Attachment B: Program Narrative
Narragansett Bay Estuary Program Support
NEIWPCC Job Cost Code: TBD

Applicant:	New England Interstate Water Pollution Control Commission (NEIWPCC) 650 Suffolk Street, Suite 410 Lowell, MA 01854
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Narragansett Bay Estuary Program Program Director:	TBD Narragansett Bay Estuary Program 235 Promenade Street – Suite 393 Providence, Rhode Island 02908 (401) 633-0552 (401) 230-1798 (fax) TBD@nbep.org
QA/QC Plan Required:	Yes
Project Period:	October 1, 2018 – September 30, 2021
Resources Requested:	The total budget requested is $2,200,000. Attachment A provides the budget summary and itemized budget for the total project cost.
Federal Cost:	Current request: $1,100,000
Non-Federal Match:	The attached match documentation has the $1,100,000 received by various partners for matching funds.

Background

New England Interstate Water Pollution Control Commission

The New England Interstate Water Pollution Control Commission (NEIWPCC) is a non-profit organization established through an act of Congress in 1947. The agency serves and assists its member states individually and collectively by providing coordination, public education, training, and leadership in the management and protection of water quality in the New England and New York Region. It is a leader in forming strong bonds between the New England and New York State environmental agencies and is unique in its ability to bring diverse interest groups together, create forums, and educate with innovative multi-faceted curriculum.

The Commission is comprised of seven states: Connecticut, Massachusetts, Maine, New Hampshire, New York, Rhode Island, and Vermont. The 35-member Commission consists of five persons from each state including representatives from state health departments, water pollution control boards, and governor appointees who may represent municipal and industrial interests. NEIWPCC's primary role is to integrate the state's individual efforts to improve and maintain water quality in the Northeast. Educating and training environmental professionals as well as communicating water quality concerns and needs to the public are key components of NEIWPCC's mission.

Narragansett Bay Estuary Program

Narragansett Bay is one of 28 estuaries in the country designated by the U.S. Environmental Protection Agency (EPA) as an "estuary of national significance" under Section 320 of the 1987 amendments to the Federal Water Pollution Control Act (Clean Water Act). The National Estuary Program was established in 1987 to protect and restore nationally significant estuaries threatened or impaired by pollution, development, and overuse. The Narragansett Bay Estuary Program (NBEP or Estuary Program) was initially formed in 1985 and was formally included in EPA's National Estuary Program on March 11, 1988. The goal of the Estuary Program is to protect and restore Narragansett Bay and its bi-state watershed, which is shared by Rhode Island and Massachusetts, through collaborative action, sound science, and informed decision-making. The NBEP accomplishes this goal while working with a Steering Committee comprised of numerous stakeholders, representing citizen and environmental groups, academic institutions, and local, state, and federal governments.

In 1993, a Comprehensive Conservation and Management Plan (CCMP) was adopted for Narragansett Bay – a watershed-based plan that addressed a wide range of issues including nutrient enrichment, pathogens, management of special ecological areas, nonpoint source pollution, contaminated sediments, water resource management, living resources management, bay and watershed governance, and monitoring. This original CCMP was updated in 2012 (2012 CCMP) to promote a holistic approach to protecting, enhancing, and restoring the Narragansett Bay and its watershed through partnerships that conserve and restore natural resources, enhance water quality, and promote community involvement and stewardship. The 2012 CCMP includes a large number of goals that are organized in four sections: Section 1) Protect and Restore Clean Water; Section 2) Manage Land for Conservation and Community; Section 3) Protect and Restore Fish, Wildlife, and Habitats; and Section 4) Manage Climate Change Impacts to Natural Systems.

Objectives

NEIWPCC proposes to assist and support the NBEP in implementing the 2012 CCMP and ongoing priority issues. The Narragansett Bay Estuary Program Guiding Principles for Program Management as approved will provide a framework for the proper and effective management of the NBEP. The specific tasks designed to support these objectives are outlined below:

Overarching Program Evaluation Heading: **Program Management**

Goal 1: **Program Management**

Sub-elements: **Financial Management**

Task 1a: NEIWPCC Lowell Program Management (Ongoing)

NEIWPCC proposes to continue supporting personnel time for NEIWPCC Lowell staff to manage NBEP-related grants and contracts/subawards and supervise NBEP staff. Funding will mainly support a senior program manager. Specific tasks include, but are not limited to:

- Supervise the NBEP's Program Director, in consultation with the Executive Committee and Steering Committee.
- Coordinate the supervision of all NBEP staff, in consultation with the Program Director, the Executive Committee, and the Steering Committee.
- Coordinate with the Program Director in preparation of the annual work plan and budget.
- Prepare and submit grant applications to U.S. EPA.
- Lead hiring process for all staff positions.
- Set up and manage agreements with RI Department of Environmental Management (RI DEM) and MA Department of Environmental Protection (MassDEP) regarding office space arrangements and technical support, as needed.
- Manage budgets in coordination with the Program Director.
- Execute and manage contracts/subawards in coordination with the Program Director. Submit monthly reports of subawards that have been executed in the previous month to the Federal Funding Accountability & Transparency Act Subaward Reporting System.
- Process invoices and travel reimbursements.
- Communicate with the Program Director and EPA Project Officer on a regular basis.
- Meet with EPA Project Officer annually to coordinate issues between NEIWPCC, NBEP, the states, and EPA Region 1.
- Garner support for NEIWPCC's NBEP commitments from EPA and the states.
- Facilitate coordination with other regional National Estuary Programs and NEIWPCC activities.
- Prepare, with the assistance of the Program Director, and submit quarterly progress reports that describe NBEP activities and outputs.

While NEIWPCC is responsible for managing the grant from EPA, administering contracts/subawards, completing fiscal, subaward, and administrative reports, and overall supervision of the staff, the NBEP Program Director will be the public point of contact for the program.

Task 1a will be accomplished through personnel time of NEIWPCC Lowell staff and NBEP staff.

Sub-elements: Program Planning and Administration

Task 1b: Work Plan Development and Tracking (Ongoing)

NEIWPCC Lowell Staff will:

- Jointly work with the NBEP Program Director and Executive Committee to implement the process and timeline for developing the annual work plans and budgets.
- Jointly with the Program Director, develop the FY19 work plan and budget for approval by the Executive Committee and Steering Committee in June 2019.
- Complete a final FY19 grant application for submission to EPA in July 2019.

The NBEP Program Director will work with NEIWPCC Lowell staff to:

- Develop the FY19 work plan and budget for approval by the Executive Committee and Steering Committee in June 2019.
- Track and report on progress toward completion of work plan deliverables consistent with EPA's National Estuary Program grant requirements.

Task 1b will be accomplished through personnel time of NEIWPCC Lowell and NBEP staff.

Task 1c: Support of NBEP Oversight and Advisory Committees (Ongoing)

The Estuary Program's Management Conference includes three major committees: the Steering Committee, the Executive Committee, and the Science Advisory Committee. NBEP staff will support these three committees as well as any other advisory committees or subcommittees (presently there is a grants subcommittee, a communication subcommittee, and a nominating subcommittee) that may be developed as needed, as follows:

The **Steering Committee** serves as a forum for information exchange and a mechanism to enhance coordination among local, state, and federal programs. Membership of the Steering Committee consists of top-level environmental officials representing state government in Rhode Island and Massachusetts, federal agency representatives, environmental groups, academic institutions, and watershed groups. The Steering Committee is responsible for reviewing and providing guidance and direction for the implementation of NBEP program elements. The NBEP Program Director will participate in and serve as primary staff support to the Steering Committee. Staff will schedule quarterly meetings, develop agendas in coordination with the Chair of the Steering Committee, draft meeting minutes, prepare reports on recent activities, provide technical support, channel information, and present recommendations to the Steering Committee for their approval.

The **Executive Committee** is a designated subset of the Steering Committee that conducts the business of the NBEP between Steering Committee meetings and reports to the Steering Committee. The Executive Committee is comprised of the following members: the elected Chair of the Steering Committee, the elected Vice-Chair of the Steering Committee, two senior management level staff from state environmental agencies, a non-profit representative from each state, one representative from EPA, one representative from NEIWPCC (as the host institution), and the Chair of the Science Advisory Committee. The NBEP Program Director will participate in and serve as primary staff support to the Executive Committee. Staff will schedule monthly meetings, develop agendas in coordination with the Chair of the Executive Committee, draft meeting minutes, prepare reports on recent activities, provide technical support, channel information, and present recommendations to the Executive Committee for their approval.

The **Science Advisory Committee** is comprised of technical experts, researchers, and resource managers from universities, state and federal agencies, and non-profit agencies throughout the Narragansett Bay watershed. The Science Advisory Committee solidifies science as the foundation of the NBEP. The Science Advisory Committee provides an exchange of information among researchers, technical experts, and natural resource managers; provides valued guidance to the NBEP Steering Committee and staff; and identifies priority applied research needs. In support of the Science Advisory Committee, the NBEP will draw upon the region's considerable expertise, forge new partnerships, and pursue innovative sources of funding to support needed scientific work. The NBEP Program Director will participate in and serve as primary staff support to the Science Advisory Committee with the assistance of the Staff Scientist. Staff will schedule meetings, develop agendas, draft meeting minutes, provide technical support, channel information, and present recommendations to the committee.

Task 1c will be accomplished through personnel time of NBEP staff.

Task 1d: Program Leadership (Ongoing)

NBEP staff must remain up to date on regional and national developments relevant to NBEP mission, programs, and projects; represent NBEP in regional and national forums; and provide internal and external leadership for the Program, ensuring focus and progress on strategic priorities, as well as effective communication and collaboration with and among partner agencies, organizations, academic institutions, etc. The Program Director will focus on ways to leverage NBEP resources, ensure best use of limited resources, minimize duplication of effort, and optimize public and community-based support.

The Program Director will work with the Steering Committee, the Executive Committee, and subcommittees to continue good governance for the program. Tasks will include:

- Continue to ensure consistency in NBEP's engagement of stakeholders in a bi-state manner.

- Continue to develop partnerships across federal, state, university, and non-profit community and explore public and private partnerships.
- Continue to work with other programs in the National Estuary Program to collaborate and share information.

Task 1d will be accomplished through personnel time of NBEP staff.

Task 1e: Communication Strategy Implementation (Ongoing)
Staff will implement the approved communication strategy to properly plan workplan deliverables through the brainstorming, production, implementation, and follow-up stages by defining target audience, metrics for success, and additional information. Contractor support will be used as needed for communication efforts.

A photographer will be hired to take high resolution, high quality pictures of the individual river watersheds during different seasons and different weather events. The photos will be used on the website, in the upcoming CCMP update, and other avenues.

In addition, staff will continue to update the website regularly to enhance communication efforts and share information in support of the program mission. The website will be updated on a continuous basis. It is expected to include the latest scientific publications, new science and policy reports, news, updated results of indicators as data become available, figure data, and other topics of interest.

Task 1e will be accomplished through personnel time of the NEIWPCC Lowell and NBEP staff and contractual funds from prior years (CE00A00366 for use of priority projects funds for photographer and pending approval of an amendment to FY17 reallocating funds assigned to Watershed Counts for communications support).

Task 1f: Case Statement Development and Implementation (NEW)
EPA requires National Estuary Programs (NEPs) to develop case statements that outline accomplishments and results that could occur with additional resources. The Program Director will work with staff and the Executive Committee to create a Case Statement that will ultimately be approved by both the Steering and Executive Committees. The Case Statement will be informed by the priority science strategy (see Task 2h) and the restoration strategy (see Task 3c).

Task 1f will be accomplished through personnel time of the NEIWPCC Lowell and NBEP staff and contractual services.

Task 1g: Finance Plan Development and Implementation (NEW)
EPA requires NEPs to develop sustainable funding strategies (also referred to as finance plans) regularly and directs that they incorporate new, diversified funding sources that will decrease their reliance on EPA dollars. The finance plane will look at ways to diversify funds without depleting funding sources to our partners who also work within the watershed. The Program Director will work with staff and NEIWPCC Lowell Staff to create a Finance Plan that will ultimately be approved by both the Steering and Executive Committees.

In addition, staff will examine a range of grant opportunities with the Executive Committee and prepare at least one funding proposal during the fiscal year. In addition to potentially serving as the lead on submitting, staff will work with partners to submit proposals for grants to support data gaps and research needs identified within the *State of Narragansett Bay and Its Watershed* and further CCMP goals, including water quality and habitat restoration activities, and climate change resiliency and adaptation.

Task 1g will be accomplished through personnel time of the NEIWPCC Lowell and NBEP staff and contractual services.

Task 1h: Comprehensive Conservation Management Plan (CCMP) (NEW)

EPA requires NEPs to update their Comprehensive Conservation Monitoring Plan every decade. The NBEP's CCMP update is due in 2022. As such, NBEP will devote time to begin the process of updating, including forming a subcommittee and delineating tasks.

Task 1h will be accomplished through personnel time of the NBEP staff.

Milestone Schedule for Task 1

Task 1a: NEIWPCC Lowell Program Management	October 1, 2018 – September 30, 2021
Task 1b: Work Plan Development and Tracking	
Completion of FY19 Work Plan	June 2019
Work Plan Tracking	October 1, 2018 – September 30, 2021
Task 1c: Support of NBEP Oversight and Advisory committees	
Steering Committee Meetings	Quarterly
Executive Committee Meetings	Monthly or as needed
Science Advisory Committee Meetings	Three Meetings Per Year
Task 1d: Program Leadership	October 1, 2018 – September 30, 2021
Task 1e: Communications Strategy Implementation	October 1, 2018 – September 30, 2021
Task 1f: Case Statement Development and Implementation	October 1, 2018 – September 30, 2021
Task 1g: Finance Plan Development and Implementation	October 1, 2018 – September 30, 2021
Task 1h: CCMP	
Formation of subcommittee	Fall 2018
CCMP Subcommittee Meetings	October 1, 2018 – September 30, 2021

Outputs and Outcomes for Task 1

Work Plan Activity and Staff Point of Contact	**Target Date**	**Output**	**Outcome**
Task 1a: NEIWPCC Lowell Program Management (Program Director and NEIWPCC Senior Program Manager)	June 2019 and quarterly	Produce 4 quarterly reports to document progress on all program activities and ensure progress on commitments; 1 EPA grant application.	Improved water quality, habitat, and resources of Narragansett Bay documented.
Task 1b: Work Plan Development and Tracking (Program Director and NEIWPCC Senior Program Manager)	June 2019 and ongoing	Program commitments are documented and tracked using quarterly reporting and SC/EC agenda updates; 1 annual work plan and budget	Workplan aligns with the CCMP, identifying activities to gain a better understanding of the full watershed-estuary system.
Task 1c: Support of NBEP Oversight and Advisory Committees (Program Director)	Ongoing	4 Steering Committee meetings and decisions are documented through meeting minutes; approximately 11 Executive Committee meetings and meeting minutes; at least 1 Science Advisory Committee meeting and notes	Program management is improved.
Task 1d: Program Leadership (Program Director)	Ongoing	Approximately 30-50 Partnerships maintained.	Program capacity is improved.

Work Plan Activity and Staff Point of Contact	Target Date	Output	Outcome
Task 1e: Communications Strategy Implementation (Assistant EA)	Ongoing	Enhance communication with partners and community and disseminate information; update website monthly; photo database management	Program communication and management is improved
Task 1f: Case statement development and implementation (Program Director)	Ongoing	1 case statement.	EPA requirements are met, and program management is improved.
Task 1g: Finance Plan Development and Implementation (Program Director and NEIWPCC Senior Program Manager)	September 2021	1 finance plan and at least 1 grant proposal.	Program fiscal capacity and management is improved.
Task 1h: CCMP (Program Director)	Ongoing	Advancement toward 2022 CCMP; 1 subcommittee formed with agendas and notes from at least 1 meeting	Improved water quality, habitat, and resources of Narragansett Bay.

Overarching Program Evaluation Heading: **Ecosystem Restoration and Protection Projects**

Goal 2: **Facilitate Sound Science to Protect and Restore Clean Water**

Sub-elements: **Habitat, Water Quality, Living Resources**

CCMP: Section 1, Goal 6 and 6.1

- Improve information, science and analysis that support management efforts necessary to restore and protect fresh and salt waters.
- Effectively manage, analyze, synthesize and make available data to support management decision-making, characterize environmental condition trends linked to ecological indicators, prioritize investments and communicate to the public. Continue development of data driven analytical tools, *e.g.*, predictive models, biological indices, etc.

The NBEP provides an important forum for fostering both the synthesis of bay-related science, as well as effective communication on increasingly complex environmental issues involving Narragansett Bay. One of the NBEP's most important roles is to champion and facilitate communication and cooperation with its partners throughout the watershed. NBEP's most important recent focus has been the development of the *2017 State of Narragansett Bay and Its Watershed* report. This report provides an overview of research on environmental indicators on the status and trends in the health of Narragansett Bay and its watershed (in addition, the study area includes the Southwest Coastal Ponds and Little Narragansett Bay and their respective watersheds).
These indicators include a wide spectrum of issues that the Science Advisory Committee has included in three major categories:

1. Bay and Watershed Stressors

1.1 Climate Change Stressors (Temperature, Precipitation, and Sea Level)
1.2 Landscape Stressors (Population, Land Use, Impervious Cover, Nutrient Loading, and Wastewater Infrastructure)
1.3 Chemical Stressors (Legacy Contaminants and Emerging Contaminants)

2. Indicators of Ecosystem Condition

2.1 Bay Ecosystem Indicators (Seagrass, Salt Marsh, Benthic Habitat, Dissolved Oxygen, Chlorophyll, Water Clarity, and Estuarine Fish Communities)
2.2 Watershed Ecosystem Indicators (Stream Invertebrates, Freshwater Fish, Water Quality Conditions for Aquatic Life, and Open Space)
3. Indicators of Public Health (Marine Beaches, Water Quality Conditions for Recreation, and Shellfishing Areas)

In this upcoming fiscal year, the primary goal for protecting and restoring clean water is to build upon progress made in the development of the *2017 State of Narragansett Bay and Its Watershed* report and to continue to enhance NBEP's role in estuary and watershed science. To achieve this goal, NEIWPCC proposes to complete the following sub-tasks:

Task 2a: Bay and Watershed Story Maps (Ongoing)
The following project was put on hold while EPA-ORD (Narragansett) partners implement a pilot project (also described below):

The information developed in the *State of Narragansett Bay and Its Watershed* report will be highlighted through an online story map that disseminates and showcases data results. Story maps integrate and connect the narrative with geospatial and tabular data, pictures and videos, and other graphics to present the importance of the results in the context of geographical various scales, partnerships, and retrospective view. The 2016 work plan (NEIWPCC JCC: 326) included contractual funds to help develop these story maps. This project would allow us to create a series of story maps on the issues in Narragansett Bay and its watershed by highlighting topics identified in the *State of Narragansett Bay and Its Watershed* report. While the goal is to update the report every five years, the use of story maps will importantly provide NBEP with a vehicle to update Bay and watershed indicators as new information becomes available. In addition, it would allow us to take the GIS data and information gathered in the report and included in static maps and make this information available through ArcGIS Online maps on our website. The NBEP's database contains a vast amount of data that were synthetized at different geospatial scales, for multiple metrics, that have not yet been presented and represent key findings. Story Maps will allow the public to better navigate the maps with multiple data layers representing the results of the metrics for each indicator, interactively. Lastly, story maps provide a mechanism to humanize the often abstract aspects of environmental indicators by using stories and photographs to show how Bay and watershed resources have changed and are still important to us all. A gallery of Story Maps will live in the website to streamline accessibility, therefore the website must be regularly revised to incorporate the latest tools for improving accessibility and visibility of information. It is envisioned that the story maps will be organized in the framework developed by the Science Advisory Committee in the Technical Report where the indicators are organized by stressor indicators (climate change, landscape and chemical), condition indicators (Bay and watershed) and public health indicators. As an example, one story map would address the three public health indicators (recreation, beaches, and shellfishing areas) and would illustrate the connection limiting pathogens in local waters. **The Program Director in conjunction with the EC will determine whether or not to move forward with this project following the completion of the pilot project described below.**

EPA-ORD (Narragansett) partners who developed some of these geo-spatial indicators and authored the corresponding chapters identified that to continue this collaborative effort and strengthening the partnership, a Story Map could be developed leveraging EPA's resources and NBEP's staff support, using data from the 2017 *State of Narragansett Bay and Its Watershed* to showcase the results of population and land use. This pilot project is an ongoing process where EPA ORD is developing the Story Map, NBEP is providing technical and content support, and EPA Region 1 is assisting and working with EPA ORD to utilized lessons learned of Story Maps already created at Region 1.

As part of this work, the NBEP staff recognized the need to have a mechanism for sharing mapped data. The story maps are intended to be the entry to this resource as Map Viewer or other data platform, where users can learn about the indicators, and then decide whether they want to download data, or users interested only in the data, can also use the Story Maps to learn about the interpretation of the results. In the meantime, however, staff will devote time to investigate other mechanisms for data management, sharing and storage. Currently, staff has participated in few efforts

where state and regional partners are tackling this same challenge, and the idea is to avoid duplicating efforts or dismissing important leverage opportunities, thus strengthening partnerships.

Task 2a will be accomplished through personnel time of NBEP staff and contractual services from prior work plan funding.

Task 2b: Synthesis Manuscript (Ongoing)

The next major issue for the Science Advisory Committee is to develop a synthesis manuscript based upon the results of the 2017 *State of Narragansett Bay and Its Watershed* report. A synthesis manuscript would allow the Estuary Program and members of the Science Advisory Committee to reflect upon the results in the report. The synthesis manuscript will be submitted and anticipated to be published in an appropriate journal. It is important for the Estuary Program to publish results in documents designed for broad public consumption and to also publish these findings in academic journals. This project would provide an opportunity to coordinate a small group of researchers and develop a synthesis of our recent efforts. In March 2018, the NBEP received QAPP approval, formed a synthesis subcommittee, and developed a detailed outline of the manuscript. Major writing should commence during the summer 2018 and continue through this work plan period. The goal is to submit the synthesis paper to an appropriate journal during the FY19 work plan. The milestone schedule below is based upon the anticipated timeline to complete a manuscript for submission as the timeline for review and publication (if accepted) will depend upon the relevant journal.

Task 2b will be accomplished through personnel time of NBEP staff and the Science Advisory Committee and contractual services (to support publication) from prior work plan funding.

Task 2c: Watershed Science and Policy (Ongoing)

The 2017 *State of Narragansett Bay and Its Watershed* report was designed to identify critical gaps in understanding the Bay and its watershed. For each indicator, we are identifying issues that need to be addressed through further scientific synthesis and policy analysis. For example, we would like to develop an estuarine water quality index that would combine various measurements (DO, water clarity, pH, etc.) to better track water quality improvements. In addition, supporting ongoing efforts to develop fine resolution impervious cover methods to track changes and measure trends. While the Bay and Watershed Research Program will provide a mechanism to fund some of these efforts, we and partners will be identifying important scientific initiatives that need to be advanced with NBEP staff analysis. For example, numerous partners have requested data and information developed by NBEP in the Technical Report and significant staff effort is needed to coordinate, compile and share effectively this information. Examples of these partnerships include: 1) The National Fish and Wildlife Foundation's collaboration with the National Oceanic and Atmospheric Administration to develop a Coastal Watershed Resilience Assessments for the Narragansett Bay watershed; 2) the Wood-Pawcatuck Watershed Association formed a Wild and Scenic Study Committee to obtain national recognition of the Outstandingly Remarkable Values of seven rivers; 3) Mass Audubon's partnership with URI to examine the ecosystem services of the watershed; 4) Blackstone River Valley National Historical Park using population and open space data to inform the public on these indicators specifically within the Blackstone River basin In addition, there are policy implications that are emerging from the *State of Narragansett Bay and Its Watershed* report that will require a similar effort on policy analysis. Our recent work has included extensive outreach with numerous partners to compile existing data and research on the environmental indicators. Specific deliverables will include providing staff technical expertise on science and policy papers or initiatives advanced through NBEP's partners and providing information to policymakers on request. This staff effort will provide an opportunity to continue to help coordinate the science and policy issues in the Bay and its watershed.

Task 2c will be accomplished through personnel time of NBEP staff.

Task 2d: Priority Projects (Ongoing)

The priority project funding will allow the Executive Committee to provide funding to projects that were not anticipated during work plan development. This process allows for the consideration of new projects that align with CCMP goals where a summary of the project is submitted to the Executive Committee in writing for their consideration. The

Executive Committee will make funding decisions based on project budget, amount of funding remaining for priority projects at the time of the request, alignment with CCMP goals and work plan priorities, availability of other funding sources, and timeframe in which funding is needed. Because it is expected that these projects will be time sensitive, it is anticipated that the Executive Committee will approve these matters in coordination with input from the Science Advisory Committee, where appropriate.

Task 2d will be accomplished through the Executive Committee and prior year funding. No new funding has been allocated to this task.

Task 2e: Bay and Watershed Research Program (Ongoing)
This program funded 4 research projects during the previous year work plan:

Sediment Profile Imagery Survey to Evaluate Benthic Habitat Quality in Narragansett Bay--John King (URI)
This project will monitor change benthic habitat quality by rerunning a Bay-wide Sediment Profile Imagery (SPI) survey that was previously run in 1988 and 2008, and will add several new stations. Shumchenia et al (2016) showed improvements in the benthic habitat quality of the Bay between these surveys. However, these surveys need to be run more frequently, and a new survey will be able to fill in more data gaps.

High Resolution Salt Marsh Mapping Using Un-manned Aerial Systems--Peter August (URI)
This project will collect high resolution (~10 cm pixel size) imagery using small unmanned aerial systems (UAS) which is valuable, yet cost-effective. This means more opportunity for monitoring changes in extent and composition of salt marsh habitats over time. These images will be used for interpretation of salt marsh vegetation. These data will directly address the gaps identified in the State of Narragansett Bay Technical Report. Specifically, these data will support the Tier 1 salt marsh monitoring and assessment plan put forth by NBNERR and others.

Further Analysis and Synthesis of Bay Oxygen, Chlorophyll, and Temperature--Dan Codiga (Independent)
The final product will provide several related analyses of oxygen, chlorophyll, and temperature in the Narragansett Bay Watershed—at sites from Phillipsdale Landing in the Seekonk River to the southern end of Prudence Island— and will build on prior understanding and create products in support of NBEP scientific research. Objectives and tasks address gaps that were identified by the 2017 State of Narragansett Bay and Its Watershed report. Benefits include improved understanding of variability and long-term trends in oxygen, chlorophyll, and temperature.

Research Needs for Marine Beaches--Dave McLaughlin (Clean Ocean Access)
The project aims to advance the understanding of bacteria at high recreational use beaches in Rhode Island to improve public health and provide a model for future other locations in the Narragansett Bay. The benefit of this study is improved insight into the 15+ years of microbiology dataset of Enterococci levels at high usage recreational areas along with relationships of bacterial counts and antecedent rain using advanced statistical analysis software developed and supported by US EPA.

Staff will continue to be involved in these projects, including reviewing final and interim deliverables. In addition, staff will continue to share project results with partners, to identify further needs, and work strategically, and consider the benefits these projects have created to improve the understanding of the system and interaction with indicators.

Task 2e will be accomplished through personnel time of NBEP staff and NEIWPCC Lowell staff. No additional subaward funding has been allocated to this task.

Task 2f: Status and Trends Update (NEW)
The 2017 *State of Narragansett Bay and Its Watershed* was the ultimate achievement taking numerous years to fully develop from indicator selection to data analysis and reporting. Most data sources were truncated in 2015 to allow the authors (staff and partners) to fully gather, process and interpret the data. This means that the NBEP staff and partners will need to update the indicators with data post 2015. By updating indicators yearly, the Estuary Program can spread

out the demands of the next report over the next few years, rather than all at once.

Partners are already making more data available. For example, the RIDEM just released its 2016 List of Impaired Waters (http://dem.ri.gov/programs/benviron/water/quality/surfwq/pdfs/iwr16.pdf, and http://www.dem.ri.gov/programs/water/quality/surface-water/integrated-water-quality-monitoring.php). The data from this list can be used to update the Water Quality for Aquatic Life and Water Quality for Recreation indicators. Additionally, 2016 and 2017 data is available for other indicators as well: temperature, precipitation, sea level, land use, impervious cover, nutrient loading, seagrass, benthic habitat, open space (by the time this workplan begins in October 2018), chlorophyll, dissolved oxygen, water clarity, estuarine fish communities, marine beaches, and shellfishing areas. Other indicators in development may be analyzed (marine beaches), and indicators that were not included in the 2017 report may be explored (fish passage and streamflow).

Personnel time will be allocated to update data (and associated metadata) for the indicators of the 2017 *State of Narragansett Bay and Its Watershed* as the data become available following revision to the approved quality assurance project plan (QAPP) for the status and trends report. The indicators will be updated to cover all study areas of the NBEP: the Narragansett Bay Watershed, the Little Narragansett Bay Watershed, and the Southwest Coastal Ponds. These funds will be used to hire interns to assist with the data processing. Through the process of developing indicators for the 2017 report, databases, methods, and map and metadata templates have been created which will be utilized for updating indicators, while maintaining repository databases. Some methods can be subject to change as new data are developed; however, the protocols of data standardization are to be kept.

Task 2f will be accomplished through the personnel time of the NBEP staff and interns.

Task 2g: Little Narragansett Bay and Southwest Coastal Ponds Data Gathering (NEW)

During the writing process for the 2017 *State of Narragansett Bay and Its Watershed*, indicator information related to two study areas – the Little Narragansett Bay Watershed and the Southwest Coastal Ponds – were removed from the final report for clarity. These study areas have data analysis for many (but not all) indicators that are mentioned above. Therefore, it is in the best interest of the NBEP to ensure that these data are available for our partners, and the interested public.

Currently this task will include data and information gathering related to the Little Narragansett Bay and Southwest Coastal Ponds. Future work plans will provide for next steps related to dissemination of this information.

Task 2g will be accomplished through the personnel time of the NBEP staff and interns.

Task 2h: Priority Science Strategy (NEW)

The Science Advisory committee held a full committee meeting in May 2018 and began discussions on organizing and prioritizing the data gaps and research needs from the *State of Narragansett Bay and Its Watershed*. The data gaps and research needs from the *State of Narragansett Bay and Its Watershed* were initially reviewed and organized into three bins: monitoring gaps, assessment needs, and research needs. These bins were further refined by addressing if the gap or need had been met by research occurring between the writing of the *State of Narragansett Bay and Its Watershed* and the present, or if funding had been allocated towards that effort. Additionally, management implications and priorities were included. This organization created a set of spreadsheets which were discussed and prioritized based on funding availability or future funding availability. The committee also commented on which items received the highest priorities and new priorities which should be added.

The overall outcome of this exercise is to create a prioritized list of data gaps and research needs which can be modified/updated as they are tackled. This list will be shared with partners directly and attached to any future NBEP grant programs related to science. It is intended to be used by NBEP and partners to target funding, grants, external sources, and to be a vehicle of communication across the watershed. In addition, it will help inform the finance plan (Task 1g) and case statement (Task 1f). Additionally, staff will work with partners to make this a "living" list where

partners will inform staff of updates to research, assessment, and monitoring.

Task 2h will be accomplished through the personnel time of the NBEP staff.

Milestone Schedule for Task 2

Task 2a: Bay and Watershed Story Maps	October 2018 – September 2021
Task 2b: Synthesis Manuscript	October 2018 – September 2019
Task 2c: Watershed Science and Policy	October 2018 – September 2021
Task 2d: Priority Projects	October 2018 – September 2019
Task 2e: Bay and Watershed Research Program	October 2017 – September 2020
Task 2f: Status and Trends Update	October 2018 – September 2021
Task 2g: Little Narragansett Bay and Southwest Coastal	October 2018 – September 2021
Task 2h: Priority Science Strategy	October 2018 – September 2021

Outputs and Outcomes for Task 2

Work Plan Activity and Staff Point of Contact	Target Date	Output	Outcome
Task 2a: Bay and Watershed Story Maps (Watershed and GIS Specialist)	On hold, pending EPA ORD pilot	On hold, pending EPA ORD pilot Anticipated output if moved forward: 1 Approved QAPP; 1 Story Map Gallery showcasing approximately 6 story maps related to the indicator groupings.	On hold, pending EPA ORD pilot Anticipated outcome if moved forward: Improved understanding of the ecological health of the Bay and its watershed.
Task 2b: Synthesis Paper (Staff Scientist)	September 2019	1 Approved QAPP; Submission of at least 1 paper to at least 1 journal examining complex environmental issues that affect the health in Narragansett Bay.	Improved understanding of the ecological health of the Bay and its watershed.
Task 2c: Watershed Science and Policy (Staff Scientist and Watershed and GIS Specialist)	Ongoing	Technical support on at least 1 science and policy paper(s) developed outside of NBEP related to issues in the watershed.	Improved understanding of science and policy issues.
Task 2d: Priority Projects (Program Director)	Ongoing	At least 1 priority project will be selected for improved protection and restoration of the Bay and its watershed	Improved commitment to protecting and restoring the Bay and its watershed.
Task 2e Bay and Watershed Research Program (Program Director and NEIWPCC Program Manager)	June 2019	4 final reports on projects that advance research related to the issues in the Bay and its watershed; Contract deliverables.	Improved understanding of science.

Work Plan Activity and Staff Point of Contact	Target Date	Output	Outcome
Task 2f: Status and Trends Update (Staff Scientist and Watershed and GIS Specialist)	Ongoing	1 approved QAPP; at least 3 of 24 indicators updated with data available; new indicators discussed for development	Improved understanding of the ecological health of the Bay and its watershed
Task 2g: Little Narragansett Bay and Southwest Coastal Ponds (Staff Scientist)	September 2021	Data and information gathering regarding the Little Narragansett Bay Watershed and the Southwest Coastal Ponds. Advancement of information for these two study areas in preparation for the next Status and Trends Report.	Improved understanding of the ecological health of the Bay and its watershed.
Task 2h: Priority Science Strategy (Staff Scientist)	September 2021	1 "living" prioritized list of data gaps and research needs with watershed science tracked	Improved understanding of science and policy issues.

Goal 3: Protect and Restore Fish, Wildlife, and Habitats

Sub-elements: Habitat, Living Resources, Healthy Communities

CCMP: Section 3, Goals 1 and 1.1

- Conserve existing natural landscapes that have been and will be adversely affected by development, climate change, and invasive species
- Focus resources and enhance land protection efforts by conservation agencies and organizations on less-developed areas, particularly areas threatened by new sprawl development in both states.

CCMP: Section 3, Goals 2, 2.1, and 2.2

- Restore degraded or lost habitats and habitat functions.
- Improve river connectivity and habitat by removing dams, upgrading culverts and creating structural fish ways to restore free-flowing rivers and anadromous fish passage; implement state fish passage plans.
- Create a coordinated bi-state habitat sustainability strategy with a restoration component and identification of priority projects, comprehensive management principles, and implementation targets for fresh and saltwater ecosystems.

The protection and restoration of coastal and riparian habitat is integral to the stewardship of the Narragansett Bay ecosystem and its associated watershed. The bi-state Narragansett Bay watershed has many partners that are working on restoring critical habitats such as saltmarshes, freshwater wetlands, anadromous fish runs, etc. The Massachusetts Division of Ecological Restoration (MA DER), the Rhode Island Coastal Resources Management Council (RI CRMC), RI DEM, MassDEP, NOAA, and ACOE are all working to update coastal and freshwater restoration strategies. Building on the planning work conducted in both MA and RI, the NBEP is well positioned to integrate and articulate habitat priorities on a bi-state watershed basis. NEIWPCC proposes to support facilitation of habitat protection and restoration in Narragansett Bay and its watershed by carrying out the following sub-tasks:

Task 3a: NEPORT (Ongoing)

An important aspect of our CCMP (as well as our annual habitat reporting to EPA) is to track the acreage or stream miles of projects completed to protect and restore the watershed and bay's water quality and ecosystems. Each year NBEP staff compile acres of open space lands preserved, stream miles of fish habitat restored, acres of wetlands

restored, and other habitat protection or restoration projects. NBEP staff has served on the selection committee organized by RI CRMC to select grants under the Rhode Island Coastal and Estuarine Habitat Restoration Trust Fund and also works with numerous partners involved in habitat restoration. For the *State of Narragansett Bay and Its Watershed* report the NBEP has advanced efforts with numerous partners to examine fish passage and stream continuity and is assisting the New England District of the US Army Corps of Engineers in their Narragansett Bay Restoration Study. NBEP staff will work with partners and EPA to submit appropriate information in the NEPORT system. Additional staff time will be allocated to provide support for restoration activities in the bay and watershed.

Task 3a will be accomplished through personnel time of NBEP staff.

Task 3b: Watershed Restoration and Protection Projects (Ongoing)

The needed next step is a compilation of projects completed over time to better represent the progress made to date. This project would include both the compilation of past and ongoing implementation projects as well as the development of GIS data and using the ArcGIS Online platform, to show the restoration efforts retrospectively by location and highlight case studies of these projects. It would provide an update to a habitat portal developed with the leadership of RI CRMC and we would work with numerous partners (CRMC, Save The Bay, MA DER, TNC and others) to highlight habitat protection and restoration efforts accomplished by these partners and NBEP funded projects. NBEP has convened these partners to discuss its functionality and future usability, and all agreed this is a needed tool at the bi-state Narragansett Bay and Watershed scale to aim the identification of cluster projects, potential areas of interest, areas with restoration gaps, and linkage with other factors (land use, population, water quality, sea level rise, etc.). There is a need to streamline the wealth of restoration data and information in a centralized platform what can be shared and used widely. This would be an expansion of NBEP research into past projects as well a new component of the NBEP website. Importantly, this would allow NBEP to promote the important work and investments of NBEP partners in habitat restoration and protection, and identify other potential restoration projects strategically. This larger goal will be implemented in two stages:

- Restoration map 1.0 would be the creation of an online map of completed and in-progress restoration projects in the watershed, compiling data from partners. Most of the partners we have reached out to have already compiled this information in their own databases, which will be shared with NBEP for cross-referencing and standardization at the watershed scale, then for mapping and visualization.
- The completion of the map would feed into Task 3c below.

Task 3b will be accomplished through personnel time of NBEP staff and contractual services from prior work plan funding.

Task 3c. Development of Restoration Projects Strategy (NEW)

Habitat restoration can be more impactful, effective, and efficient when potential projects are looked at holistically. It is important to target areas and resources based on multiple factors across the bay and its watershed: geographical gaps; interaction among indicators that can significantly impact the success of projects; and partners' capacity and funding to fully implement and assess progress of the project. Therefore, there is a need to develop a strategic approach to identify areas, types of projects, collaborative efforts, and leverage opportunities, that can help NBEP work with partners to prioritize areas of interest to conduct restoration. NBEP will convene bi-state partners to begin development of this strategy. As envisioned, such a strategy will include the process used to prioritize project areas, a key list of restoration types and potential projects that could benefit an array of habitat and water quality needs, and (potentially) priority areas to be protected as open space (based on NBEP's open space indicator). This strategy will be developed using a geospatial analysis (primarily using ArcGIS Desktop) that will include other information developed by NBEP and available at the bi-state level as needed. The robustness of this analysis will rely on partnership input from the restoration practitioners, scientists, and policymakers. It is expected that outputs from this analysis will be ranked to prioritize areas and types of projects, based on agreed upon criteria and a geospatial multiscale approach. The written strategy will include the most suitable platform and venues to share this information, and the process for updating as new projects are completed or started, and as methodologies are improved. The goals of this project will be mindful of

three important components: scale (which define the feasibility of projects to be implemented), emerging new technology (which considers effective techniques for assessments), and leveraging opportunities across bi-state agencies and organizations (which increases the chance of successful, sustainable projects). The strategy is intended to be used by NBEP and partners to target funding, grants, external sources, and to be a vehicle of communication to showcase the efforts to restore, protect and preserve terrestrial and aquatic habitats across the watershed. This work plan task will allow the initial planning for this strategy as Task 3b is completed. However, the written strategy itself will be a deliverable for future work plans. Once written, it will help refine the finance plan (Task 1g) and case statement (Task 1f).

Task 3c will be accomplished through personnel time of NBEP staff and contractual services from prior work plan funding.

Milestone Schedule for Task 3

Task 3a: NEPORT	September 2019
Task 3b: Watershed Protection and Restoration Projects Restoration map 1.0	October 2018 - September 2021 September 2020
Task 3c: Development of Restoration Projects Strategy	October 2018 - September 2021

Outputs and Outcomes for Task 4

Work Plan Activity and Staff Point of Contact	Target Date	Output	Outcome
Task 3a: NEPORT (Watershed and GIS Specialist)	September 2019; October 2018-September 2021	Update NEPORT system once per year; assist partners with restoration projects in the watershed.	Enhanced habitat protection and restoration in Narragansett Bay and its watershed.
Task 3b: Watershed Protection and Restoration Projects (Watershed and GIS Specialist)	October 2018-September 2021	1 Approved QAPP; Development of online mapping of habitat protection and restoration projects	Enhanced habitat protection and restoration in Narragansett Bay and its watershed.
Task 3c. Development of Restoration Projects Strategy (Watershed and GIS Specialist)	October 2018-September 2019	At least 2 meetings of bi-state partners to develop a strategic approach	Enhanced habitat protection and restoration in Narragansett Bay and its watershed.

Overarching Program Evaluation Heading: **Technical Assistance and Capacity Building**

Goal 4: **Manage Land for Conservation and Community by Building Local Capacity**

Sub-elements: **Healthy Communities, Direct Assistance**

CCMP: Section 2, Goals 6 and 5

- Increase the role of watershed organizations and municipalities to serve as critical partners in watershed management.
- Improve science, information, and communication to support effective land use management

The management of its watershed lands influences the quality of Narragansett Bay. Achieving changes in the way land is developed, whether mandated or voluntary, requires an expanded effort to build the capacity of local governments as well as strengthen the role of watershed and other local organizations as partners in watershed management. Through enhanced outreach coupled with the provision of ongoing guidance and partnerships, it is envisioned that the

NBEP can contribute to increasing local stewardship in a manner that builds upon its relationships with local entities including municipalities, watershed organizations and land trusts. Specifically, this includes the following sub-tasks:

Task 4a: Southeast New England Program (Ongoing)

EPA's Southeast New England Program (SNEP) is a partnership made up of public and private stakeholders collaborating to create a broad ecological and institutional framework for protecting, enhancing, and restoring the waters along southeastern New England. SNEP's vision is to restore the ecological health of southeast New England's estuaries, watersheds, and coastal waters and ensure access now and in the future to resilient, self-sustaining ecosystems of clean water, healthy diverse habitats, and associated populations of fish, shellfish, and other aquatic dependent organisms. SNEP includes the coastal waters and watershed lands spanning from Westerly, Rhode Island to Pleasant Bay, Massachusetts. The watersheds of Narragansett Bay, Buzzards Bay, the islands, and southern Cape Cod face similar opportunities and challenges and SNEP's focus on this geographic area is designed to develop innovative and effective approaches to preserve the region's critical resources.

Staff will continue to serve on the committees which serve as a forum to discuss ideas for potential SNEP activities and priorities and leverage regional support, provide feedback on vision, goals, and future direction of the program, and share lessons learned from their experiences and their local regions that would be helpful for others to know. This involves meetings, occasional conference calls, and review of written materials as requested by EPA. In addition, NBEP staff and NEIWPCC Lowell staff continue to assist partners in projects funded by SNEP. Currently, the Program Director serves on the Policy Committee, the Staff Scientist on the Monitoring Subcommittee, and the Watershed and GIS Specialist on the Ecosystem Services Subcommittee.

Task 4a will be accomplished through personnel time of NBEP staff and NEIWPCC Lowell staff.

Task 4b: Southeast New England Program Subawards (NEW)

The EPA, through SNEP, is providing funding for large scale implementation projects (>$100,000 per project) as well as a small portion of funding for smaller scale projects. A competitive request for proposals will be issued, and projects selected using a two-step process of pre-proposal followed by invited full proposal. These projects will support CCMP goals and focus on SNEP priorities.

Task 4b will be accomplished through personnel time of NBEP staff and NEIWPCC Lowell staff and contractual services for large scale implementation projects totaling $152,000 ($400,000 from this year and $152,000 from prior work plan funding) and for small scale projects totaling approximately $54,000.

Task 4b will be accomplished through personnel time of NBEP staff and NEIWPCC Lowell staff and subaward funding.

Milestone Schedule for Task 4

Task 4a: Southeast New England Program	October 2018 – September 2021
Task 4b: Southeast New England Program Large Implementation Projects	October 2018 – September 2021

Environmental Outputs and Outcomes for Task 3

Work Plan Activity and Staff Point of Contact	Target Date	Environmental Output	Environmental Outcome
Task 4a: Southeast New England Program (Program Director and NEIWPCC Program Manager, Staff Scientist, and Watershed and GIS Specialist)	Ongoing	Participation in at least 3 meetings related to environmental issues in southeastern New England estuaries; input on written products	Partnerships are strengthened. Improved understanding of water quality and ecological issues impacting southeastern New England estuaries.

Task 4b: Southeast New England Program Subawards (Program Director and NEIWPCC Program Manager)	October 2018 through September 2021	3-5 large implementation projects (>$100k) to be completed in the watershed and 2-3 small projects	Advancement of on-the-ground projects in the watershed and restoration planning projects.

Goal 5: Develop and Strengthen Partnerships

Sub-elements: Trainings, Outreach

CCMP: Section 2, Goals 6 and 5

- Increase the role of watershed organizations and municipalities to serve as critical partners in watershed management.
- Improve science, information, and communication to support effective land use management

The cornerstone of improving the Bay and watershed is strong partnerships. The CCMP relies on these partnerships to improve management policy and develop sound science to guide decision-making. To do this, the NBEP strives to develop and strengthen partnerships with federal, state, regional, and local organizations. Through enhanced outreach and trainings, it is envisioned that the NBEP can contribute to increasing local stewardship in a manner that builds upon its relationships with local entities including municipalities, watershed organizations and land trusts. Specifically, this includes the following sub-tasks:

Task 5a: State of the Taunton River Watershed – Building Partnerships for Progress (Ongoing)
On October 23, 2017, NBEP hosted a workshop and press event at Save The Bay in Providence, Rhode Island. This event showcased key results from the *2017 State of Narragansett Bay and Its Watershed*. NBEP has been planning for similar events in Massachusetts.

On October 1, 2018, the State of the Taunton River Watershed Workshop is being co-hosted by the Narragansett Bay Estuary Program and the Resilient Taunton Watershed Network. This event will highlight the outcomes of the 2017 *State of Narragansett Bay and Its Watershed* specific to the Taunton River, informing the audience of major environmental factors that are affecting the Taunton River, its tributaries, surrounding lands, and ultimately Mount Hope Bay. The audience will engage in workshops about clean water, changes to our land and waters from more people and more development, and how rising seas affect our coasts. Participants will join old partners and meet new ones; exchange ideas and lessons learned; and help us protect and restore this place that is ours together. Local Champion awards will be given out at the event.

Task 5a will be accomplished through personnel time of NBEP staff and NEIWPCC Lowell staff and through partnerships with Resilient Taunton Watershed Network, Save The Bay, Mass Audubon, and others.

Task 5b: MA Workshop event in Worcester (Ongoing)
Similar to the Taunton event above, this event would highlight key results of the *2017 State of Narragansett Bay and Its Watershed* which pertain to the Blackstone River Watershed and environmental achievements of local practitioners. A small committee will be formed to develop an agenda, select venue and date, and work on other logistics.

Task 5b will be accomplished through personnel time of NBEP staff and NEIWPCC Lowell staff, and through partnerships with Mass Audubon and others.

Task 5c: Technical Transfer and Outreach (Ongoing)
A key component of the 2017 *State of Narragansett Bay and Its Watershed* is disseminating the information to key partners, public, and peer audiences. As such, staff have and will continue to submit proposals to speak at local, regional, and national conferences. These opportunities will raise the image of the NBEP and showcase the important

work done by the NBEP staff and its partners. Additionally, staff will work with partners on other technical transfer opportunities, including relevant meetings, webinars, outreach events, and assistance with partner grant applications.

Task 5c will be accomplished through personnel time of NBEP staff

Milestone Schedule for Task 5

Task 5a: Taunton event	October 1, 2018
Task 5b: Worcester event	October 1, 2018-September 2019
Task 5c: Technical Transfer and Outreach	October 2018-September 2021

Outputs and Outcomes for Task 5

Work Plan Activity and Staff Point of Contact	**Target Date**	**Output**	**Outcome**
Task 5a: Taunton event (Assistant EA, Watershed and GIS Specialist)	October 1, 2018	1 event; 50-100 participants anticipated	Improved understanding of science; Inform local practitioners; Develop/Foster partnerships
Task 5b: Worcester event (Assistant EA)	Early 2019	1 event; 50-100 participants anticipated	Improved understanding of science; Inform local practitioners; Develop/Foster partnerships
Task 5c: Technical Transfer and Outreach (Program Director, Staff Scientist, and Watershed and GIS Specialist)	Ongoing	Education of ecological indicators for the Narragansett Bay Watershed; partnerships to develop projects to answer data gaps and research needs; at least 2 presentations; lectures, or webinars; meeting notes; at least 1 grant application submitted	Improved understand of science; inform local practitioners, develop/foster partnerships

Non-Federal Match

The Narragansett Bay Estuary Program's Steering Committee includes many partners that are implementing projects that are directly implementing the CCMP. A summary of each non-federal match, to address the grant request of $1,100,000, is provided below and match documentation is provided for each source of funds:

- Massachusetts DEP(contractual) - $113,397
- Narragansett Bay Commission (Bay monitoring staff) - $150,000
- Rhode Island CRMC (Coastal and Estuarine Habitat Trust Fund awards) - $132,705
- Rhode Island DEM (contractual and staff) – $703,898

Appendix A: New Contractual/Subaward Projects using FY2018 Funding

Task	Project Title	Amount	Output	Procurement Type	Timeline
Task 2a	Finance Plan	$15,000	1 finance plan	Contract (RFP to be posted)	October 2018-September 2020
Task 4b	SNEP Subawards	$454,159 (plus prior year funding)	3-5 large implementation projects (>$100k) to be completed in the watershed and 2-3 small projects	Subawards anticipated	October 2018 – September 2021

Appendix B: Grant Performance Report (CE96184201) NEIWPCC JCC: 315
In addition to the reports submitted quarterly to the EPA Region 1 Project Officer, this report satisfies the obligation to submit an annual performance report as required under the programmatic terms and conditions of the grant.

Appendix C: Grant Performance Report (CE00A00004) NEIWPCC JCC: 318
In addition to the reports submitted quarterly to the EPA Region 1 Project Officer, this report satisfies the obligation to submit an annual performance report as required under the programmatic terms and conditions of the grant.

Appendix D: Grant Performance Report (CE00A00127) NEIWPCC JCC: 326
In addition to the reports submitted quarterly to the EPA Region 1 Project Officer, this report satisfies the obligation to submit an annual performance report as required under the programmatic terms and conditions of the grant.

Appendix E: Grant Performance Report (CE00A00366) NEIWPCC JCC: 332
In addition to the reports submitted quarterly to the EPA Region 1 Project Officer, this report satisfies the obligation to submit an annual performance report as required under the programmatic terms and conditions of the grant.

Appendix F: Travel Report
In addition to the reports submitted quarterly to the EPA Region 1 Project Officer, this report satisfies the obligation to submit documentation of Clean Water Act §320 Funds Used for Travel as required under the National Estuary Program Funding Guidance.

Appendix G: Outreach Report
In addition to the reports submitted quarterly to the EPA Region 1 Project Officer, this report supplements the previously mentioned reports above.