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

March 11, 2025

Dear Margherita:

MassBays is pleased to submit Massachusetts Bays National Estuary Partnership's (MassBays') application for funding under the Infrastructure Investment and Jobs Act of 2021 (here referred to as IIJA), to implement this Federal Fiscal Year 2025 workplan. With this letter and following workplan, we continue our work under a three-year incremental award to expend the remaining funds appropriated to the National Estuary Programs under the law.

On the basis of our Long-term IIJA Plan we propose applying this year's IIJA funds to:

1. Provide a $128K subaward for an RSP-identified project that will advance local infrastructure needs.
2. Expand upon two infrastructure programs initiated with last year's funding: a) installing new and maintaining existing continuous water quality monitoring buoys and b) maintaining flow-through seawater tanks for eelgrass seed production and storage. Both of these investments advance our CCMP goals, and leverage future funding for habitat restoration.
3. Increase MassBays' capacity to disseminate and describe the outputs and outcomes of both IIJA and S.320 programs to specific target audiences. We propose hiring a Science Communications Specialist who will work closely with Regional Coordinators to apply research findings across the Bays, share recommendations based on our projects with state policy makers, and generate social and traditional media and other outreach products to highlight MassBays' (and broader National Estuary Program) successes.

MassBays' Management Committee reviewed and approved the components of this application. Please do not hesitate to contact us if you have any comments, suggestions, or concerns.

Sincerely,

Pam DiBona
Executive Director
Massachusetts Bays National Estuary Partnership
pamela.dibona@umb.edu
339-368-0608 (cell)

Denise Ellis-Hibbett
Management Committee Chair

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

Massachusetts Bays National Estuary Partnership

Proposed Workplan

Infrastructure Investment and Jobs Act (IIJA) Federal Fiscal Years 2024-2026 Funding

Contents

A. Summary

Background

MassBays' planning area is large, stretching 1100 coastal miles and a watershed including more than 50 coastal municipalities from the New Hampshire border to Provincetown at the outer end of Cape Cod. Within this area, we have a range of infrastructure and environmental managment needs. For example:

- ***Building resilient communities.*** MassBays has described the range of stressors on communities across our planning area in terms of demographics and exposure to toxins, geohydrology, and environmental stressors and resources. Any effort to improve community health and resiliency requires interdisciplinary approaches.
- ***Responding to ecosystem shifts.*** The Gulf of Maine is facing significant shifts in sea level and temperature, and increased frequency and severity of storms has already been observed in our region. While the Commonwealth has invested significant capital monies in programs to assist municipalities to plan for and address the impacts of these changes, some are not able to take full advantage of those resources due to lack of local capacity.
- ***Addressing regional issues.*** Massachusetts is a home-rule state, and any response to cross-municipal issues – from dam removals to stormwater and wastewater management – requires deliberate coalition-building on a town-by-town basis. MassBays seeks to make local responses part of a regional plan, our CCMP.

MassBays has and will continue to apply IIJA funds to respond to these needs, through planning and implementation of infrastructure improvements with municipalities, habitat restoration alongside community partners, and building monitoring infrastructure that will serve all of these efforts.

2022-2025 Projects

MassBays distributed a significant portion of the first year of IIJA funding (FFY22 monies) to subawardees for projects to be implemented over multiple years in selected communities, while FFY23 monies have enabled us to launch new infrastructure to support monitoring and restoration in the Bays. Accomplishments include:

- Mystic River Watershed Association (MyRWA) was awarded $260,000 from IIJA FFY22 for a project that has significantly built up capacity of the City of Malden to improve their stormwater management program for the benefit of the Malden River.
- Merrimack River Watershed Council (MRWC) also received $260,000 under IIJA FFY22 to engage communities in watershed planning for the Shawsheen and Spicket Rivers.
- MassBays engaged USGS to purchase and deploy buoys in two sites; one was deployed during the summer of 2024 as a pilot.
- In collaboration with the Massachusetts Division of Marine Fisheries, MassBays applied FFY23 IIJA funding to construct new flow-through tanks, dedicated to eelgrass seed storage for restoration efforts, in their Cat Cove facility in Salem. Additional grant funding from Woods Hole Sea Grant supported a pilot project that included field testing of seed viability.
- MassBays' Central Staff investigated the potential for development of Habitat Potential Indices for inclusion in the Ecohealth Tracking Tool as a means for communicating about progress toward our CCMP habitat goals to multiple audiences and support State of the Bays reporting.

Status and accomplishments of these projects are described in Section B.

2025-2026 Proposed Work and Staffing

Proposed work under this year's IIJA funding will be led by MassBays' Central Staff based in Boston and will include engagement with partners. Projects will include:

- ***Improving local management of tide gates*** to support marsh health, beginning with structures prioritized as high impact.
- ***Leveraging partnerships with EPA Region 1, USGS, and MassBays Regional Service Providers (RSPs)*** to support quality assurance of data collected via continuous monitoring buoys.
- ***Conducting discrete sampling*** to validate long-term, continuous monitoring at three sites in the Bays.
- ***Testing seed-based restoration of eelgrass***, augmented by funding provided by WHOI Sea Grant in 2024.
- ***Establishing a new strategic science communications effort*** with the hiring of an experienced communications specialist familiar with MassBays' target audiences and needs regarding increased visibility and more robust uptake of recommendations and findings generated through our research and programming.

CCMP Programmatic outcomes

MassBays' CCMP calls for programs that will deliver on the following three programmatic outcomes, all of which will be addressed by this year's workplan:

- **Information about habitat conditions across the Bays is documented and disseminated via a targeted communications strategy.** State of the Bays reporting is a requirement of CWA §320, and a focus of MassBays' outreach and communication efforts.

- **A majority of MassBays municipalities implement habitat protection and restoration practices.** MassBays' RSPs will work with communities to identify and implement restoration and protection efforts that are grounded in scientific research and best practices as well as local expertise.

- **Measurable progress toward target conditions across the MassBays planning area.** At the same time, funding dedicated to provide technical support to tide gate owner-operators will expand healthy marsh area, contribute to coastal shoreline preservation, and demonstrate the importance of sound management.

B. Completed Major Projects and Activities (July 1, 2023 to June 30, 2024)

MassBays' IIJA Workplan for FFY2024 was guided by 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 Increase community engagement in decision making

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

All activities fall under the ***IIJA-supported tasks*** listed in the funding guidance, which are:
1) Accelerate and more extensively implement the CCMP
2) Build the adaptive capacity of ecosystems and communities relative to ecosystem shifts

The following list of accomplishments is organized according to the CCMP Strategies included in our CCMP and to be completed by June 30, 2025. Each project description includes the following:

Title
IIJA-supported Tasks: Per list (1-2) above
Objective: Project-specific objective
Partners: Collaborators not directly funded by MassBays/IIJA funds
Status: as of June 2025
Accomplishments and Deliverables: completed products

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

Title	**Initiate long-term monitoring for MassBays' study area**
IIJA **Task**	(1) Accelerate and more extensively implement the CCMP
Objective	Initiate deployment of sensors to implement continuous water quality monitoring
Partners	STAC, USGS
Status	***Ongoing*** Five priority sites for continuous monitoring selected, to be phased over the course of IIJA incremental funding.
Accomplishments and deliverables	
Collaboration with USGS	USGS built and deployed a dock-based buoy at the mouth of the Danvers River, continuous data were collected under an approved QAPP from August to December 2024 during which potential glitches and improvements were addressed.
Collaboration with NROC	Purchased pCO2 sensors with funding from the Northeast Regional Ocean Council (NROC); additional funding will be applied to data management by MassBays' Senior Scientist.

Title	**Restoring eelgrass using innovative approaches in a regional collaboration**
IIJA **Task**	(1) Accelerate and more extensively implement the CCMP
Objective	Collaborate eelgrass restoration efforts with other NEPs, academic, agency and NGO partners across the East coast. Convene partners regarding grant pursuits both underway and upcoming. Continue to provide technical guidance regarding the implementation of previously developed protocols and experimental designs (e.g., the Carr and Colarusso Eelgrass Flowering Phenology Survey Protocol, 2023).
Partners	NEPs from Maine to North Carolina, EPA, National Park Service, USGS, NWF, academic institutions (Northeastern, BU, Stony Brook, UMCES, VIMS, UNCW, UMES); NGOs (Schoodic institute, others TBD)
Status	***Ongoing***
Accomplishments and deliverables	
Proposal to NOAA not funded; new funding sources explored	Proposal by a coalition of entities with RAE as a lead applicant submitted to NOAA Transformational Habitat Restoration grant program for an eelgrass research and restoration project titled "HEAT: Helping Eelgrass Adapt to Temperature" (Nov 2023). Requested total $15,912,696. Agency feedback indicated that the research and science-oriented aspects of the project fell outside of the funding plans. MassBays has initiated conversations with UMass Boston's Office of University Advancement, National Fish and Wildlife Foundation, and the UMass Boston Grand Scholarly Challenges Initiative to explore other opportunities to bring this project to fruition.
Established flow-through tank infrastructure for restoration	Flow-through tank infrastructure dedicated to eelgrass seed storage for restoration efforts was installed and maintained at DMF's Cat Cove Marine Lab in Salem, MA. Work-study undergraduate students were dedicated and consistent in their work in the lab to maintain the systems and process plants. Funding in 2025-2026 will allow us to continue to use the tanks to support research and restoration projects.
Launched seed-based eelgrass restoration pilot program	MassBays received a WHOI Sea Grant grant for a project titled *Modeling and piloting a new seed-based approach to large-scale eelgrass restoration in Massachusetts* to run from 2024 to 2026, with a total award of $197,538. We have been alerted that second-year funding (2025-2026) is not guaranteed; we propose continuation of the project with IIJA funding (see Section C).

Investigated eelgrass flowering timing in NE systems	More than a dozen partners from New Jersey to Maine have employed the Carr and Colarusso Eelgrass Flowering Phenology Survey Protocol (2023) over the last two summers to determine the timing and proportion of flowering eelgrass shoots in local meadows. Results were shared among the groups during a meeting in February 2025; outcomes will inform future seed collection efforts. Continued collaboration using the protocol is proposed.

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

Title	**Develop Habitat Potential Indices**
IIJA Task	(1) Accelerate and more extensively implement the CCMP (2) Build the adaptive capacity of ecosystems and communities relative to ecosystem shifts
Objective	Incorporate water quality-based indices for habitat health into the ETT to facilitate interpretation of water quality data presented in the Tool and provide water quality-based targets to meet the CCMP habitat goals. This project will build on previous work done to identify WQ thresholds for inclusion in the ETT.
Partners	EPA ORD, DMF, Cape Cod Extension Service, MIT Sea Grant, STAC
Status	***On hold*** As we launched that effort this past year it became clear that we do not have adequate water quality data to support this initiative on a Bays-wide scale. Instead, we have determined that a pilot in a well-studied embayment would be the best way to demonstrate the utility of the approach. In this workplan we are reprogramming the funds allocated to an already-established effort to support on-the-ground tide gate improvements at priority sites.
Accomplishments and deliverables	
HPI defined, ETT formatted	CEI (Consultant) met with MassBays Central Staff to define the scope of the HPI effort, and software engineers prepared ETT to present this new data interpretation tool.

Title	**Develop diadromous fish habitat target**
IIJA Task	(1) Accelerate and more extensively implement the CCMP
Objective	Increase the number of coastal habitats addressed by the CCMP
Partners	EPA ORD, DMF, Cape Cod Extension Service, MIT Sea Grant, STAC
Status	***Complete***
Accomplishments and deliverables	
New ETT data layer available	Diadromous fish migration routes and upstream spawning/habitat areas have been mapped and the layer will be incorporated into ETT by June 30 2025.

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

Title	**Advancing stormwater management to improve water quality and address flooding in the City of Malden (Mystic River Watershed Association)**
IIJA Task	(1) Accelerate and more extensively implement the CCMP (2) Build the adaptive capacity of ecosystems and communities relative to ecosystem shifts
Objective	Promote the development of a stormwater management program that among other benefits reduces nutrient runoff and improves anadromous fish habitat using a variety of tools, including updated Stormwater Ordinances and Regulations; a comprehensive gap analysis of municipal practices across departments; a proposal for funding schemes; and other best management practices
Partners	City of Malden, Horsely-Witten Group
Status	***Ongoing*** No-cost extension granted through December 2025 with a minor scope adjustment to respond to Gap Analysis findings, specifically the need for more capacity building.
Accomplishments and deliverables	
Stormwater utility/alternative funding study underway	A final study will be provided to the City by December 2025.
Infiltration trench demonstration project planning	A demonstration project, designed to introduce and train Malden DPW staff in installation of infiltration trenches, will be completed by December 2025.
New permit request template in use	In response to the gap analysis, the project team developed a template to guide permittees through the steps and appropriate contacts to work with as they propose activities that impact stormwater and stormwater infrastructure.

Title	**Develop solutions to flooding and water quality impairments in Merrimack River tributaries (Merrimack River Watershed Council)**
IIJA Task	(1) Accelerate and more extensively implement the CCMP (2) Build the adaptive capacity of ecosystems and communities relative to ecosystem shifts
Objective	Goals include: 1) Integrate community input into watershed planning and solutions to flooding and water pollution on the Spicket and Shawsheen Rivers; 2) Complete the watershed planning necessary to prepare municipalities and communities for development and prioritization of specific infrastructure improvements; 3) Facilitate inter-municipal collaboration, data-sharing, and project prioritization; and 4) Deliver the benefits of flood mitigation and pollution remediation to communities
Partners	Cities of Lawrence and Methuen, neighborhood groups, volunteers
Status	***Complete.*** Shawsheen River watershed plan and BMP designs are complete; no-cost extension through 6/30/25 granted for completion of Spicket River watershed plan
Accomplishments and deliverables	
Spicket River watershed plan data sets shared	MRWC developed a data viewer: https://merrimack.org/spicketriver/

Water quality monitoring conducted to support watershed planning	MRWC, with funding from EPA and MassBays, collected and analyzed samples in the mainstem of the Merrimack River.
Watershed based plan for the Shawsheen to be completed	The final document will be submitted to DEP for approval by 6/30/25 and subsequently shared on MRWC's website.

C. Proposed Projects and Activities

This workplan includes details for projects and activities for FFY2025 only; we will submit yearly workplans under this incremental award, budgeting $909,800 per year. The initial workplan for this award included a three-year budget. The proposed work for this year does vary from that proposal, primarily because of shifting funding availability and a desire to complete programs already underway. These changes are highlighted in the task descriptions below.

Our proposed work with funding under Federal Fiscal Year 2025 remains 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 Address data gaps
Strategy 1.2 Support valid (QA/QC) data collection and use

Goal 2. MassBays reaches all planning-area municipalities with actionable information about coastal habitats
Strategy 2.1 Support research to inform policy and actions
Strategy 2.2 Technical support and communications
Strategy 2.3 Increase community engagement in decision making

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), to document progress and 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 for expanded habitat and improved water quality
Strategy 3.3 Maintain MassBays' National Estuary Program status

All activities fall under the ***IIJA-supported tasks*** listed in the funding guidance, which are:

1) Accelerate and more extensively implement the CCMP
2) Build the adaptive capacity of ecosystems and communities relative to ecosystem shifts

Our proposed activities also contribute to the following ***CCMP long-term 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

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 Level of Effort
Description*:* Status (New or Ongoing), project activities and objectives
IIJA -supported Tasks*:* Per list (1-2) above
Long-term CCMP Outcome*:* Per list (A-G) above
Partners*:* Collaborators not directly funded by MassBays/IIJA 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/Staff), IIJA funds + LOE	Description	IIJA Task CCMP outcome	Partners	Timeline & Deliverables
Maintain and expand long-term monitoring network for MassBays' region (Senior Scientist) $105,933 [FFY22 funds] + 500h	***Ongoing*** Continuing with funding from the FFY22 workplan and Joint Finance Agreement, MassBays will work with USGS to deploy sensors at three sites (Danvers River [dock], Duxbury Bay [offshore buoy], and Merrimack River [offshore buoy provided by DEP]) as prioritized by the STAC and aligned with State of the Bays data gaps. Senior Scientist will manage associated grab sampling and sample analysis.	(1) Accelerate and more extensively implement the CCMP (C) Improved water quality	USGS, Center for Coastal Studies, Salem Sound Coastwatch (S.320 funding), EPA Region 1 Lab (Chelmsford)	(Q1), Deploy sensors (buoys) at identified locations, manage discrete sampling; (Q2) implement data management protocols; (Q3) plan for next stage of deployment (one to two additional sites)
Restoring eelgrass using innovative approaches in Massachusetts and via a regional collaboration (Coastal Data Scientist) Woods Hole Sea Grant (Y2 amount TBD) IIJA $33,000 + 500h (Coastal Data Scientist)	***Ongoing*** Implement Year 2 of pilot program to address the questions of 1) when and where reproductive eelgrass shoots should be harvested, 2) potential impacts of seed harvest on a donor meadow, 3) the quantity, quality and germination rate of Massachusetts seeds, and 4) the regulatory processes needed to permit large-scale routine harvest and seeding. ***Ongoing*** Convene partners and lead grant pursuits to secure funding for a regional collaboration. Lead new eelgrass restoration efforts in collaboration with other NEPs, academic, agency and NGO partners across the East coast.	(1) Accelerate and more extensively implement the CCMP (E) Restored natural communities (D) Resilient coastal habitat, including nature-based coastal protection	***Ongoing*** DMF, SSU, WHOI ***Ongoing*** NEPs from Maine to North Carolina, National Parks Service, USGS, academic institutions (Northeastern, BU, Stony Brook, UMCES, VIMS, UNCW, UMES); NGOs (Schoodic institute, others TBD)	(Q1-Q4) Conduct field surveys, finalize modeling and analyses, prepare Best Practice Guide and technical reporting. (Q1-Q3) Convene partners, develop regional project concept and prepare grant proposals.

Strategy 2.2 Technical support and communications
Strategy 2.3 Increase community engagement in decision making

Title (Region/Staff), IIJA funds + LOE	**Description**	**IIJA Task CCMP outcome**	**Partners**	**Timeline & Deliverables**
Disseminate findings, tools, and recommendations to increase engagement among multiple audiences (Science Communications Specialist) 1170h	***Ongoing*** MassBays has committed to providing one-on-one assistance to entities responsible for high-priority tide gates that are impacting salt marsh extent and condition, as an add-on to the RAE NEP Watershed Grant. A CEI staff person experienced in working with municipal DPWs will take up the next steps.	(1) Accelerate and more extensively implement the CCMP (E) Restored natural communities (D) Resilient coastal habitat, including nature-based coastal protection	Tide gate owners TBD, CEI Inc., RCs	(Q1) initiate outreach to owners of priority sites, with assistance from RCs; (Q2) tally and documentation of support provided and potential implementation actions for FFY25 spending.

Community Prioritization of Ecosystem Services Impacted by Coastal Acidification (CA) in Duxbury Bay (Director, Science Communications Specialist, Senior Scientist) NOAA $71,666	***New*** Pending funding under NOAA CA grant program MassBays' Director (Co-I), Science Communications Specialist, and Senior Scientist will collaborate with social and natural scientists to 1) synthesize existing data and develop a model to predict CA in Duxbury Bay); 2) develop and implement surveys, focus groups, and workshops to ascertain perceptions and priorities regarding ecosystem services impacted by CA; 3) develop informal education training curricula for high school students to practice systems thinking, with CA causal diagrams and feedback loops as a case study. Proposal submitted March 5, 2025; funding (total project $1,057,646) expected September 2025.	(1) Accelerate and more extensively implement the CCMP (2) Build the adaptive capacity of ecosystems and communities relative to ecosystem shifts (C) Improved water quality (G) Well-informed, multisector input to decision making	UMass Boston School for the Environment, Manomet Conservation Sciences. Advisors include MIT Sea Grant, North and South Rivers Watershed Association, Virginia Polytechnic Institute and State University, and Emerson College	(Q3) Project kick-off, convene advisory group; (Q4) compile and synthesize existing data sets relevant to CA in Duxbury Bay for incorporation into a forward model that includes land, water, and atmospheric inputs of CA-relevant parameters.

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

Title (Region/Staff), IIJA funds + LOE	**Description**	**IIJA Task CCMP outcome**	**Partners**	**Timeline & Deliverables**
Advance stormwater management to improve water quality and address flooding in the City of Malden (MyRWA) $260,000 (FFY22 funds)	***Ongoing*** Work alongside city DPW to demonstrate installation of stormwater trenches, building local capacity for future implementation.	(H) Accelerate and more extensively implement the CCMP (I) Build the adaptive capacity of ecosystems and communities relative to ecosystem shifts All CCMP outcomes	City of Malden, Horsely-Whitten	(Q2) Present proposals for stormwater infrastructure investments to City Council (Q3) Completed stormwater retrofit analysis, demonstration trench installation (including training for DPW)

D. Budget Narratives

Assumptions – IIJA funding allocation to MassBays will be $909,800. Subawards to Division of Marine Fisheries (DMF) and Salem State University (SSU) are based on existing scopes of work previously executed and renewable for the three-year period of this incremental award.

FFY25 Proposed Spending

These notes refer to Table 1, MassBays National Estuary Program Proposed IIJA Budget, FFY25. We request reimbursement of pre-award costs, up to 90 days, for the work included in this plan. The funding is distributed over two Periods of Work, June 1 2025 to May 31 2026, and June 1 2026 to May 31 2027.

Salaries for four staff: Director (0.213FTE), Staff Scientist (0.4007FTE), Coastal Data Scientist (0.903 FTE). A new part-time, temporary science communications specialist (pending future funding availability) will be hired (0.5FTE) and funded in Project periods 1 and 2. In addition, MassBays will bring on a Graduate Research Assistant in each project period, with funding for two semesters part-time (9h/week for 36 weeks) and full-time for summer (450h/summer) at $37.04/h.

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 plan, pension plan, and workman's compensation expenses among others. UMB has four fringe rates in accordance with the University's FY2025 Fringe Benefits and Payroll Tax Rates memorandum and NICRA.

Rate #1 General Fringe, 43.44%
Rate #2 Health and Welfare, $33 Bi-weekly/FTE
Rate #3 Payroll Tax, 1.62%
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 Pam DiBona	Professional Benefitted	Calendar	Rates 1, 2, 3, 4
Senior Scientist Prassede Vella	Professional Benefitted	Calendar	Rates 1, 2, 3, 4
Coastal Data Scientist Jill Carr	Professional Benefitted	Calendar	Rates 1, 2, 3, 4
Science Communications Specialist	Professional Benefitted	Calendar	Rates 1, 2, 3, 4

No fringe is applied for academic-year Graduate Assistantships; fringe costs of $516/year are provided for summer hours.

Travel
No travel funds are requested.

Supplies
No funds for supplies are requested.

Contractual (Table 2)

- Center for Coastal Studies. CCS' laboratory will analyze water quality samples collected by MassBays as part of the continuous monitoring effort ($4600). CCS Water Quality Program Director Amy Costa will also revise the "Master QAPP" which serves as the basis for AquaQAPP to ensure that the output aligns with new EPA guidance ($34,716). Their budget (total $39,316) is included in Table 2.
- Ethan Mick, LLC will implement changes identified by CCS to re-architect and conduct iterative testing and improvement of AquaQAPP. This budget ($20,198 total) is included in Table 2.

Subawards (Table 3)

- Division of Marine Fisheries. DMF provides access to and onsite assistance at a wet lab and flow-through tanks located on Cat Cove, Salem. This is critical to a region-wide collaboration initiated by MassBays to establish seed production for eelgrass restoration in the Northeast. Their budget (total $39,107) is provided in Table 3.
- Salem State University. SSU professor Ted Maney recruits and supervises a co-op student to monitor and maintain optimal conditions for our eelgrass set-up in the Cat Cove facility ($5,506; see budget Table 3).
- Local Infrastructure Project. MassBays will provide funds ($128,508) to one Regional Service Provider for a "ready-to-go," locally prioritized project to be managed by the Regional Coordinator. These funds may instead be applied to implement plans generated through the RAE-funded Tide Gate prioritization effort described in Section C, depending on project readiness, municipal capacity, and availability of state funds for that work.

Indirect Charges

The University of Massachusetts Boston has a Facilities and Administrative overhead rate of 37.5%, which is a federally negotiated indirect cost rate agreement between University of Massachusetts Boston and the Department of Health and Human Services effective 10/02/2020. The indirect rate is charged to expenditures relating to direct costs excluding equipment, travel, supplies, and contracts, and on the first $50,000 of subawards initiated after 7/1/2025. Since the proposed subawards to DMF and SSU will be amendments to existing subaward agreements, the $25,000 trigger stands; indirect will be applied to the first $50,000 of the local infrastructure project subaward.

Matching Funds

Matching funds are not required under this cooperative agreement.

Table 1. Proposed spending, Federal Fiscal Year 2025

Infrastructure Investment and Jobs Act (IIJA) Grant Application (FFY25) Massachusetts Bays National Estuary Program Proposed Expenditures		
Personnel	**6/1/25-5/31/26**	**6/1/26-5/31/27**
Director, 21.3%	$ 29,589	
Senior Scientist, 40.07%	$ 49,805	
Coastal Data Scientist, 90.3%	$ 91,377	
Science Communications Specialist (50% FTE)	$ 45,000	$ 46,350
Graduate Program Assistant, academic year + summer	$ 44,351	$ 44,351
subtotal, salaries	**$ 261,931**	**$ 71,072**
Fringe benefits		
subject to change per yearly calculations	$ 112,829	$ 23,092
subtotal, fringe	**$ 112,829**	**$ 23,092**
total, salaries +fringe	**$ 374,760**	**$ 94,164**
Contractual		
Center for Coastal Studies (sample analysis, AquaQAPP update)	$ 39,316	
Ethan Mick (AquaQAPP update)	$ 20,198	
subtotal, contracts	**$ 59,514**	**$ -**
Supplies *(none)*		
subtotal, supplies	**$ -**	**$ -**
Travel *(none)*		
subtotal, travel	**$ -**	**$ -**
Subawards		
Division of Marine Fisheries	$ 39,107	
Local Infrastructure Project	$ 128,508	
Salem State University student	$ 5,506	
	$ 173,121	**$ -**
Other *(none)*		
subtotal, other	**$ -**	
Total Direct	**$ 701,559**	**$ -**
Indirect		
36.4% (salaries+fringe, travel, contracts, supplies)	$ 158,076	$ 34,276
36.4% (Subawards: first $25K of new [local infrastructure]; +$13,148 DMF +$5,506 SSU awards)	$ 18,750	$ -
subtotal, indirect	**$ 173,966**	**$ 34,276**
subtotals	**$ 781,362**	**$ 128,400**
Total Request, FFY25		**$ 909,800**

Table 2. Contractual budgets

A. Center for Coastal Studies

Sample Analysis

Line Item	Cost
Analysis (240 samples @$15/sample)	$ 3,600
Overnight shipping	$ 1,000
Other Direct Costs	$ 0
Total	**$ 4,600**

AquaQAPP update

Line Item	Cost
Salaries* and Fringe	$ 34,457
Travel	$ 259
Other Direct Costs	$ 0
Total	**$ 34,716**

*Hours	Task
6	Needs Assessment meeting with DEPs; check in updates / coordinate outputs with DEP
81	Team meetings
220	Identify, prioritize and implement changes to tool based on EPA standards, wishlist, and DEP needs (communicate and draft the changes to Ethan, incorporate beta testing feedback, etc.)
60	App development/testing
12	User beta testing workshop/training (watershed and volunteer orgs)
24	Assist in planning and implementation of 2 Regional Trainings, coastal and inland
403	**TOTAL**

B. Ethan Mick, LLC

AquaQAPP update

Line Item	Cost
Salary*	$ 20,198
Travel	$ 0
Other Direct Costs	$ 0
Total	**$ 20,198**

*Hours	Task
15	1. Work with QAPP Content Expert to prioritize changes to tool based on EPA standards, MassBays wishlist, and DEP needs
120	2. Implement changes from (1) above
24	3. Iterative testing/improvement
16	4. Team meetings (every 6 weeks x 1hr)
80	5. Re-architect coding
255	**TOTAL**

Table 3. Subaward budgets

A. Division of Marine Fisheries

Eelgrass seeding project/Cat Cove

Line item	Cost
Salaries (Schenck)	$ 2,958
Fringe (43.44% on salaries and dive pay)	$ 1,285
Payroll tax (1.62% on salaries and dive pay)	$ 48
Supplies	$ 1,000
Indirect costs (25.59% on salaries and dive pay)	$ 757
Total	$ 6,047

To provide access to and onsite assistance at a wet lab and flow-through tanks located on Cat Cove, Salem. This is critical to a region-wide collaboration initiated by MassBays to establish seed production for eelgrass restoration in the Northeast.

Eelgrass seeding project, field work

Salaries (Schenck, field tech, dive pay)	$19,75
Fringe (43.44% on salaries and dive pay)	$8,007
Supplies (tank fills)	$248
Indirect costs (25.59% on salaries and dive pay)	$5,054
Total	**$33,060**

To provide field, boat, and lab support for an eelgrass study to track reproduction in Massachusetts eelgrass beds, identify seed donor sites and assess impacts of eelgrass harves

B. Salem State University

Line item	**Cost ($)**
Salaries Ted Maney, Biology Instructor/Researcher, supervisory time 1 hr/week * 18 weeks (18 hours/year at $47.62/h)	$ 857
Salaries *Student Co-op Lab Technician* 10 hr/week * 18 weeks (180 hours at $15/h) + 16 hrs of field work at $15/hr	$ 2940
Fringe Benefits, 2.45% on wages Ted Maney, .0245*$857 = $21 Student, .0245*$2,940 = $72	$ 93
Indirect Ted Maney (68.1% on salaries; $583.73 per year) Student (35.1% on salaries (off-campus); $1,031.94 per year)	$ 1616
Total	**$ 5506**

C. Locally Prioritized Infrastructure Project

Total of $128,508 to be directed to a priority project deemed critical to local infrastructure needs, especially projects related to tide gates or other projects to address coastal flooding and water quality.