



**NARRAGANSETT BAY  
ESTUARY PROGRAM**

## **FY2011 WORKPLAN**

**Grant period: July 1, 2011 – June 30, 2012**

## **The Narragansett Bay Estuary Program FY2011 Workplan**

This workplan reflects the state of the program as it moves forward with the development of the Narragansett Bay Region Plan – a collaborative effort to replace the existing Comprehensive Conservation and Management Plan (CCMP) with a new ecosystem plan that integrates planning processes. Each National Estuary Program is required to develop, implement and update its CCMP through its mandated inclusive stakeholder process. In the new collaboratively-developed Narragansett Bay Region (NBR) plan, the NBEP seeks to address and support the planning needs of the R.I. Statewide Planning Program and the R.I. Bays, Rivers and Watersheds Coordination Team, as well as Massachusetts agencies and organizations, by providing a watershed bi-state consensus-based set of goals, objectives and priority actions that will inform individual agency and organization workplans and initiatives.

The workplan also reflects efforts by the program to work more closely with agency initiatives, watershed coalitions and municipalities. A number of tasks in the workplan address state agency priorities as expressed through committee discussions and individual meetings and the NBEP is reaching out to engage Massachusetts NGO stakeholders through efforts like indicator development and water trail development and expansion. To more effectively work at the bi-state level, the NBEP Management Committee membership has been expanded to include additional Massachusetts representation. Working with the City of Providence and community stakeholders on the Roger Williams Park Ponds restoration project has helped the program engage partners beyond those it has traditionally worked with and advances our work in urban waters restoration while supporting state TMDL implementation.

Though still in draft form, the NBR plan provides guidance to the NBEP on workplan content. It has led the program to examine its focus areas and reconfigure some to increase effectiveness or meet an articulated need. Workplan guidance has also been provided by discussion with the NBEP Policy and Management Committees. At its March 2011 meeting, the bi-state high-level Policy Committee identified common areas of interest for R.I. and Massachusetts, where collaborative action would benefit the ecosystem. Priority areas identified include: stormwater management, habitat restoration and biodiversity, nutrient reductions, assessment and monitoring, and flooding hazards/climate adaptation.

The NBEP has responded to this guidance by including selected actions in this workplan, some of which will be further developed based on discussion and coordination with existing efforts. Workplan tasks that address Policy Committee priorities include work on development of nutrient criteria and monitoring of dissolved oxygen, examining how both states assess coastal waters, implementing an EPA Climate Ready Estuaries grant project related to climate change impacts, habitat restoration actions and policy development, continued development and application of watershed ecosystem indicators, and development of a technical assistance project geared toward municipal implementation of Phase 2 stormwater regulations.

The workplan also accounts for program management, administration and communications actions necessary to successfully implement the workplan and inform the public and decision-makers of Bay and watershed issues. It also responds to the federal requirements for reporting that the NBEP must adhere to and reflects the program's efforts to address EPA strategic priorities and program needs.

Richard C. Ribb  
NBEP Director

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**Attachment A. FY2011 NBEP Workplan Actions**

## A. Program Highlights

**Development of Narragansett Bay Region Plan:** The NBEP organized a collaborative effort to develop an integrated watershed plan that meets the needs of a number of key institutions while providing an effective update to the existing CCMP. Drafts of the plan have been reviewed on several occasions by a wide range of stakeholders; a series of technical stakeholder workshops in October 2010 helped shape and guide plan development. It is anticipated that the plan will be completed in fall 2011.

**Enhanced Program Management:** The creation of a new bi-state Policy Committee for the program (initiated in March 2011) will help provide direction for the NBEP and its work particularly in regard to bi-state, cross-watershed issues. The Policy Committee is identifying priority areas where bi-state collaboration can add value to existing efforts; Policy Committee input was also used to shape this workplan. The program has is conducting internal strategic directions reviews with staff and the Executive Committee to better align program resources with NBR plan goals and priorities and to address program needs and concerns.

**FY2010 Dissolved Oxygen Surveys:** The eleventh annual round of the NBEP-initiated surveys were completed with partners Brown University and RIDEM; NBEP and Brown University researchers analyzed results and provided a summary report to the State.

**FY2010 Macroalgae Surveys:** This seasonal effort has been building a trends record for the extent and coverage of macroalgae in Narragansett Bay and assesses macroalgae concentrations as an indicator of system health. The program has pioneered the use of computer software that can more accurately map and assess coverage. This tool, based on open source software, can be applied to a number of far-ranging uses. The NBEP made a presentation on the effort at the November 2010 NEP national meeting and will be sharing the software with interested NEPs.

**Bay & Watershed Ecological Indicators Initiative:** The NBEP is working to identify and enhance key indicators as selected by a technical stakeholder workshop process. In FY2010, the program focused on three key indicators - impervious surface, beach closures, and freshwater flow. Technical stakeholders have been convened to provide consensus on indicators to be used. The project team and partners present the results of this effort to the R.I. General Assembly on April 27, 2011. This collaborative effort will start working on a next tier of indicators in FY2011. The indicators project is being conducted in partnership with the URI Coastal Institute and the R.I. Bays, Rivers & Watersheds Coordination Team.

**Coalition for Water Security:** Having found success in collaborative working arrangements in the past, the NBEP became a founding member of the Coalition for Water Security with a stated goal of improving R.I.'s management of freshwater resources. The group's work helped with the passage of the state's Water Use and Efficiency Act. The NBEP will be participating in this ongoing effort, providing communications and grant writing assistance.

**Coalition for Transportation Choices:** Again using the coalition model, the NBEP participates in the Coalition for Transportation Choices. The group seeks to build a diverse coalition of organizations and individuals to support sustainable transportation policies that protect the environment while supporting community transportation needs. The NBEP will be participating in this ongoing effort, providing communications and grant writing assistance.

**Pawtuxet River Ecosystem Restoration:** NBEP continues to lead a community based process to restore the lower Pawtuxet River in order to provide spawning habitat for anadromous shad and herring; restore wetlands and water quality; and reduce property flooding. A permit to remove the first dam on the river has been approved by state authorities; the partial dam removal was initiated in August 2011 with completion by October 2011 (including shoreline replanting). This project required significant NBEP resources for project management, securing funding, and public outreach as well as connecting with local elected officials.

**Roger Williams Parks Ponds Restoration:** The NBEP worked with the City of Providence and community NGOs to secure \$424,000 through EPA's STAG grants program to fund construction of several large stormwater BMPs at the Park. The City is also contributing An RFP for the engineering element of the project was released in March 2011; technical work to be done includes selection and siting BMPs, developing a waterfowl management program, and creating a landscaping plan that will promote water quality. NBEP is also providing funding and support to local groups like ServeRhodeIsland to conduct a local volunteer-based park cleanup as part of the City's Earth Day agenda. The program continues to reach out to non-traditional partners like local community NGO's to build support for the effort. EPA's Atlantic Ecology Lab has agreed to provide water sample analyses support to the project and is seeking other EPA resources to expand the scope of the project. In August 2011, the NBEP secured SEP funding of an additional \$200,000 to expand this project.

**Program Recognition:** In June 2011, the Southern New England Chapter of the American Fisheries Society selected the NBEP to receive their 2011 Outstanding Organization Award. The SNE Chapter is recognizing the NBEP for its efforts to protect and preserve Narragansett Bay and its watersheds. The award letter states that "the NBEP has been a leader in estuarine management" and notes that the Chapter especially "recognizes NBEP's outstanding efforts to educate the public on the science and management of Narragansett Bay and its watershed."

**EPA Climate Ready Estuaries Grant:** In June 2011, NBEP was notified that it would receive a \$25,000 grant from EPA's Office of Oceans, Wetlands and Watersheds – Coastal Management Branch for a climate-related project under the Climate Ready Estuaries Program which provides grant funds available on a competitive basis to the 28 National Estuary Programs. The NBEP seeks to develop ways to better understand and address watershed dam issues particularly in light of anticipated climate change (increased precipitation) impacts. The NBEP project focuses on better assessing our dam network, its vulnerability to these impacts, and ways in which we can better prepare for the impacts, all while keeping ecological and community values in mind.

We have identified an approach that would select a set of candidate subwatersheds where there have been identified significant dam-related issues, e.g., high hazard, lack of ownership data, historic and community value, impoundment issues, wetland issues, etc., to include in this pilot study. NBEP will contract technical assistance to research local and state records to assist in determining ownership of a set of problem dams. We will coordinate with the River Restoration policy development effort to implement the CCMP action regarding revising state condemnation processes for high priority dams or other mechanisms to better manage hazards and integrate ecological restoration with floodplain management. Results of land ownership reviews and studies undertaken, the policies developed, and data and maps regarding floodplain impacts produced would be included in a final project report. The project results would be able to be used as a model for assessing other subwatersheds in the Narragansett Bay watershed and could then be assembled into a watershed-wide report on dam issues, conditions and policy development and recommendations.

## **B. NBEP Overview**

The Narragansett Bay Estuary Program is part of the National Estuary Program (NEP), a national network of 28 programs working for collaborative solutions for estuaries designated by Congress as of critical importance. Created in 1987 under the Clean Water Act, the NEPs are charged with protecting and restoring U.S. estuaries by engaging state and federal agencies, nongovernmental organizations and local communities in planning and management decisions and actions. The U.S. Environmental Protection Agency provides base funding and federal oversight for each of the NEPs, but program management is typically the responsibility of an estuary stakeholder-based management committee.

In 1993, the Governor of Rhode Island and the Administrator of the Environmental Protection Agency affixed their signatures to the Narragansett Bay CCMP, committing both entities, with other partners who developed the plan's recommendations, to implementation of the Bay plan. Concurrently, the CCMP was accepted as part of the R.I. State Guide Plan, requiring that State agency and municipal plans are consistent with the CCMP. The plan specifically recognizes that it should be a living and dynamic plan and should be periodically reviewed and revised to address current needs and issues. An extensive update to the plan is currently underway.

In keeping with Congress' mandate, since 1993 the Narragansett Bay Estuary Program has been implementing the CCMP by coordinating planning, policy, technical assistance, science and outreach pertaining to Narragansett Bay's environment. The NBEP is affiliated with the Coastal Institute (CI) at the Graduate School of Oceanography at the University of Rhode Island, which provides program offices for its five-person staff. Program staff are managed under an unusual institutional arrangement involving the University, the R.I. Department of Environmental Management and the R.I. Natural History Survey. This institutional arrangement gives the program more flexibility to conserve program resources and hire and oversee co-located or nonpermanent project staff. It has also allowed the program access to additional nonfederal match.

### **NBEP Program Mission Statement**

*To protect and preserve Narragansett Bay and its watershed through partnerships that conserve and restore natural resources, enhance water quality and promote community involvement.*

The NBEP accomplishes this by:

- Promoting a holistic perspective of Narragansett Bay and its watershed that includes social, economic and environmental aspects.
- Identifying information needs; acquiring, interpreting and disseminating data to support informed, science-based decision-making;
- Stimulating discussion on Bay issues and bringing expertise through public workshops, professional forums and scientific symposia and reporting on the results;
- Coordinating actions to protect and restore coastal ecosystems;
- Initiating and managing restoration plans and projects;
- Using collaboration and partnerships to address common goals;
- Effectively keeping the public and policy-makers informed of Bay and watershed issues;
- Matching resources to management needs through grants and partnerships;
- Supporting local watershed organizations in restoration, protection and outreach initiatives;

- Convening and coordinating interagency technical teams and workgroups.

The Narragansett Bay Regional Plan, nearing completion, will serve as an update to the original 1992 CCMP. The NBR Plan is built on a set of overall goals developed through a consensus-based stakeholder process; these goals drive the NBEP workplan process. The broad goals are:

- Manage Watershed Lands for Human and Ecological Needs
- Restore and Protect Water Resources
- Protect and Restore Vital Habitats
- Sustain and Restore Fish and Wildlife
- Restore Prosperity while Preserving Quality of Life and Natural Resources
- Protect Human and Natural Assets

In May 2006, the NBEP Management Committee recommended consolidated areas of concentration for the NBEP that build on program strengths, identified needs, and are consistent with the CCMP goals:

- Develop and apply scientific information to manage the Narragansett Bay ecosystem
- Serve as regional leader for establishing a watershed-based framework that reflects key management issues that can be addressed and acted on in both R.I. and Massachusetts
- Focus program activities on key restoration and protection goals that engage constituencies and, concurrently, identify emerging issues and corresponding technical and information needs related to those issues.
- Communicate timely, meaningful information on the condition of the Bay and its associated watersheds, including habitats, water quality, and institutional efforts

### **The NBEP Role in Narragansett Bay Ecosystem Planning & Management**

Like the other National Estuary Programs, the NBEP is the only planning, policy and project initiative with a specific Clean Water Act charge to work on a watershed/ecosystem basis and to do this in a highly collaborative manner, based on an articulation of stakeholder priorities for the watershed which is the foundation of the Narragansett Bay Regional Plan. NEPs serve as catalysts in their watersheds: working to attract and direct federal and other resources to local needs, building needed scientific and watershed information, informing the public and policy makers, convening collaborative workgroups around key issues in estuary watersheds, supporting local grassroots-level organizations to conduct implementation actions, and bringing together funding, partners and projects to implement the defined goals and objectives of estuary management plans.

The NBEP identifies areas of need where the program can have the greatest impact, filling data and action gaps. Using its skills in science, policy, management and communications, the NBEP seeks to address key issues in the Narragansett Bay watershed, through program and partnership action.

The program has taken leadership roles in several areas of Bay and watershed management including the restoration of anadromous fish to Bay rivers and streams and coastal marsh restoration, enhancing bi-state connections with stakeholders in the Massachusetts part of the watershed through grant programs, technical assistance and the development of the NBR watershed plan that updates the existing CCMP, tackling data needs by actions such as instituting the first dissolved oxygen surveys of the Bay, creating the first baseline data sets on the status of the state's coastal habitats, and developing the watershed-wide environmental status and trends report, *Currents of Change*, based on consensus-based

Bay and watershed indicators, and creating a mechanism to broadcast information specific to Bay issues to the greatest possible number of watershed residents and stakeholders through the online publication, the *Narragansett Bay Journal*.

## C. NBEP Oversight Committees

### NBEP Management Committee

The NBEP Management Committee is a stakeholder-based panel that is engaged in the program's work and provides feedback and direction to NBEP implementation actions. The group oversees current workplan development, approves workplans, advocates for the NBEP and provides guidance and suggestions for improving the workplan. Membership listed below is as of August 2011.

Susan Kiernan, RIDEM	Judith Swift, URI Coastal Institute
James Boyd, RI CRMC	Rachel Calabro, STB Watershed Coordinator
Jared Rhodes, R.I. Statewide Planning Program	Eric Scherer, RI NRCS
Jane Austin, Save The Bay (chair)	Mel Cote, USEPA Region 1
David Gregg, R.I. Natural History Survey	Bob Stankelis, Narra. Bay NERR
Ames Colt, RI Bays, Rivers & Watersheds Coordination Team	Carolyn LaMarre, Taunton River Watershed Alliance
Jan Reitsma, Blackstone River Valley National Heritage Corridor Commission	Bryant Firmin, Mass. Dept. of Environmental Protection
Priscilla Chapman, Mass Audubon	Peter Coffin, Blackstone River Coalition

### NBEP Executive Committee

The NBEP Executive Committee was formed in June 2010 to supersede the NBEP Finance Committee to provide more frequent and in-depth program oversight, allowing the Management Committee to focus on workplan development and strategic directions for the program.

Sue Kiernan, RIDEM	Judith Swift, URI Coastal Institute
Mel Cote, USEPA Region 1	David Gregg, R.I. Natural History Survey
Jane Austin, Save The Bay (chair)	Margherita Pryor, USEP Region 1
Jan Reitsma, Blackstone River Valley National Heritage Corridor Commission	

## **D. Narragansett Bay Region Plan: Goals & Objectives** (from March 30, 2011 draft)

### **1. Manage Watershed Lands for Human and Ecological Needs**

- 1.1. Encourage low impact development.
- 1.2. Preserve open space and natural systems.
- 1.3. Concentrate development and growth in identified urban and suburban growth centers
- 1.4. Increase and maintain regional recreational opportunities and public access to shorelines and waterfronts.
- 1.5. Improve science and information to support effective land use management

### **2. Restore & Protect Clean Water**

- 2.1. Reduce pollution from point sources
- 2.2. Reduce pollution from non-point sources
- 2.3. Maintain stream flow to balance human and ecological needs
- 2.4. Improve funding for water quality and quantity improvement and for resource assessment/monitoring
- 2.5. Improve information, analysis and management practices necessary to restore and protect fresh and salt waters

### **3. Protect & Restore Vital Habitats**

- 3.1. Conserve existing natural landscapes that have been and will be adversely affected by development, climate change, and invasive species
- 3.2. Restore degraded or lost habitats and habitat functions
- 3.3. Monitor, control and prevent land and aquatic invasive species
- 3.4. Improve science and information to guide management of habitats and biodiversity
- 3.5. Build capacity to implement ecological restoration at state and local levels and improve interstate coordination

### **4. Sustain and Restore Fish and Wildlife**

- 4.1. Preserve and restore fresh and salt water populations, habitats and ecosystems
- 4.2. Reduce ecological impacts of commercial and recreational fisheries in fresh and salt water
- 4.3. Manage species for commercial, recreational, cultural and ecological value
- 4.4. Improve science and information to guide fisheries management

### **5. Restore Prosperity While Preserving Quality of Life and Natural Resources**

- 5.1. Develop a regional economic platform to collaborate on and encourage sustainable industrial, technological, and commercial development
- 5.2. Plan infrastructure as a region for long-term economic and ecological resiliency
- 5.3. Preserve the region's natural, cultural and quality of life assets as advantages that improve its business climate and promote sustainable economic development
- 5.4. Sustain and improve economic value provided by commercial and recreational fisheries and aquaculture

## **6. Protect Human and Natural Assets**

- 6.1. Maximize preservation and restoration of green infrastructure to increase coastal and floodplain resilience
- 6.2. Improve public and private infrastructure to withstand anticipated impacts
- 6.3. Ensure adequate disaster mitigation and response planning to protect life and property
- 6.4. Develop funding mechanisms for improved preparedness and response
- 6.5. Improve science and information necessary for preparedness and response
- 6.6. Ensure that coastal habitat restoration efforts take sea level rise into account

## **E. NBEP FY2011 Workplan Implementation Framework**

### ***A. Develop and apply scientific information to manage the Narragansett Bay ecosystem***

- A.1. Synthesize, analyze and interpret Bay ecosystem data and support the development and use of effective Bay ecosystem indicators
- A.2. Collect critical ecosystem data where needed to improve estuary and watershed management; develop collection methodologies as necessary
- A.3. Convene technical stakeholders to communicate state of science and management and work toward solutions for ecosystem problems

### ***B. Establish a regional framework for collaboration throughout the Narragansett Bay Region(R.I. and Massachusetts) to address environmental issues at watershed scales.***

- B.1. Engage the public and Bay/watershed stakeholders in developing agreed upon goals and objectives that will guide watershed action
- B.2. Establish collaborative institutional networks that implement solutions for ecosystem problems
- B.3. Provide technical assistance to build capacity of conservation organizations throughout the Narragansett Bay Region

### ***C. Advance the restoration and protection of habitats and natural areas throughout the Narragansett Bay ecosystem***

- C.1. Develop and manage collaborative habitat restoration projects by providing technical assistance to communities and local organizations
- C.2. Support planning and funding at state, regional and national levels to accomplish habitat restoration for the Bay and watershed

### ***D. Communicate timely, meaningful information on the condition of Narragansett Bay and its associated watersheds, including habitats, water quality, and institutional efforts***

- D.1. Build support for Narragansett Bay Region Integrated Plan implementation by effectively tracking progress and communicating successfully with a wide variety of audiences and partners through implementation of communications strategies

### ***E. Focus and improve NBEP program resources on effective implementation of the Narragansett Bay Region Plan***

- D.1. Strengthen internal program management, communication and planning
- D.2. Strengthen program oversight and interaction with external stakeholders

## F. Current Issues & Challenges

**Climate Change – Narragansett Bay and its watershed:** Bay scientists and managers are documenting changes in the Bay ecosystem that they believe are the result of warming Bay temperatures related to climate change. The average mean temperature of Narragansett Bay has increased by two degrees Fahrenheit and the average mean winter temperature by four degrees. These are significant changes and are having an effect on the Bay ecosystem. Researchers are seeing changes in the timing of Bay biological events and shifts in species. The food web is changing which then alters the composition of communities that depend on it. The NBEP is working to increase understanding of changes in the Bay. The NBEP sees a role for the program in working with partners to build scientific understanding of the impacts of climate change on the Bay ecosystem. Legislation that was drafted and passed by the U.S. House in 2010 reauthorizing the NEP requires that NEPs take a role in understanding the impacts of climate change as part of its overall ecosystem management charge. EPA Region 1 is interested in seeing the New England NEPs take a role in addressing climate change as part of their ecosystem focus. The NBEP is interested in upstream watershed impacts related to climate change and how these impacts will re-shape management activities.

**Narragansett Bay Region Planning Processes:** In early 2010, the NBEP engaged some key partners in an effort to update the existing Narragansett Bay Comprehensive Conservation and Management Plan (CCMP) in a way that provides integration with other major planning processes, initially with the R.I. Statewide Planning Program's restructuring of the R.I. State Guide Plan and with the existing R.I. Bays, Rivers & Watersheds Coordination Team's Systems Level Plan. In order to address ecosystem-based management, NBEP provides something that R.I. state-focused efforts cannot – a direct connection to the public, stakeholders and organizations in the Massachusetts part of the watershed who needed to be included in any attempt at watershed planning and implementation. This effort has evolved into a collaborative effort that has developed a draft common set of goals, objectives and priority actions within an integrated ecosystem plan; the plan also reflects priorities for water-dependent economic activities. Technical and public stakeholder review processes have been and continue to be conducted in order to ensure input from all appropriate parties. A challenge inherent in this work is how to integrate planning efforts that arise from different sources, scopes and purposes to achieve maximum coordination and efficiency in identifying and developing solutions for Bay and watershed problems. However, the planning workgroup process now in place has allowed the participants to work their way through issues. An additional challenge is ensuring that the broadest range of stakeholders is engaged in the process in both R.I. and Massachusetts; the involvement of NBEP Management Committee members has been valuable in making the appropriate connections. As the plan nears completion, the NBEP, with local partners, will host a series of local stakeholder and citizen workshops to get final public input into the plan.

**Plan Implementation and Program Funding:** Though the National Estuary Program has received annual appropriations from Congress since 1987, it is a continuing challenge to ensure that the programs receive sufficient funding to carry out the charge that Congress has given them – to implement the comprehensive conservation and management plans for the 28 estuaries in the NEP. Fortunately, the program has had strong support at the federal and Congressional level. Since 2000, the per program allocation for each NEP has grown from \$300,000 to \$600,000 in FY2009; Congress provided additional funding totaling \$800,000 in the FY2010 budget. The FY2011 budget provided \$598,800 per NEP. However, federal deficit concerns will weigh heavily on the Congressional appropriations processes for at least the next several years. The NBEP has been very prudent in its program budgeting in order to

ensure continuity through difficult fiscal times but if budget cuts are significant, the program will have to adapt to funding realities and trim costs while seeking additional funding sources. For the FY2011 workplan, the NBEP has secured or anticipates securing an additional cash amount of \$238,500 for workplan implementation from a number of sources.

**Supporting Bay and Watershed Monitoring:** The NBEP has been a leading organization in building the current capacity for Bay monitoring through its ground-breaking dissolved oxygen monitoring program, involvement in the federally funded Bay Window, National Coastal Assessment and the NOAA-funded Coastal Hypoxia Research monitoring projects, marine invasive species surveys, and in developing bay and watershed ecological indicators.

While continuing the above efforts as funds allow, the program, in cooperation with EPA's Atlantic Ecology Division lab, will continue a Bay macroalgae monitoring project. Securing the use of a R.I. Airport Corporation helicopter, NBEP and EPA AED staff use high-resolution digital camera imagery to document the extent and type of macroalgae communities in near shore areas of the Bay. The intent is to analyze for connections to the level of nutrients in Bay waters and to assess measurement of macroalgae extent and density as an indicator of Bay health. With assistance from URI researchers, the NBEP has developed a new digital analytical process to assess and map areal extent and coverage of macroalgae in the Bay; this new technology is being shared with the other 27 National Estuary Programs.

A critical challenge in assessing condition and trends in the Narragansett Bay watershed is the lack of consistent long term ecological indicator information. While there are a few long term data sets (state fishery trawls, state shellfish program pathogen monitoring, WWTF effluent monitoring), many are not geared to ecological assessments, are not complete enough in spatial and temporal coverage, and may not be easily accessible. In fact, one of the key findings of the NBEP 2009 status and trends report was how difficult it is for managers to make statements of condition or describe trends. Strengthening watershed monitoring requires resources and commitment – both difficult items to secure in a recession economy. NBEP's efforts to build a common set of watershed indicators will be the foundation of work we can use to influence changes to increase the effectiveness of states' monitoring programs.

**Supporting Grassroots and Community Action:** The NBEP has used its strong connections with watershed groups and communities to build partnerships, secure funding from a variety of sources, and make advances in policy development and capacity building. One new way the program has been able to be more engaged in the development of state policy is through participation in targeted issue coalitions like those described below.

The NBEP has been a major partner in the Coalition for Water Security, a collaboration of several NGOS which is working to improve freshwater management in Rhode Island. The CWS policy agenda calls for protection of natural resources, management of water withdrawals, reductions in demand and permanent protection of watershed lands. The CWS produced a detailed issue paper on the topic and has crafted a legislative agenda that targets the goals defined in the issue paper. In Rhode Island, the Water Use and Efficiency Act became law in November 2009. This bill is designed to manage demand for potable water, reinvest in water supply infrastructure and preserve the health and ecological functioning of R.I.'s water resources. One part of the legislation requires the state to set targets to reduce water demand, take action to reduce water waste, and incorporate estimates of water availability into state and local plans. Along with other CWS member organizations, the NBEP is now conducting training on water conservation for key user groups like the R.I. Realtors Association.

The NBEP also participates the Coalition for Transportation Choices (CTC), which targets the creation of a 21<sup>st</sup> century transportation system that enhances our economy, make communities more livable, and offers transportation choices. Formed in early 2009, this coalition, composed of a broad range of organizations, has engaged decision makers in analysis of funding options for transportation systems.

The NBEP and partners have developed the first-ever comprehensive maps of water trails for kayaks and canoes on the rivers, lakes and salt waters of Narragansett Bay (Blueways Project) and its watershed. By enhancing public use and enjoyment of lesser-known waterways, the project will promote public understanding of the links between fresh and salt waters, and stewardship of the Bay's larger watershed ecosystem. Community and economic stakeholders are also engaged in this effort and the coalition is working on expanding the trail system throughout the bi-state watershed.

An additional aspect of the indicators development work targets increasing local organizations' abilities to implement work that supports the goals and objectives of the NBR plan. As part of that effort, we have secured funding from both US EPA and the R.I. Foundation to support watershed organizations to work with us on development of bi-state indicators. Selected tasks from the project will be completed by watershed partners like the Blackstone River Coalition, the Taunton River Watershed Alliance, the Woonasquatucket Watershed Council and the Wood Pawcatuck Watershed Association.

## **G. Accomplishments & Status of FY2010 and Ongoing Projects**

### **Bay Science & Monitoring**

**Narragansett Bay and Watershed Ecological Indicators Initiative:** The NBEP, working with the URI Coastal Institute and the RIBRWCT Environmental Monitoring Collaborative, organized and conducted an initial series of technical workshops over 2010-2011 to identify and refine key bay and watershed indicators and to develop a framework for an indicator report card. To date, 34 agencies and organizations are partners in this project. The first indicators to be examined, selected by a technical stakeholder process, were impervious cover, saltwater beach closures, and freshwater flows. This work is intended to improve and institutionalize the use of key indicators that will allow agencies and organizations to better report on condition and identify trends. NBEP and the Coastal Institute summarized background information on selected indicators, researched how other programs developed and presented the indicator and identified local experts on the indicator issue. Following an initial kickoff workshop in Spring 2010, a workshop for impervious cover, beach closures and freshwater flows were held by the end of the calendar year; a climate change indicators workshop was held in January 2011. Adopting an effective public reporting model used by the Kids Count program, NBEP and project partners developed what is now called Watershed Counts and presented a summary of the selected indicators (coastal and marine beaches, climate change, freshwater resources, impervious cover, terrestrial and freshwater invasives) to members of the R.I. General Assembly and others at a Legislative Day event held April 27, 2011. NBEP and partners have applied for federal and foundation grants to support and expand this work by greater engagement with watershed groups in both R.I. and Massachusetts. Workshop presentations and a summary report, as well as Watershed Counts materials, are posted on the web ([www.watershedcounts.org](http://www.watershedcounts.org)).

**Targeted Dissolved Oxygen Surveys – Upper Narragansett Bay:** In 2010, NBEP began its eleventh year of dissolved oxygen monitoring on Narragansett Bay. The 2010 surveys showed that, despite severe spring floods, the Bay experiences less severe hypoxic and suboxic watershed than in 2009. In May and June 2011, we launched the 12<sup>th</sup> seasonal survey series and have documented current hypoxic conditions in some areas of the Bay. Over the past decade, the DO surveys have led to significant improvements in scientific understanding of Narragansett Bay and greater awareness of nitrogen impacts on the Bay ecosystem. In combination with data from other more recent DO monitoring initiatives, such as fixed-site buoys, the NBEP surveys led to major changes in policy and management, including stricter regulation of wastewater treatment plant discharges and reclassification of more Bay waters as impaired for DO under state water quality standards. NBEP is continuing its monthly boat surveys of Upper Narragansett Bay and one of its most sensitive embayments, Greenwich Bay, with assistance from the R.I. Dept. of Environmental Management and Brown University. New high-tech monitoring technology has improved upon the methods of the overnight, large team surveys that the NBEP organized from 1999-2003, providing better data using fewer resources (for survey information, maps and photos, see <http://www.geo.brown.edu/georesearch/insomniacs/>).

**Nutrient Criteria Development:** NBEP has continued to support RIDEM in development of nutrient criteria. In June 2011, with assistance from Brown University's Don Pryor, NBEP revised its original Estuarine Numeric Nutrient Criteria Strategy document it had provided to RIDEM in June 2010 by adding the latest information on New England state efforts and new guidance info from US EPA. NBEP continues to work with the US EPA AED (Atlantic Ecology Division) to develop a guidance document that uses data from Narragansett Bay for numeric nutrient criteria development in estuarine waters. This

document will be useful to the state in its criteria development since the latest statistical procedures and exploratory methods will be used as examples. The report will be completed in September 2011. Related to this work, NBEP developed a proposal with URI's Dr. Candace Oviatt and Dr. Bethany Jenkins to the R.I. Sea Grant program to continue monitoring the nutrient concentrations along the Bay north-south gradient for a three year period, including addition of total nitrogen as well as dissolved inorganic nitrogen (and other nutrients). The preliminary proposal was peer reviewed and recommended for the 2nd round of applications. NBEP and URI researchers have since submitted a complete proposal that best encompasses the TN (total nitrogen) gradient while examining the potential alteration of the nitrogen cycle within the Bay in areas of severe hypoxia.

**Benthic Microbial Community Surveys in Narragansett Bay:** Work was completed by URI researchers in summer 2010 to gather data on the effects of hypoxia on nitrogen cycling in the Bay. More researchers are now finding that nitrogen cycling is altered under reducing (hypoxic) conditions, but little is understood about the role of sulfur-loving bacteria which seem to be involved. The NBEP is working with Dr Bethany Jenkins (URI) to examine nitrogen fixation enzyme expression in the benthic microbial community under hypoxic conditions. Such changes may cause a positive feedback loop to the system that further increases nitrogen loads once a system initiates hypoxic conditions, further worsening the excess N situation. Her initial results found significant expression of the nitrogen fixation enzyme gene in western Greenwich Bay. This work is part of the proposal to RISG mentioned in the above item to continue this work.

**Baseline Survey/Testing of Technology - Macroalgae Distributions in Narragansett Bay:**

The NBEP was able to secure funding from the NOAA Bay Window monitoring project to continue a baseline monitoring effort in 2010 to quantify and identify locations of high macroalgae concentrations in anticipation of decreased nitrogen loads expected by 2012 due to new strict nutrient limits on major WWTFs. The 2010 summer season surveys were cut short due to the loss of the use of a state airport corporation helicopter that has been used to conduct the surveys. However, it appears that the use for the 2011 season has been secured. This data is considered valuable in assessing the present response to significant nitrogen levels in the upper Bay and allow for comparison with response to reductions that are and will be occurring at major wastewater treatment plants along the Bay, with a 50% drop in point source loads by 2012-2013. The Rhode Island Airport Corporation, a state entity, provided a Bell helicopter and pilot to the NBEP and USEPA Atlantic Ecology Lab provided loan of a state of the art 14 MP digital SLR camera to acquire digital images of bay areas showing significant macroalgae growth.

In summer 2009, the NBEP, in collaboration with Dr. Giancarlo Cicchetti of the US EPA AED lab, flew 6 helicopter missions monthly on spring low tides acquiring over 1,000 high resolution oblique photos with GPS coordinates of the western shoreline of Narragansett Bay from the Slater Mill dam at the mouth of the Blackstone River to the mouth of Narragansett Bay. The NBEP has analyzed the photos for the type of macroalgae and categorized areas into density classes. GIS maps with this information have been developed. Four helicopter flights were flown in summer 2010. Dr. Carol Thornber of the University of Rhode Island is also a partner in the project, and receives a small amount of Bay Window funding to assist in ground-monitoring specific areas (Greenwich Bay shoreline) with species identification and biomass estimates. In summer 2011, we will expend the last of the Bay Window funding to support an NBEP intern who is working on the project by continuing work using a digital image analysis software program called Image-J. This program allows much more accurate assessments of macroalgae coverage and density. The NBEP has begun to develop biomass estimates for the various density classes of macroalgae in anticipation of projecting rough approximations of biomass for various

western shore areas of the Bay. Information and distribution maps from the project is at <http://www.nbep.org/bay-science-macro.html>

**NOAA Coastal Hypoxia Project:** NBEP Chief Scientist Chris Deacutis is one of the principal investigators, along with researchers from the University of Rhode Island, Brown University, University of Connecticut and Virginia Institute of Marine Science, in a 5-year project designed to develop a predictive hypoxia model linked to both a physical dynamic model and an ecological model that will be verified by field measurements. The project relies on the NBEP dissolved oxygen survey data for model verification for salinity, temperature, and oxygen. Summer 2010 was supposed to have been the final season of CHRP funding. The final outputs from the various researchers involved include the five years of DO survey data and GIS maps produced by the NBEP and Brown U., a physical ROMS hydrodynamics model for the upper half of Narragansett Bay, and a simplified ecological model that can project oxygen daily averages based on physical parameters and nutrient loading levels. Information on the hypoxia project is available at <http://www.cop.noaa.gov/stressors/pollution/current/chrp/default.aspx>. In Spring 2011, NBEP and project partners applied for additional funds to continue assessment work in the Bay and received that additional funding to support continuing work; NOAA has committed to continue some elements of the CHRP project.

**Technical Assistance to R.I. Dept. of Environmental Management:** NBEP's Chris Deacutis has been participating in and organizing a panel to review of biological impacts and issues associated with the permit renewal of the National Grid's Manchester St. power plant in Providence, R.I. In addition, Dr. Deacutis has been a technical resource to RIDEM's Office of Waste Management in reviewing sampling plans for use at a number of Navy Superfund sites located on the Bay. He has been providing technical comments and reports on issues regarding both projects.

**Biological Condition Gradient Project:** As a partner in the EPA-organized Biological Condition Gradient Project, the NBEP has been assisting the EPA Atlantic Ecology Division in preparing a pilot study report on applying the BCG approach in Greenwich Bay, an embayment of Narragansett Bay that has experienced significant pollution impacts. The final document is anticipated Summer 2011.

### **Community & Watershed Projects**

**Land & Water Conservation Summit Held March 2011:** This summit, which this year attracted over 350 conservation leaders from watershed groups, land trusts and municipal conservation commissions, as well as governmental representatives, is an annual event. The 2011 Summit was organized and hosted by the NBEP and the R.I. Land Trust Council. The NBEP provided staff and financial support and provided training presentations to participants. The 2011 Summit featured a keynote address "Connecting People to Place and Your Conservation Mission" by Steve Sloan from The Massachusetts Trustees of Reservations. Workshop offerings highlighted key watershed issues including stormwater, cesspool phase out, freshwater management, impervious cover TMDL, public access to waterways, complete streets, dams, beach monitoring and fish contamination. Additional workshops were directed to Land Trusts, providing tools for land preservation and stewardship as well as general organizational development and support. Several participants told the Summit organizers that this was the "best summit yet" – conference evaluations are being reviewed to gather specific feedback. Information on the Summit is at <http://www.landandwaterpartnership.org/summit.php>

**Coalition for Transportation Choices (CTC):** The condition of Narragansett Bay and its watershed is significantly affected by our current transportation choices. Runoff from roads, parking lots and homes is a major source of pollution to rivers, streams and the Bay. NBEP's goal is to protect and restore Narragansett Bay and its watershed, and this cannot be accomplished without sustainable transportation choices for the more than 2 million people living in the watershed. NBEP also promotes grassroots, stakeholder based decision making for the Bay watershed. The goal of the project is to build a diverse coalition of organizations and individuals to support sustainable transportation policies in Rhode Island. The network has two major goals. 1) To put healthy, sustainable and accessible transportation on the policy agenda and build momentum for implementation. 2) To build the capacity and influence of Rhode Island's grassroots environmental movement. The CTC has been able to secure grant funding from the Prince Charitable Trust, the Prospect Hill Foundation and the R.I. Foundation.

The CTC is working with the legislature and the governor on strategies for increasing funding for DOT, RIPTA and local municipalities transportation needs. The Transportation investment and Debt Reduction Act of 2011 has been introduced in the Senate and House and transportation funding is included in the Governor's budget. CTC is optimistic that a more sustainable funding strategy will emerge from the legislative dialog. "A Wake-up Call to Action: Rhode Island's Transportation Funding Crisis," was held in April 2011. The event was sponsored by RIDOT, CTC and the URI Transportation Center, with the public support of Governor Chafee, Senate President Teresa Paiva Weed, and House Speaker Gordon Fox. NBEP leads CTC's funding and communications committees, writing proposals and producing weekly e-blasts highlighting the many facets of sustainable transportation. The coalition is also partnering with the Nature Conservancy and AARP on a Complete Streets program – an effort to make streets more accessible to people, bikes and those with limited mobility. For more information on the CTC, see <http://www.rictc.org/>

**Building Grassroots Capacity:** NBEP helped organize the March 2011 forum, "2011 Nonprofit Collaboration and Shared Services Forum" hosted by the United Way, RIF, New Roots Providence and the Harvard Business School Association of Southern NE and led a discussion on collaborative fund raising. NBEP also participated on the grant review team for New Roots Providence.

**Blueways Trail System:** NBEP is a founding member of the RI Blueways Alliance (RIBA) and sees the project as a way to build public awareness and conservation of freshwater resources and strengthen watershed organizations. The mission of the Rhode Island Blueways Alliance is to develop a water trail network linking the watershed's rivers, lakes and ponds to Narragansett Bay and to use the trail to promote safety, conservation, recreation and economic development. In 2011, NBEP helped the Blueways Alliance convene watershed organizations to discuss a collaborative project to develop water trail maps. A concept paper has been developed and conversations have begun with the RIF to explore funding opportunities.

## **Communications**

**Narragansett Bay Journal:** NBEP has been producing the Narragansett Bay Journal (NBJ) since June 2002. The March 2011 electronic NBJ was distributed through Constant Contact in March 2011. This edition of the Journal focused on the issue of stormwater and included articles and commentary on the topic as well as a stormwater dictionary. The June 2011 was organized around the theme of recreational uses of the Narragansett Bay watershed. The September 2011 edition will be organized around the theme of green buildings and green infrastructure.

**Continuous Improvement of NBEP Website:** NBEP has continued to improve its program website, adding new content, making all NBEP reports available online, posting NBEP Quarterly Reports and using it to make the NBEP Status & Trends (S&T) Report available. We created and used wikis for status and trends report development, linked to the main website. NBEP has built staff capacity to better design and manage our web content and link it to expanded project work.

**Science Blog:** Also new is the NBEP science blog, *Simply Science*, that provides information on Bay science, projects and scientific work on Narragansett Bay and its watershed to the interested public. NBEP is interviewing researchers and helping them communicate to a broader audience what they are studying and why it is important to increasing our understanding the bay ecosystem.

### **Habitat Restoration/Technical Assistance**

**Lower Pawtuxet River Ecosystem Restoration:** NBEP continues to lead a community based process, providing technical assistance to the Pawtuxet River Authority (PRA) to restore the lower Pawtuxet River in order to provide spawning habitat for anadromous shad and herring; restore wetlands and water quality; and reduce property flooding. Working with stakeholders, the project team selected partial dam removal at Pawtuxet Falls as the preferred alternative for restoration. In early 2011 PRA received its state permit to remove the dam—the largest freshwater wetlands permit ever awarded by DEM. The project team has continued to engage in extensive community and stakeholder outreach and to provide technical assistance to a local NGO, the Pawtuxet River Authority (PRA). NBEP will continue to oversee project administration, outreach and engineering, and will work with our engineering contractor to oversee construction of the project. In 2010 we secured a new grant of \$75,000 from NRCS for engineering. Now we're working to prepare for construction by finalizing funding agreements with NRCS and RIDEM, developing construction specifications, and developing financing mechanisms. The project received the necessary state permits in June 2011 and we are on track to remove the dam and complete the project in early fall of 2011.

As manager of the project, NBEP will be required to devote significant effort to assisting our partner Pawtuxet River Authority in this phase of the work, including administration of three major funding grants (\$675,000 total); completion of regulatory and legal processes; and development, award, administration and oversight of engineering and construction contracts. In addition, we will continue to coordinate an interdisciplinary project management team, and conduct much of the stakeholder, community and legislative outreach necessary to complete the work, in partnership with Save The Bay, Pawtuxet Village Association, the Pawtuxet River Authority Watershed Council, and others. We are working with NRCS on a companion project to restore wetlands just upstream of the dam removal site, and are beginning restoration planning for other dams upstream. We are also supporting PRA on a related project to reconcile hydroelectric development with river ecosystem needs in the upper Pawtuxet River watershed.

**Roger Williams Park Ponds Restoration:** NBEP continues to provide technical assistance to City of Providence on a project to restore water quality and freshwater habitat, while improving urban environmental quality in and around a 100-acre ponds complex which is the centerpiece of Roger Williams Park, the City's largest and most important area of green space. In September 2010 the City was awarded \$424,000 to fund construction of stormwater BMPs and other water quality improvement measures at the Park. The City has committed more than \$300,000 in match toward the project, in cash and in-kind. NBEP will continue to coordinate the steering committee and provide technical assistance and guidance to the City of Providence. In 2011 we worked with the City to develop several important

contracts to move forward with implementation, including a large contract for design and engineering which is now out to bid. The RFP process for design and planning was awarded to Horsley & Witten Inc.; NBEP is now working closely with the contractor on developing the framework for the project master plan and stormwater abatement devices. NBEP is receiving a small amount of staff funding to continue working with community groups and other stakeholders to ensure extensive public input. Following completion of the master plan, we'll work with the City to begin final design, permitting and other preparations for BMP construction, planned for 2012. We are now working closely with EPA Atlantic Ecology Division to develop and implement water quality and fish tissue sampling plans for the Ponds.

**River Restoration Policy Development:** In 2011 the NBEP is co-leading a renewed and increased focus on statewide habitat restoration planning, led by the R.I. Habitat Restoration Team under the coordination of CRMC. We established and co-chair working group on river restoration and intend to participate in other working groups on specific habitat types. The river restoration group will be defining restoration priorities, needs and strategies, and will be working with regulatory agencies to examine restoration permitting issues, with the goal of improving the regulatory and funding environment for habitat restoration in Rhode Island.

**Fish Passage Technical Support:** NBEP was closely involved in planning, development and feasibility-phase funding of several significant projects to restore anadromous fish passage and spawning habitat to the major rivers of the Narragansett Bay Region. Today, several of these projects are under construction; NBEP continues to track progress and provide technical assistance on an as-needed basis, specifically:

- Ten Mile River, East Providence, R.I.: Construction on three large fish ladders is scheduled for 2010, led by U.S. ACOE and R.I. DEM, with funding by USDA NRCS, ACOE, RIDEM and NOAA under the American Recovery and Reinvestment Act (ARRA). Once completed, the project will open up over 700 acres of fisheries habitat.
- Blackstone River Fish Passage Project: This project focuses on constructing fish passage structures over the first four dams on the River – three of which hold FERC permits for hydropower generation. The USDA NRCS is providing funding for the first, second and fourth dam while the R.I. Department of Environmental Management will cover costs for the third dam. At the three NRCS-led projects, engineering and permitting are underway, and construction is scheduled for 2010-2011.
- Upper Pawcatuck River Fish Passage and Dam Removal: This project entails two dam removals and an engineered fish passage at 3 dams on the upper Pawcatuck River. The project will provide spawning habitat for river herring, American shad and American eel along the river and in Rhode Island's largest natural body of fresh water, Worden Pond, 1,043 acres in size. In early 2009 NBEP supported development of an application to NOAA under the American Recovery and Reinvestment Act which resulted in an award of \$3 million in economic stimulus funding for the upper Pawcatuck and Ten Mile River restoration projects. NBEP also provided technical support to WPWA related to a proposed hydro development at a downstream dam on the Pawcatuck River, Potter Hill Dam. NBEP provided comments to the municipality and to FERC on a draft license application.

**Restoration Advocacy:** NBEP continues to advocate for ecosystem restoration in the Narragansett Bay Region. For example, NBEP published an op-ed in the Providence Journal following the devastating March floods, explaining the contribution of floodplain development toward the problem and advocating for better management of floodplains and infrastructure to reduce flooding risks and increase coastal resiliency.

**R.I. Coastal and Estuarine Habitat Restoration Trust Fund:** The state estuarine habitat trust fund again provided \$250,000 from state oil spill and response funds for coastal habitat restoration projects. NBEP staff served on the project proposal review and selection committee and is involved in several of the projects that received trust fund moneys.

### **Bay & Watershed Planning & Priority Setting**

**Development of an Integrated Watershed Ecosystem Plan:** Having determined that the CCMP should be updated, the NBEP discussed the process with its Management Committee and key stakeholders. In the process, the R.I. Statewide Planning Program stated that it intended to update the R.I. State Guide Plan – a state policy overview document that guides state and local plans – and would like to work with the NBEP on development of an integrated watershed plan. At the same time, the R.I. Bays, Rivers & Watersheds Coordination Team, created to coordinate R.I. state agency actions on the Bay and watershed, indicated that it would be interested in collaborating on an integrated plan that would meet the planning requirements of all three parties.

The NBEP has continued to work with key agency and organization stakeholders to refine the current draft plan. Individual work sessions to gain input have been held with key stakeholders and will continue until August 2011. Following these sessions, a final draft will be completed and will be discussed and reviewed by stakeholders across the region in a series of regional workshops throughout the Narragansett Bay region. A final step is approval by the NBEP Management Committee, the RIBRWCT and by key stakeholders; this is anticipated in Fall 2011.

**NBEP Management Committee Involvement/Executive Committee:** The NBEP Management Committee (MC), is significantly involved in shaping the NBEP annual workplan. The committee reviewed and agreed upon priority actions within the plan and MC discussions were very useful in developing actions to address CCMP goals and objectives. Input from the recently-formed NBEP Policy Committee was also integrated into the workplan. The NBEP Executive Committee proposed adding a representative from Massachusetts Audubon to the committee; this was approved by the Management Committee and the MC welcomed Priscilla Chapman as a new member.

Management Committee meetings were held in September 2010, December 2010, April 2011, and June 2011 and are scheduled on a quarterly basis; meeting notices are widely distributed and the meetings are open to the public. Committee comments and suggestions, documented in publicly available meeting summaries, have been very valuable to the program, particularly in integrated plan direction and development.

The NBEP Executive Committee (EC), formally instituted in June 2010, is made up of representatives from EPA Region 1, URI Coastal Institute, RIDEM, and the R.I. Natural History Survey with one additional at-large NGO member drawn from Management Committee membership. The EC instituted a staff evaluation process with the goal of continual program improvement and staff development; evaluations were conducted in January 2011. In cooperation with the Management and Executive Committees, new and more detailed workplans and budget formats have been designed to create more transparency and provide key information on program operations. The NBEP has worked internally on reshaping the program's priorities and operations and will hold a staff/EC strategic planning retreat in September 2011 to check and set program directions.

**Development of the NBEP Policy Committee:** NBEP, working with EPA Region I, the R.I. Dept. of Environmental Management, and Mass. Executive Office of Energy and Environmental Affairs, has established a high-level Policy Committee to provide guidance to the NBEP and to serve as venue for issues that relate to the bi-state watershed. At the committee's initial meeting in March 2011, the members discussed the role of the committee and focused on common priorities for collaborative bi-state action. Common issues included stormwater management, habitat restoration, biodiversity, climate change impacts and monitoring. There was also a keen interest in models for regulations to control the use of fertilizers. The NBEP has geared several of its workplan activities to align with these priorities.

**Program Recognition:** In June 2011, the Southern New England Chapter of the American Fisheries Society selected the NBEP to receive their 2011 Outstanding Organization Award. The Chapter is recognizing the the NBEP for its efforts to protect and preserve Narragansett Bay and its watersheds. The award letter states that the NBEP "has been a leader in estuarine management" and notes that the Chapter especially recognizes "NBEP outstanding efforts to educate the public on the science and management of Narragansett Bay and its watersheds."

## H. Support for Clean Water Act Programs

**Monitoring:** Since 1999, the NBEP has organized and implemented dissolved oxygen surveys of the Upper and Mid-bay. The program undertook this monitoring because, at the time, the state did not monitor DO levels in the Bay on a consistent basis and there was evidence that hypoxic and anoxic events were occurring. The state was also poised to embark on new management measures to reduce nitrogen loading from the major WWTFs that discharge to the Bay. Assessing the problem and evaluating the management response were two good reasons for the NBEP to initiate DO surveys. Since that time, the data developed by the NBEP with RIDEM assistance and analyzed/mapped by project partner Brown University, has proven valuable to the state's management efforts. It was a key element in the state's passage of legislation to reduce nitrogen loads to the Bay by 50%.

As part of the program's work in assessing the impacts of excessive nitrogen loadings, the NBEP, in partnership with the EPA Atlantic Ecology Division lab, continues implementing a monitoring project to assess the extent of macroalgae in the Bay in order to determine if macroalgae concentrations are an effective indicator for nutrient impacts. With the use of the R.I. Airport Corporation's helicopter, the project partners continue to secure high resolution images of the Bay's near shore areas. The NBEP is analyzing the data and converting it to GIS data layers for use in indicator development and has developed an open source software package to better assess density and coverage of macroalgae.

**Water Quality Standards:** RIDEM has requested that the NBEP assist in development of nutrient criteria for the Bay; this requested action is reflected in the FY2011 workplan. In 2010, the program provided a report to RIDEM on nutrient criteria efforts in other New England states and subsequently updated that report; in this workplan, the NBEP has committed to further assisting RIDEM in development of nutrient criteria. NBEP involvement in the EPA ORD pilot Biological Condition Gradient project will inform this work. The FY2011 workplan reflects NBEP commitment to continue supporting the state on nutrient criteria development.

**Environmental Reporting:** The NBEP Bay and Watershed Status & Trends Report supports the state water quality program by reviewing and analyzing state water quality data which was presented in this public report. The water quality data was a key component of the report and was included in the public summary report distributed to decision-makers and the public in October 2009. The data is also included in the NBEP online status and trends website. The Watershed Counts initiative builds on and updates the Current of Change condition data and cumulative data over a 5-year period will be used as the basis for the 2014 State of Estuary Conference that the NBEP has committed to producing.

**Freshwater Flow:** The NBEP is a member of the Coalition for Water Security – a group of organizations that have developed a policy agenda for better management of the R.I.'s water resources. The coalition has been instrumental in advocacy for stream flow standards to protect stream and river ecology. Legislation based on CWS priorities became state law in November 2009. The legislation, the R.I. Water Use and Efficiency Act, is intended to manage demand for potable water, reinvest in water supply infrastructure and preserve the health and ecological functioning of the state's water resources. Information is available at <http://www.coalitionforwatersecurity.org/efficiency.html>. In FY2011, the NBEP continues to participate in and support this coalition.

**NPDES Permitting:** RIDEM requested that NBEP participate and organize a technical committee to assess biological impacts of the Manchester Street power plant discharge in Providence, R.I. Chief Scientist Chris Deacutis provides technical review of permit documents and studies and works with this

work group to provide input into the permit development.

**Hazardous Waste/Superfund:** RIDEM has requested that NBEP participate in work reviewing the Peterson Puritan Company Superfund site in Cumberland, R.I. Chief Scientist Chris Deacutis will serve as an advisor on ecological risk to RIDEM’s assessment and cleanup of the site. Dr. Deacutis is already serving a similar function on RIDEM’s work on U.S. Navy hazardous waste sites affecting Bay waters and benthos off Aquidneck Island.

## I. FY2011 NBEP Workplan Budget Information

Program Categories	Category Costs
Personnel	\$358,438
Fringe	\$185,676
Indirect	\$102,639
Other/operating/contractual	\$ 51,225
<b>TOTAL</b>	<b>\$697,978</b>

Note that Fringe and Indirect costs constitute about 45% of staff costs. The actual FY2011 budget allocation that the NBEP will receive through EPA will be \$598,800 with an additional \$25,000 added for the Climate Ready Estuaries (CRE) grant and, bringing total Section 320 funds to \$623,800 (NBEP FY2011 request). The remaining \$74,178 in the total budget is derived from other sources such as state, federal, and foundation grants.

Operating costs total \$51,225, allocated to costs such as printing/production, supplies, equipment, travel and mileage costs, office support, and miscellaneous expenses as well as contracting expenses related to the CRE grant. NBEP staff: 5 FTEs plus about 0.4 FTE intern assistance.

ESTIMATED STAFF RESOURCE ALLOCATION BY PROGRAM OPERATIONAL ELEMENTS	FTEs ALLOCATED	PERCENT OF FTEs
Section A – Ecosystem Science	2.115	39.0%
Section B – Watershed Framework	.68	12.7%
Section C – Habitat Restoration	1.2	22.2%
Section D - Communications	.765	14.2%
Section E – Program Mgmt./Admin.	.64	11.9%
<b>Totals</b>	<b>5.4</b>	<b>100%</b>

## J. NBEP National/Regional Travel Report – FY2010 & Projected FY2011

Date	Event	Place	NBEP staff/others	Travel Costs
June 27-29, 2011	National Conference on Engineering & Ecohydrology for Fish Passage	Amherst, MA	T. Ardito	\$460
February 28 - 3 , 2011	EPA NEP Spring 2010 National Meeting	Washington, DC	R. Ribb	\$1065
November 5-7 , 2010	EPA NEP Fall 2010 National Tech Transfer Meeting	Punta Gorda, FL	R. Ribb, C. Deacutis	\$950
October 28-30, 2010	New England Estuarine Research Society Conference	Provincetown, MA	C. Deacutis	\$304
November 2-5, 2010	RAE Habitat National Conference	Galveston, TX	T. Ardito	\$868

**FY2009 TOTAL \$ 3,647**

**PROJECTED FY2011  
NATIONAL/REGIONAL  
TRAVEL**

Date	Event	Place	NBEP staff/others	Travel Costs
October 16-20 2011	NEP Directors Meeting	Santa Monica, CA	R. Ribb	\$1200
November 2011	Coastal & Estuarine Research Federation Conference	Daytona Beach, FL	C. Deacutis	\$1000
March 2012	EPA NEP National Meeting	Arlington, VA	R. Ribb	\$1100
May 2012	River Management Society National Meeting	Asheville, NC	M. Kerr	\$900

**Estimated TOTAL \$ 4,300**

**Attachment A. FY2011 NBEP Workplan Actions** (grant period: July 1, 2011 – June 30, 2012; for NBR Reference, see plan goals and objectives on page 8)

**Workplan Element A: Develop and apply scientific information to manage the Narragansett Bay ecosystem in R.I. and Mass.**

Workplan Element A Outcomes:

A.1. Synthesize, analyze and interpret Bay ecosystem data; support use of NBEP-developed Bay ecosystem indicators

- Consensus on Bay ecosystem ecological indicators forms basis for ecosystem monitoring by scientists and managers. An eventual outcome could be the widespread use of these indicators as common measurements of condition and acceptance by state agencies as the means by which states will report on condition. Indicators will shape monitoring programs and provide a rationale for increased capacity.
- Better understanding of the causes and impacts of hypoxia on Bay ecosystem and baseline information development to track changes due to management responses (nutrient permit limits).
- Increased information on status of eelgrass growth in Narragansett Bay that could provide basis for eelgrass as Bay health indicator
- Increased understanding of nitrogen cycling in the Bay system that could have management implications

A.2. Collect needed data based on priorities and level of program or partner resources available

- Improved understanding of Bay and watershed resources quality is applied to management decisions and results in improved conditions.

A.3. Convene technical stakeholders to communicate state of science and management and work toward solutions for ecosystem problems

- Environmental management is informed by latest scientific and technical information
- Emerging consensus on ecosystem priorities builds support for management actions

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
<b><i>A.1. Synthesize, analyze and interpret Bay ecosystem data; support the development and use of effective Bay ecosystem indicators</i></b>		
<p><b><u>PRIORITY ACTION</u></b>  <b>A.1-1. Improvements/ Development of Ecological Indicators for Bay and Watershed – Next Tier Indicators</b>   <b>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 4-4.4, 6-6.5</b></p>	<p>In partnership with URI CI, RIBRWCT/EMC, develop shared ecological indicators for the Bay and watershed. Work with technical stakeholders to select next tier indicators. Technical reports, meeting documents will be developed and posted online. Technical workshops on the next tier of indicators will be initiated toward the end of FY2010 and into FY2011. This project will expand the work into Massachusetts and engage key MA stakeholders. Indicators will be presented to decision makers and the public on Earth Day 2012. The work on indicators is providing a foundation for the next NBEP Status and Trends report, slated for completion in 2014 (5 yr. cycle). Indicator development and refinement work will likely continue over the next two fiscal years. Additional funds to support this work are being sought from US EPA and the R.I. Foundation.</p>	<p>M. Kerr, L. Lambert; staff support, funding for workshops, meetings, etc. Over grant period <b>[FTE allocation: MK - .45; LL - .34]</b> task cost: \$62,539</p>

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
<p><b><u>PRIORITY ACTION</u></b>  <b>A.1-2. Nutrient Criteria Development</b></p> <p><i>NBR Plan Reference: 2–2.5</i></p>	<p>This effort will support RIDEM’s development of numeric nutrient criteria for estuarine waters. NBEP chief scientist will coordinate a nutrients sub-group of the RIBRWCT SAC and other technical stakeholders with a goal of building consensus about an appropriate approach toward nutrient criteria development for the state. The group would shape what would be included in a report that discusses such an approach due to be completed by the end of calendar year 2011. The report will include information on appropriate approaches, assessment of additional data, modeling, or monitoring needs if any, and a framework for addressing those needs.</p>	<p><i>C. Deacutis (in collaboration with RIDEM; report Dec 2011)</i>  <b>[FTE allocation: 0.14]</b>  <i>task cost: \$24,851</i></p>
<p><b>A.1-3. EPA Narragansett Bay Nutrient Criteria Report</b></p> <p><i>NBR Plan Reference: 2–2.5</i></p>	<p>NBEP will collaborate with EPA AED on the development of EPA report using Narragansett Bay data to be produced by Sept. 2011 (EPA schedule). EPA AED is using Narragansett Bay data as a case study that will be used to support development of nutrient criteria across the U.S. NBEP staff are securing and providing Bay data to be used as a case study for this effort. The resulting results of EPA’s case study analysis will be presented by NBEP to the RIBRWCT Aquatic Science Committee (ASC) in November 2011. This analysis will also support RIDEM efforts in nutrient criteria development.</p>	<p><i>C. Deacutis; in collaboration with USEPA AED; guidance due Sept 2011</i>  <b>[FTE allocation: 0.1]</b>  <i>task cost: \$17,751</i></p>
<p><b>NEW A.1-4. Comparison of Coastal Waters Assessment – R.I. and Massachusetts</b></p> <p><i>NBR Plan Reference: 2-2.5</i></p>	<p>This project responds to a priority identified by the NBEP Policy Committee to better coordinate coastal water quality assessments. Working with counterparts in Massachusetts, NBEP will compare monitoring methodologies by both states to identify similarities, inconsistencies, and data gaps. The aim is to find areas of potential collaboration, resulting in greater efficiencies as well as shared data.</p>	<p><i>C. Deacutis (report by Jan. 2012)</i>  <b>[FTE allocation: 0.1]</b>  <i>task cost: \$17,751</i></p>
<p><b>NEW A.1-5. RI Sea Grant Proposal – Expansion of Efforts to Examine Eutrophication Impacts on Narragansett Bay</b></p> <p><i>NBR Plan Reference: 2–2.5</i></p>	<p>This proposal project, if funded, will continue monitoring of nutrients, productivity and dissolve oxygen in Narragansett Bay previously supported by the NOAA CHRP project. It will provide additional data on total nitrogen in the Bay and will support state efforts on development of nutrient criteria. NBEP staff will help plan the project and assist with sampling work.</p>	<p><i>C. Deacutis – lead for NBEP; with URI; schedule dependent on funding</i>  <b>[FTE allocation: 0.1]</b>  <i>task cost: \$17,751</i></p>
<p><b><u>A.1. Outputs – Collect needed data based on priorities and level of program or partner resources available</u></b></p> <ul style="list-style-type: none"> <li>• Continued work in convening stakeholders to vet indicator development; expand number of indicators as needed; report on indicators developed</li> <li>• EPA AED guidance report for states on development of estuarine nutrient criteria using Narragansett Bay as a case study</li> <li>• Report on comparison of R.I. and Mass. coastal waters assessment programs with identification of data gaps</li> <li>• Continued technical assistance to RIDEM in develop for RI nutrient criteria</li> <li>• If funded by RISG, additional monitoring activities and data to support continued assessment of eutrophication impacts on Narragansett Bay</li> <li>• New 2011 aerial photographs and GIS data layers regarding current coverage and density of Bay eelgrass communities</li> </ul>		

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
<ul style="list-style-type: none"> <li>• Written recommendations for improvements to monitoring and assessment efforts in the Bay</li> <li>• Workshop series with key bi-state stakeholder on development of three next tier indicators</li> <li>• Earth Day event at the R.I. State House where the indicators Watershed Counts report will be presented to decision makers. A parallel event in Mass. will be offered.</li> </ul>		
<p><b>A.2. Collect data needed to assess condition and assist in the development of future indicators</b></p>		
<p><b><u>PRIORITY ACTION</u></b>  <b>A.2-1. Water Quality Monitoring &amp; Assessment</b>   <b>NBR Plan Reference: 2–2.5</b></p>	<p>Targeted monthly seasonal dissolved oxygen field surveys; equipment and data management; mapping (Brown Univ. work); partnership with RIDEM. Work with partners to analyze and summarize results. Assist Brown Univ. in coordinating and actively participating in ~ 5 (weather dependent) field summer surveys of dissolved oxygen and other key physical parameters. NBEP will cover the West Passage, lower East Passage (near Prudence Island T wharf) and Greenwich Bay stations (~ 30 stations) for each survey. Data will be downloaded and provided to Brown University for processing and DO distribution map generation.</p>	<p><i>C. Deacutis; Brown U. co-member, support from L. Lambert (June –Sept 2011)</i>  <b>[FTE allocation: CD - 0.18; LL – 0.05; intern - .1]</b>  <i>task cost: \$36,114</i></p>
<p><b><u>PRIORITY ACTION</u></b>  <b>A.2-2. Water Quality Monitoring &amp; Assessment - Macroalgae</b>   <b>NBR Plan Reference: 2–2.5</b></p>	<p>This project will help assess changes in the Bay resulting from nutrient reduction efforts. Five monthly early-through late summer surveys (weather dependent) of macroalgae distribution in the Providence &amp; Seekonk Rivers and the western shore of Narragansett Bay from helicopter platform (RIAC as partner). This work will include substantial ground-truthing for macroalgae ID and biomass estimates at ~ 10 sites. High resolution photos of nearshore areas will be processed through an innovative use of software (Image-J) that better assesses coverage and density and provides a possible prototype for a cost-effective remote sensing indicator. Distribution maps will be made available through the NBEP web site. Ground truthing and algae identification with NBEP intern. This field work is part of an investigation into predictive indicators of hypoxia and measurements of impacts.</p>	<p>C. Deacutis, equipment + assistance from EPA AED, support from L. Lambert (July- Oct 2011)  <b>[FTE allocation: 0.14; LL – 0.05; intern - .1]</b>  <i>task cost: \$29,013</i></p>
<p><b><u>PRIORITY ACTION</u></b>  <b>NEW A.2-3 Bay &amp; Watershed Science Priorities Workshop</b>   <b>NBR Plan Reference: 1–1.5, 2–2.5, 3 – 3.4, 4 – 4.4, 6 – 6.5</b></p>	<p>The NBEP, acting on a suggestion from RIDEM, will coordinate with R.I. Sea Grant, the RIBRWCT SAC, and other existing efforts/partners to develop a concept for an inclusive Bay Science Priorities workshop to bring together scientists, managers and conservationists to review recent research and identify and recommend scientific actions and research priorities to address science needs for key Bay and watershed issues. The NBEP will identify partners and target resources to implement the workshop.</p>	<p><i>C. Deacutis/R. Ribb – target date Spring 2012</i>  <b>[FTE allocation: CD – 0.090; RR – 0.025]</b> <i>task cost: \$20,272</i></p>

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
<p><b>NEW A.2-4. Nutrient/Hypoxia Relationship – Microbial Communities Study</b></p> <p><i>NBR Plan Reference: 2–2.5</i></p>	<p>URI researcher B. Jenkins has shown that unusual and large changes in microbial enzymatic processes are occurring in western Greenwich bay during hypoxic events, which may significantly affect nutrient processing rates in this area. Such unexpected changes associated with hypoxic conditions are critical to understand in order to fully project changes due to decreases in the projected nutrient load to Narragansett Bay. This grant-funded project will provide a study of hypoxia-related changes to Bay microbial communities to examine how nitrogen changes under hypoxic conditions. Previous work on nitrogen fixation suggests that under low oxygen conditions, bacteria may add to the nitrogen load by nitrogen fixation.</p>	<p><i>C. Deacutis – over grant project period</i>  <b>[FTE allocation: 0.05]</b>  <i>task cost: \$8,876</i></p>
<p><b><u>A.2. Outputs – Collect needed data based on priorities and level of program or partner resources available</u></b></p> <ul style="list-style-type: none"> <li>• ~ 5 D.O. summer surveys. of ~ 30 stations – preliminary dates are chosen late spring each year after discussion with Brown Univ researchers but are linked to tidal state – 4 dates are chosen late neap tide and 1 is at spring tide period (dependent upon weather).</li> <li>• NBEP will provide brief interpretation where the data is adequate and NBEP has the technical capability to process the raw data. Where the data are inadequate (# years etc.) for defensible interpretation, GIS krieged maps of concentrations / densities will be provided but statements as to trends etc will not be possible.</li> <li>• Macroalgae distribution monitoring (~ 5 surveys dependent upon weather and tides - Summer months 2011) Dates are chosen to occur during late morning / early afternoon low spring tides to achieve maximum visibility of the intertidal zone. Dates are chosen each year in late spring after consultation with RIAC pilot.</li> <li>• Summary of data and findings from microbial communities study regarding nitrogen fixation</li> <li>• Annual data report on monitoring results posted on Insomniac site with link on NBEP web site and shared with partners; survey data in accessible format. Provide brief interpretation where the data is adequate and NBEP has the technical capability to process the raw data. Where the data are inadequate (# years etc.) for defensible interpretation, GIS krieged maps of concentrations / densities will be provided. Reports may require technical assistance from Brown which maintains the raw data database.</li> <li>• Macroalgae baseline density maps (JPG) and project report posted on NBEP web site for year of monitoring (December 2011). Provide brief interpretation in report form where the data is adequate and NBEP has the technical capability to process the raw data. Where the data are inadequate (# years etc.) for defensible interpretation, GIS maps of densities will be provided).</li> <li>• Report and meeting summary on results of Bay Science Priorities Workshop</li> </ul>		

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
<b><i>A.3. Convene technical stakeholders to communicate state of science and management and work toward solutions for ecosystem problems</i></b>		
<b>A.3-1. Support Governmental Technical Reviews to Protect Ecosystem Resources</b>  <b><i>NBR Plan Reference: 2–2.5</i></b>	<p>a. Continue to provide technical review and comment to RIDEM Site Remediation Program and assist in in-bay assessments of condition of intertidal/subtidal areas adjacent to Navy hazardous waste sites for use in remediation plans upon request – dependent on timeline provided by RIDEM; <b>b.</b> C. Deacutis is overseeing the biological impact review of the renewal of National Grid’s Manchester St. Power Plant at the request of RIDEM; reviewing biological study plans, model study designs and impingement technology review, organizing advisory panel; summarizing recommendations and comments. Meet with RIDEM OWR tech staff lead permit writer ~ biweekly and provide help as requested (permit process is projected to continue over FY2011; RIDEM provides schedule for meetings.</p>	<p><i>C. Deacutis/ over next 12 months; dependent on RIDEM schedule</i>  <b>[FTE allocation: 0.1]</b>  <i>task cost: \$17,751</i></p>
<b><i>A.3. Outputs - Convene technical stakeholders to communicate state of science and management and work toward solutions for ecosystem problems</i></b> <ul style="list-style-type: none"> <li>• NBEP Reviews/comments to RIDEM regarding biological aspects of Manchester St. Plan permitting process; participation in permitting meetings; improved permitting processes with better defined data requirements for applicants</li> <li>• NBEP Reviews/comments to RIDEM regarding Bay conditions related to Navy hazardous waste sites; participation in permitting meetings</li> </ul>		

***Workplan Element B: Establish a regional framework for collaboration throughout the Narragansett Bay Region (R.I. and Massachusetts) to address environmental issues at watershed scales.***

*Workplan Element B Outcomes:*

*Objective B.1. Engage the public and Bay/watershed stakeholders in developing agreed upon goals and objectives that will guide watershed action*

- Bay stakeholders embrace goals and objectives articulated in integrated plan and provide support for management priorities
- Goals and objectives become integrated into agency and organization annual implementation workplans

*Objective B.2. Establish collaborative institutional networks that implement solutions for ecosystem problems*

- Rhode Island successfully implements water management strategies – led by the WRB Allocation Committee and supported by flow analysis. Lessons are shared statewide.
- Sustainable transportation issues are elevated on the policy agenda, including funding for RIPTA; build momentum for implementation;
- Increase grassroots organizations' ability to influence key policy decisions on water management, transportation and other policies

*Objective B.3. Provide technical assistance to build capacity of conservation organizations throughout the Narragansett Bay Region*

- A network of strong grassroots conservation partners advocate for watershed issues throughout the NB Region. Organizations have strong connections to their communities, supportive members and volunteers and generous donors supporting their conservation advocacy.
- The Blueway trail links rivers throughout the Narragansett Bay region to the Bay. Recreational use of the rivers increases, resulting in increased concern for conservation throughout the watershed.

<b><u>Project/Activity Name</u></b>	<b><u>Project/Activity Description</u></b>	<b><u>Staff assigned/schedule</u></b>
<b><i>B.1. Engage the public and Bay/watershed stakeholders in developing agreed upon goals and objectives that will guide watershed action</i></b>		
<b><u>PRIORITY ACTION</u></b> <b>B.1-1. Completion of Narragansett Bay Region Plan with Goal, Objectives, Recommended Actions</b>  <i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 4-4.4, 6- 6.5</i>	Completion of Narragansett Bay Region Plan document in collaboration with RI SPP, RIBRWCT, MADEP and bi-state watershed stakeholders; continued implementation of public and stakeholder engagement strategies to guide plan development; implementation of plan communications strategy. Design and distribute project materials. The NBR Plan will serve as a revision for the 1992 CCMP.	<i>R. Ribb – lead/ all NBEP staff contributing via: writing plan sections; stakeholder processes; conducting outreach for the plan rollout; final plan target – late summer 2011</i> <b>[FTE allocation: 0.30]</b> <i>task cost: \$51,549</i>
<b><i>B.1. Outputs – Engage the public and Bay/watershed stakeholders in developing agreed upon goals and objectives that will guide watershed action</i></b> <ul style="list-style-type: none"> <li>• Developed Bay region vision, goals, objectives and recommended actions summarized based on existing ecosystem and water-dependent economic goals, newly-identified goals, and public and stakeholder input on goals; coordination and collaboration with ongoing planning initiatives in R.I. and Mass.; in collaboration with NBR Plan workgroup and advisory committee (Summer 2011)</li> <li>• Public outreach event to celebrate and recognize plan completion (September 2011)</li> </ul>		
<b><i>B.2. Establish collaborative institutional networks that implement solutions for ecosystem problems</i></b>		
<b>B.2-1. Building a Sustainable Framework for Managing Freshwater Resources</b>  <i>NBR Plan Reference: 2-2.3, 2-2.5</i>	Continued participation in the work of the Coalition for Water Security, advocating for effective water management in R.I. NBEP and the Coalition for Water Security will work with the R.I. Water Resources Board as regulations are developed in response to the 2009 Water Use and Efficiency Act. The Coalition no longer pursues grant funding.	<i>M. Kerr - lead/ ongoing (over grant period)</i> <b>[FTE allocation: 0.05]</b> <i>task cost: \$4,900</i>
<b>B.2-2. Creating Sustainable Transportation Policies for the Bay Watershed</b>  <i>NBR Plan Reference: 1-1.1, 1-1.3, 1-1.5, 2-2.5, 3-3.4</i>	With partner resources and foundation funding, continued work with the Coalition for Transportation Choices to develop and implement sustainable transportation policies as a critical element of an integrated green infrastructure approach for the Bay watershed. NBEP's interest in this effort is on the ecosystem impacts of transportation choices. Implementation of the CTC platform: reduce ecosystem impacts of transportation; expand R.I.'s transit system, promote and enable walkable/bikable communities; establish sustainable funding for these goals. NBEP provides grant writing and communications support, and technical research on related issues	<i>M. Kerr – lead (over grant period)</i> <b>[FTE allocation: 0.075]</b> <i>task cost: \$7,349</i>

<b><u>Project/Activity Name</u></b>	<b><u>Project/Activity Description</u></b>	<b><u>Staff assigned/schedule</u></b>
<p><b>B.2-3. Strengthen/build stakeholder networks to address ecosystem problems</b></p> <p><i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 6-06.5</i></p>	<p>Determine needs and explore new partnerships for strengthening grass-roots watershed management. Capture and share lessons local experiences and from National Estuary Programs lessons learned. In particular, the NBEP will focus on collaborations with municipalities and DOTs on efforts to reduce ecosystem impacts of stormwater. NBEP will draw on the resources of EPA and the National Estuary Program to secure training and scientific expertise that will add value to stormwater efforts.</p>	<p><i>M. Kerr – lead (over grant period)</i>  <b>[FTE allocation: 0.05]</b>  <i>task cost: \$4,900</i></p>
<p><b>B.2. – 4 NEW Support RI Nonpoint Source Pollution program bi-state watershed plan – Seekonk Mass.</b></p> <p><b>NBR Plan Reference</b></p>	<p>Based on NBEP Policy Committee identification of stormwater as a priority for bi-state collaboration, NBEP will work with the R.I. DEM Nonpoint Source Program and the Towns of Seekonk, Mass., and E. Providence, R.I. to determine if there is a role the program can play in assisting local control of stormwater through MS4 permitting. One option is to determine if the Long Creek watershed example in Casco Bay, ME, would be useful to emulate in Seekonk/E. Providence.</p>	<p><i>T. Ardito, R. Ribb – can shift to this project with completion of Pawtuxet and NBR plan. [FTE allocation: undetermined]</i></p>
<p><b><u>B.2. Outputs – Establish collaborative institutional networks that implement solutions</u></b></p> <p><i><u>Sustainable Framework for Managing Freshwater Resources outputs (NBEP plus partners)</u></i></p> <ul style="list-style-type: none"> <li>• Technical input to the WRB on water allocation regulations</li> <li>• Lead water conservation training session for realtors through R.I. Association of Realtors; additional classes scheduled at request of RIRA</li> </ul> <p><i><u>Sustainable Transportation Policies for the Bay Watershed (NBEP plus partners)</u></i></p> <ul style="list-style-type: none"> <li>• Expand CTC membership to 45 organizations</li> <li>• Provide technical support and information to support Coalition policy development</li> <li>• Pursue and secure funding resources to support CTC activities</li> <li>• With Sierra Club and AARP, implement Complete Streets programs in at least 3 RI communities</li> <li>• Developed and maintained CTC website – with coalition partners</li> <li>• Technical assistance to R.I. Nonpoint Source Program in Seekonk/E. Providence watershed</li> </ul> <p><i><u>Strengthen stakeholder networks</u></i></p> <ul style="list-style-type: none"> <li>• Report on shared lessons from both coalition efforts; outreach efforts to disseminate lessons.</li> </ul>		

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
<b><i>B.3. Provide technical assistance and information to build capacity of conservation organizations throughout the Narragansett Bay Region</i></b>		
<b>B.3.-1. Strengthen the Business and Technical Capabilities of Conservation Organizations to Build Implementation Capacity</b>  <i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 6-06.5</i>	In partnership with the R.I. Land Trust Alliance, New Roots Providence, Brown Swearer Center and others, explore strategies to build NGO capacity and foster collaboration to more effectively implement conservation projects. Identify and provide needed training, support and resources. Work with stakeholders to design and provide at least two workshops for grassroots conservation organizations on topics identified through outreach to local groups. Organize agenda, venue, speakers, materials and other logistical aspects of workshops.	<i>M. Kerr - lead/ ongoing (over grant period)</i> <b>[FTE allocation: 0.05]</b> <i>task cost: \$4,900</i>
<b>B.3.-2. Production of the Land &amp; Water Summit 2012</b>  <i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 6-06.5</i>	Develop and produce, with partners, the 11 <sup>th</sup> annual Land & Water Summit to provide training and networking opportunities for conservation organizations. Manage registration, logistics, publicity and administration for Summit and workshops. NBEP provides staff and funding resources.	<i>M. Kerr – lead/ L. Lambert (Summit March 2012)</i> <b>[FTE allocation: MK – 0.075; LL - 0.025]</b> <i>task cost: \$8,705</i>
<b>B.3.-3. Building and Promoting Recreational Connections to Narragansett Bay Resources</b>  <i>NBR Plan Reference: 1-1.5</i>	Ongoing NBEP effort to support and organize work of the RI Blueways Alliance to develop a water trail network (Blueways) linking rivers, lakes, and ponds to the Bay; promote trail use and expand to include land trails in future; work in partnership with watershed organizations to identify and develop paddle access sites along rivers and the bay as part of the Blueway system. This effort helps increase understanding of, and advocacy for, protection of aquatic resources including habitat and water quality. NBEP will link this effort with development of a rivers restoration policy that will better protect and ensure access to these unique watershed resources.	<i>M. Kerr – lead/ ongoing (over grant period)</i> <b>[FTE allocation: 0.05]</b> <i>task cost: \$4,900</i>
<b>NEW B.3.-4. National Estuary Program Climate Ready Estuaries Application</b> <i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 6-06.5</i>	EPA Headquarters has made available limited funding for CRE grants at this time. NBEP has been discussing possible projects and reached the conclusion that, given that EPA funding would only total \$25-30,000, it would make sense to see if we could bring this funding to existing or new partnership projects. Some possibilities: working with the Mass. Rivers Alliance and the Manomet Center on watershed climate change monitoring (NBEP is on Manonet project steering committee); extending existing proposed infrastructure vulnerability assessments in R.I. to the Mt. Hope Bay shoreline. No agreements have yet been made on partnering with these projects but NBEP is discussing the concept with project managers. EPA sources say this funding will not be available until mid- to late- June 2011.	<i>R. Ribb; if funded, project completed by summer 2012</i> <b>[If funded - FTE allocation: .005]</b> <i>Task cost: \$859</i>

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
	<p data-bbox="184 237 1822 261"><b><i><u>B.3. Outputs – Provide technical assistance and information to build capacity of conservation organizations throughout the Narragansett Bay Region</u></i></b></p> <ul data-bbox="233 277 1839 532" style="list-style-type: none"> <li data-bbox="233 277 1839 337">● Shared lessons learned from the 5-year Infrastructure Collaborative project with partners through online resources and training; share strategies (print articles, presentations, etc.) to increase business efficiency of conservation NGOs</li> <li data-bbox="233 350 825 375">● Production of Land &amp; Water Summit (March 2012)</li> <li data-bbox="233 388 884 412">● Production of Paddle 2012 celebration (June/July 2012)</li> <li data-bbox="233 425 1171 449">● Two workshops produced for strengthening capacity of conservation organizations</li> <li data-bbox="233 462 1297 487">● At least 2 additional paddle trail maps produced in collaboration with watershed organizations</li> <li data-bbox="233 500 1671 524">● Application for potential Climate Ready Estuaries project; project implementation (assessments, priority sites) if funding awarded</li> </ul>	

**Workplan Element C: Advance the restoration and protection of habitats and natural areas throughout the Narragansett Bay ecosystem**

Workplan Element C Outcomes:

- C.1. Develop and manage collaborative habitat restoration projects by providing technical assistance to communities and local organizations
- Improved capacity of organizations engaged in restoration actions on the Blackstone, Ten Mile, Wood-Pawcatuck and Pawtuxet Rivers
  - Restoration of anadromous fisheries providing ecosystem-wide benefits
  - Improved urban environment; improved river ecosystems and water quality; development of innovative approaches integrating ecosystem restoration with TMDL implementation
- C.2. Support planning and funding at state, regional and national levels to accomplish habitat restoration for the Bay and watershed
- Improved policies to support habitat restoration and protection and connections to other ecosystem goals;

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
<b><i>C.1. Develop and manage collaborative habitat restoration projects by providing technical assistance to communities and local organizations</i></b>		
<b><u>PRIORITY ACTION</u></b> <b>C.1.-1. Pawtuxet River Fish Passage Project</b>  <b><i>NBR Plan Reference: 3-3.1, 3-3.2, 3-3.4, 3-3.5</i></b>	Continue project/permitting oversight and public outreach actions on Pawtuxet River fish passage project. Construction will initiate July 2011.	<i>T. Ardito (completion expected October 2011)</i> <b>[FTE allocation: 0.2]</b> <i>task cost: \$27,239</i>
<b><u>PRIORITY ACTION</u></b> <b>C.1.-2 Urban Environmental Restoration – Roger Williams Park Ponds Restoration</b>  <b><i>NBR Plan Reference: 3-3.1, 3-3.2, 3-3.4, 3-3.5</i></b>	Technical assistance/project management services to City of Providence and project partners to implement ecological restoration and TMDL implementation at Roger Williams Park Ponds. Drawing on existing \$424,000 in EPA STAG funds and \$100,000 of City funds plus partner resources for a master restoration plan for the Park ponds including identification of priority pollution sources, on-the-ground stormwater abatement BMPs, community outreach, waterfowl management and watershed assessment. Partners include Save The Bay, RIDEM, ServeRhodeIsland and USEPA Atlantic Ecology Division.	<i>T. Ardito (over grant period); L. Lambert on outreach actions</i> <b>[FTE allocation: TA – 0.45; LL - 0.15]</b> <i>task cost: \$69,756</i>
<b>C.1.-3. Restoration Technical Assistance</b>  <b><i>NBR Plan Reference: 3-3.1, 3-3.2, 3-3.4, 3-3.5</i></b>	Ongoing work to support federal, state and local agencies and NGOs undertaking or considering habitat restoration projects. For example, as requested, advise watershed councils, harbor management commissions and other stakeholders regarding restoration priorities, process, funding and approaches.	<i>T. Ardito – lead (over grant period)</i> <b>[FTE allocation: 0.1]</b> <i>task cost: \$13,620</i>

<p><b><u>C.1. Outputs - Develop and manage collaborative habitat restoration projects by providing technical assistance to communities and local organizations</u></b></p> <ul style="list-style-type: none"> <li>Continued project management/outreach/technical assistance to Pawtuxet River dam removal project (over permitting and construction period; dependent on partner funding, construction contracting);</li> <li>Technical assistance/grant develop activities to other projects as they are developed (over grant period) ); includes technical review of restoration design; assistance securing grant and other funding; assistance in organizing outreach actions linked to projects; assistance in permitting activities.</li> <li>Implementation of pilot project for RWP ponds restoration (over grant period) with significant project management component for NBEP; coordinate/assist City of Providence on EPA Region 1 grant application for \$424,000 as well as on subsequent grant applications; work with local community groups in building community support (hold 2 public meetings during master plan development); baseline assessment of WQ and fish tissue contamination by USEPA AED; seek additional funding through other state and federal sources including EPA’s Urban Waters Initiative. NBEP contributions to local community NGO to support community outreach (\$1,400).</li> </ul>		
<p><b><u>C.2. Support planning and funding at state, regional and national levels to accomplish habitat restoration for the Bay and watershed</u></b></p>		
<p><b>C.2.-1 R.I. Estuarine and Coastal Habitat Restoration Trust Fund Technical Advisory Committee participation</b></p> <p><i>NBR Plan Reference: 3-3.1, 3-3.2, 3-3.4, 3-3.5</i></p>	<p>NBEP provides staff to serve on the TAC that reviews and ranks applications for annual grant cycle funding from the Trust Fund.</p>	<p><i>M. Kerr/ ongoing</i>  <b>[FTE allocation: 0.05]</b>  <i>task cost: \$4,900</i></p>
<p><b>NEW C.2.-2 River Restoration Strategy – R.I. Rivers</b></p> <p><i>NBR Plan Reference: 3-3.1, 3-3.2, 3-3.4, 3-3.5</i></p>	<p>Drawing on recommended actions in the draft Narragansett Bay Region Plan, a collaborative effort with Save The Bay, RIDEM and other organizations to facilitate ecological restoration of rivers, wetlands and other habitats throughout the Narragansett Bay Region to address a need identified by the R.I. Habitat Restoration Team. Initial focus: to identify priorities regarding ecological restoration of rivers; develop stakeholder-based recommendations for policy and regulatory changes to facilitate ecological restoration.</p>	<p><i>T. Ardito – lead (over grant period)</i>  <b>[FTE allocation: 0.25]</b>  <i>task cost: \$34,049</i></p>
<p><b><u>C.2. Outputs – Support habitat restoration policy development for the Bay and watershed and at the national level</u></b></p> <ul style="list-style-type: none"> <li>With partners on TAC for R .I. Coastal and Estuarine Habitat Restoration Trust Fund , recommendations for key coastal and estuarine habitat restoration projects to be funded (March 2012)</li> <li>Ongoing participation in stakeholder-based (potential partners: RIDEM, Save The Bay, NRCS, CRMC, Nature Conservancy, universities, watershed groups, communities) process to advance policy development through a workshop to develop recommended actions regarding river restoration, permitting, restoration priorities at state, regional and national level; report on process recommendations (May 2011)</li> <li>Collaborative development of R.I. Rivers Restoration Policy</li> </ul>		

**Workplan Element D: Communicate timely, meaningful information on the condition of Narragansett Bay and its associated watersheds, including habitats, water quality, and institutional efforts**

Workplan Element D Outcomes:

- Program external communications reach and inform Bay and watershed stakeholders and decision-makers, building a stronger constituency for environmental protection and restoration

<u>Project Activity/Name</u>	<u>Project/Activity Description</u>	<u>Staff Assigned/Schedule</u>
<b><i>D.1. Build support for Narragansett Bay Region Integrated Plan implementation by effectively tracking progress and communicating successfully with a wide variety of audiences and partners through implementation of communications strategies</i></b>		
<b><u>PRIORITY ACTION</u></b> <b>D.1.-1. Narragansett Bay Journal</b> <b><i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 4-4.4,6-6.5</i></b>	Design, edit and publish four electronic issues of the NBJ via Constant Contact; includes special features on bay and watershed issues as well as NBEP activities.	<i>M. Kerr, L. Lambert; Fall 2011, Winter 201-2012, Summer 2012 issues</i> <b>[FTE allocation: MK - 0.15; LL – 0.15; intern - .1]</b> <i>task cost: \$24,285</i>
<b>D.1.-2. NBEP Annual Report</b> <b><i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 4-4.4,6-6.5</i></b>	Develop, design and publish annual report on previous workplan year activities and focus/priorities for upcoming workplan year; report will be integrated into NBEP workplan application and EPA Performance Evaluation processes	<i>R. Ribb/L. Lambert – annual report release December 2011</i> <b>[FTE allocation: RR - 0.03; LL – 0.02]</b> <i>task cost: \$6,240</i>
<b>D.1.-3. Participation and Organization of Outreach Events</b> <b><i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 4-4.4,6-6.5</i></b>	Participate/support outreach events including the R.I. Salt Water Anglers Fishing Show, R.I. Boat Show, R.I. Envirothon, and special events as appropriate opportunities are available; continue update of display to highlight current activities and issues.	<i>L. Lambert – lead; some additional staff involvement (over grant period)</i> <b>[FTE allocation: 0.03]</b> <i>task cost: \$1,627</i>
<b>D.1-4. NBEP Website; Maintenance/Updates</b> <b><i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 4-4.4,6-6.5</i></b>	Keeping website current; researching website constructs that will allow NBEP staff to more easily maintain/update website; provide timely and useful data for bay stakeholders and the public; maintain and update information on the bay and watershed. Secure training on web software to develop new site capabilities.	<i>L. Lambert – lead; all staff involved/ ongoing (over grant period)</i> <b>[FTE allocation: 0.085]</b> <i>task cost: \$4,611</i>
<b>NEW D.1.-5. Citizen Science Blog</b> <b><i>NBR Plan Reference: 1-1.5, 2-2.5, 3-3.4, 4-4.4,6-6.5</i></b>	In summer 2010, the NBEP produced a science-oriented blog on the summer oxygen and macroalgae surveys. We received positive feedback and plan to make it a recurring feature on the NBEP website. Project involves identifying target audiences and partners; connecting with Bay and watershed scientific researchers and project managers, training and overseeing student assistance, and blog publication.	<i>L. Lambert; assistance from interns – over grant year</i> <b>[FTE allocation: LL - 0.1; intern – 0.1]</b> <i>task cost: \$6,874</i>

**D.1. Outputs - Build support for implementation by effectively tracking progress and communicating successfully with a wide variety of audiences and partners**

- Four electronic editions annually of the Narragansett Bay Journal (over grant period)
- Publication of annual NBEP report (December 2011)
- Ongoing development, content management and effective use of the NBEP website (over grant period)
- Ongoing use and development of online tools such as wikis to enhance NBEP work (over grant period)
- Updated communications tools and technologies to improve effectiveness of NBEP work (over grant period)
- Organize/revise program displays and participate in targeted public outreach events (at least 3 events over grant period)
- Provide Bay ecosystem and program information to local, state and federal officials and Congressional delegation members (over grant period)
- Production of NBEP Science Blog on a quarterly basis, distributed via Constant Contact and on the NBEP website.

**Workplan Element E: Focus and improve NBEP program resources on effective implementation of the Narragansett Bay Region Plan**

Workplan Element F Outcomes:

E.1. Strengthen internal program management, communication and planning

- Effective program management increases accountability and promotes adaptive management
- Program strategic directions are developed and implemented
- NBEP program resources are strategically used to support plan priority action implementation
- Program internal communications supports efficient use of program time and resources, increases accountability, and promotes teamwork

E.2. Strengthen program oversight and interaction with external stakeholders

- Program effectively targets priority actions from stakeholder-developed ecosystem plan based on NBEP committees' guidance
- Strategic alliances/collaboratives are developed to increase implementation effectiveness
- Effective program communications increase program definition, visibility, credibility and accountability

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
<b><i>E.1. Strengthen internal program management, communication and planning</i></b>		
<b><u>PRIORITY ACTION</u> E.1.-1. NBEP Workplan development</b>	Work with program staff, EPA, Management Committee and partners to determine how best to assign staff resources and which projects to implement based on goals and priorities from Narragansett Region Integrated Plan and other planning processes; FY2012 application to be submitted June 2012. Strategically assess actions and initiatives that could be addressed by NBEP; work with staff, EPA Region 1 and NBEP committees to identify program roles and activities related to NBR Plan priorities.	<i>R. Ribb – lead/ annual task [FTE allocation: 0.075] task cost: \$12,887</i>
<b><u>PRIORITY ACTION</u> E.1.-2. Program planning; staff management</b>	Oversee program strategic, logistical, and project planning; oversee staff workplans and assignments, conduct annual assessment of program priorities/directions, and personnel evaluations and issues	<i>R. Ribb – lead/ ongoing [FTE allocation: 0.075] task cost: \$12,887</i>
<b><u>PRIORITY ACTION</u> NEW E.1-3. Strategic Directions Retreat for NBEP</b>	NBEP staff/Executive Committee retreat in Summer 2011 to address identified program challenges. This would take the form of a facilitated workshop with the Executive Committee to discuss with staff program focuses, operations issues and identify strategic workplan directions for the NBEP in the context of NBR plan implementation.	<i>R. Ribb- lead; retreat to be held July 2011 [FTE allocation: 0.075] task cost: \$12,887</i>

<b><u>Project/Activity Name</u></b>	<b><u>Project/Activity Description</u></b>	<b><u>Staff assigned/schedule</u></b>
<b>E.1.-4. Grants management</b>	Developing budgets, grants narratives, etc. for main EPA and other grants to the program; liaise with EPA, URI, RIDEM, RINHS and other organizations to identify and develop grant proposals	<i>R. Ribb – lead on EPA program grant [FTE allocation: 0.075] task cost: \$12,887</i>
<b>E.1.-5. NBEP Executive Committee</b>	Work with NBEP Executive Committee to improve program workplan and budgeting efforts; determine strategic directions for NBEP; improve personnel management; implement personnel evaluations; strategize efforts to secure additional funding support work of the proposed NBEP Executive Committee when initiated.	<i>R. Ribb- lead/ongoing [FTE allocation: 0.07] task cost: \$12,028</i>
<b>NEW E.1.-6. NBEP Policy Committee</b>	Organize periodic meetings and agendas for NBEP Policy Committee meetings; respond to requests by the Policy Committee members; engage Policy Committee agencies in implementation of the NBR Plan	<i>R. Ribb- lead/ongoing [FTE allocation: 0.01] task cost: \$1,718</i>
<b>E.1.-7. Grant/Program Reporting</b>	Provide timely reports on program activity to EPA, EPA Region 1, Management Committee, and Bay stakeholders; GPRA required habitat reporting to EPA	<i>R. Ribb – lead/ annual tasks [FTE allocation: 0.06] task cost: \$10,310</i>
<b>NEW E.1.-8. Third Party Review of NBEP</b>	Seek funding from US EPA to bring in ecosystem program evaluation experts to review program and how it interacts and is affected by its institutional setting, partners, funders and stakeholders. This would help the program more effectively prepare for NBR Plan implementation and would be linked to D.1.-7.	<i>R. Ribb, NBEP Executive Committee [if funded - FTE allocation: 0.02] task cost: \$3,437</i>
<b><u>E.1. Outputs - Strengthen internal program management and planning</u></b> <ul style="list-style-type: none"> <li>• Annual NBEP workplan application (May 2012)</li> <li>• EPA and other grants management and reporting [grants, GPRA, reports to NBEP Management Committee] (over grant period)</li> <li>• NBEP strategic planning activities targeting funding, communications, scientific needs, program operation and finance, interaction with other organizations (grant period)</li> <li>• Program and project budgeting (May 2012)</li> <li>• Program personnel management, staff evaluations, training and task assignments (over grant period)</li> <li>• Reported habitat restoration acreages and river miles as required by EPA under the Government Performance and Reporting Act (September 2011)</li> </ul>		

<u>Project/Activity Name</u>	<u>Project/Activity Description</u>	<u>Staff assigned/schedule</u>
<b><i>E.2. Strengthen program oversight and interaction with external stakeholders</i></b>		
<b>E.2-1. Program Participation &amp; Representation in Key Watershed Actions and Initiatives</b>	Interaction with stakeholders and organizations to bring NBEP resources to varied key ecosystem management and public involvement efforts; representing the NBEP on local, regional and national technical and policy committees, reviews, policy discussions and initiatives. Includes transportation, public access/recreation, federal watershed management, water resources management, habitat restoration and communications policies, initiatives and actions.	<i>R. Ribb – lead; ongoing</i> <b>[FTE allocation: 0.05]</b> <i>task cost: \$8,592</i>
<b>E.2.-2. Program interaction with US EPA Coastal Management Branch, other regional and federal partners</b>	Attend required national program meetings; provide information to government stakeholders;; participate in NEP review and planning processes; upon request of EPA, participate in NEP policy development and scientific efforts at both regional and national level; upon request of EPA, participate in NEP performance review teams and site visits	<i>R. Ribb (over grant period)</i> <b>[FTE allocation: 0.06]</b> <i>task cost: \$10,310</i>
<b>E.2.-3. NBEP Committee Management</b>	Organize Management and other committee meetings; develop agendas, meeting materials, meeting summaries, and other reports	<i>R. Ribb – lead/ ongoing;</i> <b>[FTE allocation: 0.07]</b> <i>task cost: \$12,028</i>
<b><u>E.2. Outputs - Strengthen program oversight and interaction with external stakeholders</u></b>		
<ul style="list-style-type: none"> <li>• Organization of quarterly meetings of the NBEP Management and Finance Committees (agenda, meeting materials, information, notices) (over grant period)</li> <li>• Publication of NBEP Workplan quarterly updates (over grant period)</li> <li>• Participation in NEP meetings, policy development, program review, outreach, planning and federal partnership activities (over grant period) including: participation on Association of National Estuary Programs’ Executive Committee (monthly conference calls), Board of Directors. On request, attend meetings at US EPA Region 1 to discuss NEP issues; on request, participate in EPA Coastal Management Branch meetings and events. Attend EPA NEP national meetings (Spring &amp; Fall of each year); participate in July 12-14, 2010 EPA review of the Barnegat Bay Estuary Program in New Jersey; participate in meetings of New England Region National Estuary Programs and EPA Region 1 staff (scheduled dependent on parties’ availability and need to meet)</li> <li>• Coordination of NBEP Policy Committee meetings and support activities (timeframe dependent upon agreement of all parties to participate)</li> <li>• Participation in R.I. Statewide Planning watershed policy document (over SWP project period), in watershed stakeholder initiatives, and in integrated plan implementation efforts (over grant period)</li> </ul>		