bay, Saugus River Watershed Council, AECOM, UMass Boston, and Stone Living Lab.

Education and Outreach

- Boston Harbor Ecosystem Network (BHEN): We 1) Held a BHEN Steering Committee meeting and solicited nominations for new Steering Committee members; 2) Held the spring BHEN meeting (April 28, 19 participants) to discuss emerging AI use in coastal scientific research and public engagement; 3) Held a BHEN field trip (June 9, 13 participants) about monitoring non-native Manila clams in Boston Harbor; 4) Continued output of monthly newsletters compiling resources, events, funding, and job opportunities from across BHEN and related networks.

Other

- We continued hosting regular discussion meetings for the MassBays RCs.

South Shore – North and South Rivers Watershed Association
Contact Alex Mansfield

1.1 Make new data available, especially to address specific gaps in knowledge

1.1.1 Monitor Diadromous Fish Runs

- Communications with over 100 volunteers across five runs.

- Presentation at Duxbury Bay Management Committee meeting about stream clearing for herring runs.
- Temperature logger deployment and management at all runs.
- Environmental DNA sampling at four runs.
- Participate in DMF electroshocking surveys for Shad.
- Drone Surveys to identify potential stream obstructions in remote portions of Third Herring Brook.
- Worked with a new group (Island Creek, Duxbury) to facilitate volunteer recruitment, scheduling, and data analysis at this new fish counting site.

1.1.2 Water Quality Monitoring

- Duxbury/Kingston/Plymouth Bay water quality sampling
- RiverWatch water quality sampling throughout the North and South rivers.
- Southeastern MA WQ coalition grant management.

1.1.3 Salt Marsh Vulnerability and Assessment

- Pursing funding for pilot-scale salt marsh restoration in Scituate and Marshfield.
- Participate in MassMarsh field SOP training
- Conduct salt marsh surveys

1.1.4 Horseshoe Crab Surveys

- Managed over 60 volunteers for the conduct of 30 daytime and nighttime horseshoe crab surveys in Duxbury Bay.
- Presented talk on horseshoe crabs at Duxbury Free Library 5/8/2026

1.1.5 Marine invasive species

- 2026 MIMIC training and kick-off.
- Developed volunteer sampling schedule for MIMIC south shore.

1.2 Support valid (QA/QC) data collection and use

1.2.6 AquaQAPP/WQX

- Technical support for Duxbury Bay Maritime School water quality monitoring QAPP preparation

2.1 Research to Inform Policy & Actions

2.1.7 Dam Removal Monitoring and Implementation

- Monitoring at Temple Street Dam removal on the South River in Duxbury.
- Advanced Chandler Pond Dam removal plans on the South River through meetings with property owners and DER.
- Monitoring of Veteran's Park Dam removal.

2.1.8 Eelgrass

- Deployed and managed in site loggers in Duxbury and Plymouth as part of the RAE funded "Seeding the future: Restoring eelgrass and building community engagement across the MassBays NEP".

2.1.9 Blue Mussels

- Conducted surveys of intertidal blue mussel beds at 4th Cliff Scituate. This is ongoing work with Mass Audubon to support assessment of habitat conditions for the federally listed Red Knots (*Calidris canutus*) who stopover on this federally owned property.

2.2 Technical Support & Communications

2.2.11 Represent Mass Bay in Networks

- Participated in Salt marsh science symposium and Salt Marsh Working Group joint meeting.
- Participated in the quarterly Seagrass Working Group meetings
- Participated in the NOAA BWET Community of Practice

- Participated in monthly "Mass Rivers Science Connects" meetings
- Participated in MassBays Science and Technical Advisory Committee meetings.

3.2 Local Action for Habitat & Water Quality

3.2.15 Resilient Coastal Habitats And Communities

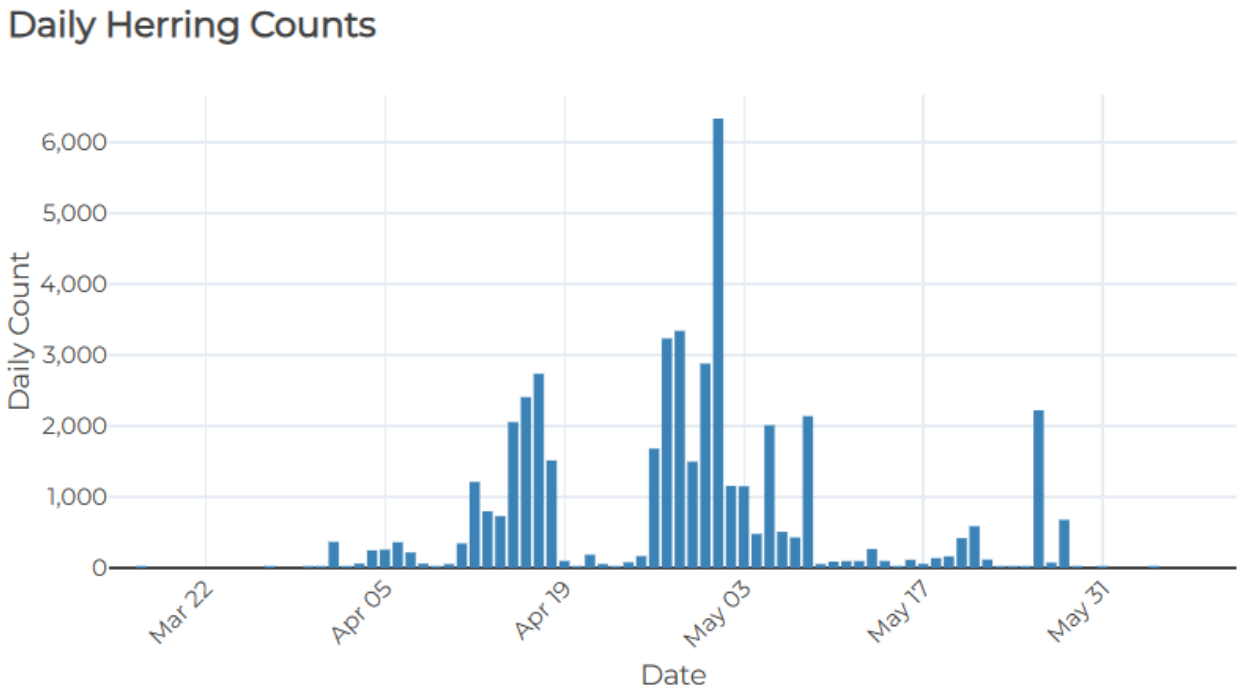
- Mid-South Shore Resilient Coasts Project.
- Coastal Relocation meeting.
- Gulf River Restoration program
- Supported Town of Duxbury's grant proposal to MA CZM for nutrient loading modeling to Duxbury Bay.

Cape Cod – Association to Preserve Cape Cod

Contact: April Wobst and Dee Marsh

Make new data available

- **River herring monitoring**:
  - The 2026 river herring monitoring wrapped up second week of June.
  - Over 46,000 river herring counted across 14 runs below is compiled daily herring counts across these runs.
  - Final data being collected and will complete QA/QC before sending to DMF for run size estimates for 2026.
  - https://apccorg.shinyapps.io/herring_monitoring/



- **State of the Waters Cape Cod**
  - APCC has begun gathering data from 2025 to include in the 2026 annual State of the Waters Report.

Habitat and Water Quality Improvement Restoration

- **Sesuit Creek Salt Marsh**: APCC is leading a large-scale planting project at Sesuit Creek in Dennis, MA. This marsh was tidally restored in 2008 but has been slow to revegetate

in bare areas formerly dominated by freshwater vegetation and *Phragmites.* The proposed design developed by Woods Hole Group in tandem with APCC and partners includes planting of over 90,000 plugs over 1.8 acres in four prioritized bare areas in the marsh. APCC contracted SumCo for completion of planting of *Spartina alterniflora* this spring. This builds upon a 2018 pilot planting completed by APCC with DER and Cape Cod Conservation District funding.

The planting began first week of May and was completed first week of June for total of 4-week planting period plus 1.5 weeks to install goose exclusion fencing. This is the largest planting of salt marsh grasses on the Cape and in the state of Massachusetts. Total project budget of half million dollars for design, permitting, implementation and monitoring. Final implementation cost ~$380K. Project funded by MassBay National Estuary Partnership BIL grant, MA Division of Ecological Restoration and private foundation funds.

APCC is working on final monitoring plan to complete a minimum of three years monitoring (2026-2028) to measure the impact of this planting including survival, percent cover, area of revegetation, changes in marsh elevation, and sediment accretion. The results of this will help inform adaptive management measures for similar large-scale restoration projects like the Herring River Restoration in Wellfleet.

- **Blue Mussel Survey:** The survey created by Salem Sound Coast Watch and shared in MassBays spring newsletter was distributed to over 40 contacts across the 15 Cape Cod towns including municipal staff, the fishermen's alliance, recreational fishing/shellfishing groups, land trusts, watershed groups and other non-profit partners. Initial survey responses were reviewed in June and are displayed here for initial review of responses and geographic distribution of responses over the first few weeks: https://apccorg.shinyapps.io/blue_mussel_survey/

- **Chase Garden Creek:** APCC is revising RFP to re-release to hire consultant(s) to complete design and permitting for priority areas of the marsh to be hydrologically restored through "trio" techniques including ditch remediation, runneling, and microtopography islands.

Outreach and Education, Collaboration and Technical Support

- APCC staff attended the Salt Marsh Working Group in-person meeting April 2 and Jordan Mora, Lead Ecologist and Science Advisor who leads our salt marsh restoration work joined a panel discussion.
- APCC participated in the NEIWPCC Non Point Source Conference on April 7-9 and co-presented posters on our Yarmouth and Public Boat Ramp Stormwater Projects including Scargo Lake site supported with MassBays funding.
- APCC supported planning and attended the Biannual Cape Coastal Conference held April 13-14 including day one focus on restoration and restoration site tours on day two. April served on panel discussing lessons learned and challenges with restoration and APCC presented on bog restoration and had poster on salt marsh restoration.

- APCC staff attended the NEERS conference April 22-25 and presented poster on salt marsh restoration.
- APCC staff attended the Mashpee Wampanoag Tribe's Honor the Earth Faire on April 18th to talk about our work and restoration projects.
- WBUR visited the Sesuit Creek salt marsh project and conducted interviews with APCC and project partners on May 20th. Final story to run mid-June.
- The spring MassBays newsletter went out in April and content is being gathered in June for next newsletter for the summer.

MassBays Staff Updates

Director

Prassede Vella (Prassede.Vella@umb.edu)

Administration and Program Support

- Oversaw the finalization and approval of the Communications Plan by the Management Committee. Submitted the plan to EPA. Plan has been approved as part of our CCMP and is available on massbays,org.
- Developed job description for Environmental Scientist position and submitted to HR for review, approval, and posting. The Communications and Development Specialist position us expected to be posted in the next few days as it is its final stages with HR. Some other staffing changes are also in progress and awaiting final approval.
- Currently working on development of the next S.320 and IIJA work plans which include work plans from the five RSPs as well as other subawardees. Working closely with EPA and ORSP to provide all documents needed for submitting to grants.gov (S.320) and to EPA (IIJA).
- Conducted the March quarterly Management Committee meeting.
- Met several times with Dean and Assistant Dean and participated in meetings on the pending office moves within SFE. Stressed the importance of MassBays having office space near other SFE faculty as well as the other Centers and Institutes, for continued interdepartmental cooperation and opportunities for partnerships. MassBays will be moving to the room next door and continue to share office space with the Urban Harbors Institute. The move will be happening before the end of June.
- Developed the Annual Program Review report, including "self-evaluation". As SFE Dean, Carol Thornber also conducted a "self-evaluation" on behalf of UMB. The report includes success in growing partnerships, how initial challenges were addressed, and thoughts about steps for the coming year. A meeting was held with the Committee on 4/9/2026 to discuss outcomes and next steps. The report was shared with the Management Committee.
- Met with Cape Cod (virtually) and Metro Boston (in person) RSPs (Director, RC, staff) for one-on-one discussions on how things are going as RSPs, their roles with MassBays and how they see mutual growth, and what they may like to see improved; program priorities and the upcoming workplans; and working together into the future to keep making MassBays stronger and increase support to communities.
- Met with the new Executive Director for Salem Sound Coastwatch, Gitte Venicx. We plan to meet in person soon as Gitte is currently also serving as interim RC while Alison Frye is out on family leave.
- Contributed to and edited MassBays' spring newsletter

- Participate in monthly NEP Directors' meetings as well as bi-monthly GOM Directors' meetings where we are mainly discussing the possibility of establishing a GOM geographic program.
- Participated in regular School for the Environment Faculty and Directors meetings. Participated in and provided feedback on candidates for faculty positions as well as ESS Chair within SFE.
- Have weekly check-ins with staff and with communications staff.

Communications

- Working with communications staff on the MassBays website to bring in all the work that MassBays does in the coming months.
- Supervised the development and publication of the Spring newsletter.

Science (in brief)

Address data gaps

- Diadromous Fish Habitat BCG and target: The 2050 targets (migratory habitat miles and spawning habitat acres) are now available on the EcoHealth Tracking Tool.
- SECWQALS – The three continuous monitoring systems have been deployed and are live for the second full year in the Lower Merrimack River, Danvers River, and Duxbury Bay. USGS will be managing the systems. This year we will have grab samples from the Lower Merrimack River as well. The three teams have started or will start next week to conduct nutrient sampling in each embayment.
- Data analysis – MassBays hired two SFE PhD students for the summer to help with data analysis including: analysis of the SECWQALS 2025 data (Anant Misra) as well as the 7-8 years of community scientists volunteer eelgrass monitoring in DKP (Vishal Verna). We look forward to the outcomes of these two efforts.
- EPA 3.0: This project is moving forward, and we hope to have EDA 3.0 by the end of September. In addition, EPA HQ wants to build on our work to include an Ecosystem Services component. TBD.

Applied research for decision-making

- TIDEGateway will be finalized in September 2026, and we are looking for opportunities to fund the implementation of the recommendations for the top 5 priority tide gates. Unfortunately, we did not get NFWF funding, and I will be meeting with them to obtain feedback on the proposal. With remaining funds, we are working with the contractor (CEI) on additional steps we can take to bring this work to the next step (final design and permitting with support from communities).

Convene and partner with others to support and improve monitoring outputs.

- Supported STAC Chair in the spring meeting on 6/9. Next STAC is scheduled for October 2026.
- Contributed to the NERACOOS Board as Secretary; participated in monthly Ex Com meetings as well as Finance Committee meetings as needed,

Program Manager, Habitat Restoration and Data Quality

Jill Carr (Jillian.Carr@umb.edu)

Support valid (QA/QC) data collection and use

1. Continue progress on EPA Exchange Network project to expand MassWateR R tool with new functions and improved accessibility. In this quarter, beta versions of the new MassWateR and AquaSensR shiny apps were developed with testing to begin soon.

AquaSensR is the companion package of functions that helps users review, QA/QC, analyze and share continuous water quality data.

2. Continued supervision and coordination of subcontractors Center for Coastal Studies and Ethan Mick to update AquaQAPP to meet new EPA QAPP Standards. A new "master QAPP" has been developed to reflect changes, which will now undergo programming to integrate into the tool's user experience.
3. Provided one-on-one support to groups on QAPP development, data upload to WQX, and use of MassWateR.

Address data gaps

1. Restore America's Estuaries eelgrass restoration grant: conducted monitoring of the test plots planted last summer and laid out full-scale sites for planting seeds in summer 2026. Sites in Gloucester, Beverly, Marblehead, Nahant, Duxbury and Plymouth are being planted in partnership with the Regional Coordinators. Monitoring of seed maturity at the collection/donor meadows began in June, and collections are expected to take place in July.
2. Finalized report for a study of eelgrass loss and barriers to recovery across eastern Cape Cod Bay. Supervise grad student Aaron Shavitz's work on project data analysis.
3. Continue data analysis, modeling, and report writing for WHOI Sea Grant study looking at seed-based approach to large-scale eelgrass restoration. Supervise grad student Aaron Shavitz's work.
4. Continued and expanded IIJA-funded project titled *Building infrastructure to support seed-based eelgrass restoration* which created dedicated tank infrastructure to support an eelgrass seed bank at DMF's Cat Cove Marine Lab. Subaward issued for IIJA-funded outdoor tank space "the seed barn", with design currently underway.
5. Kicked off MIT SG award led by D.Chin, Northeastern to look at aquaculture and eelgrass interactions. Field investigations to begin July 2026.
6. Identify and pursue gaps in Submerged Aquatic Vegetation mapping, monitoring, and conservation status. Conduct outreach with watershed organizations and agencies and begin to catalog SAV observations and priorities

Convene and partner with others to support and improve monitoring outputs.

1. As a new component of the MassDEP-MassBays Eelgrass Mapping Interagency Service Agreement (ISA), MassBays (Carr and Shavitz) provided a QA/QC review of MassDEP's 2025 eelgrass polygons. MassBays developed and implemented a protocol for conducting the QA/QC. Final polygons will be delivered to MassDEP in June 2026. Summer 2026 work will include mapping in Cape Cod Bay. This year, a subcontract is in place for Salem State University to provide a field technician while A. Frye (SSCW) is on family leave.
2. Oversee MassBays' Community of Practice forums for MassWateR and the Massachusetts Seagrass Working Group.
3. Represent MassBays on the steering committees for: NROC Coastal Vegetation Workgroup, East Coast Submerged Aquatic Vegetation Collaborative, DKP Cit Sci eelgrass monitoring project, Merrimack River living shoreline project, STAC
4. Hired and began training a new SSU biology undergraduate work-study student to assist with lab work at the Cat Cove Marine Lab.
5. Participate in Salt Marsh Symposium, salt marsh monitoring SOP trainings, and MassMarsh meetings to find collaboration opportunities with MassBays

Presentations and publications

1. Co-hosted and presented at UMB Earth Day webinar titled: *Dive into Seagrass: Science, Careers, and Coastal Change* 4/23/26

2. Presented two lightning talks at a workshop between MassBays, UHI, Stone Living Lab, and Northeastern on 5/3/26, titles: *MassBays' Tools for the Data Life Cycle* and *MassBays' Seagrass Initiatives.*

Other Updates

1. Received *Visionary Award* from the Gulf of Maine Council on the Environment, accepted at annual meeting on 5/27/26 in St. Andrews, New Brunswick, Canada https://gulfofmaine.org/awards/
2. Initiated process of purchasing the SSU 19' Northcoast vessel.
3. Manage setup and spending on 4 grants, oversee subawards, and track budgets.
4. Train and supervise UMB graduate research assistant A. Shavitz and eelgrass volunteer Ed Sheldon who is assisting with field work app development.
5. Assist with social media planning & content.
6. Work with contractors (CEI, Mick) on EDA 3.0 layers and assessment methods.
7. Manage and track annual retainer contracts for software developer Ethan Mick.
8. Participate in UMass cross-campus committee that is establishing a Scientific Boating Policy and safety program.