

# *Buzzards Bay National Estuary Program*

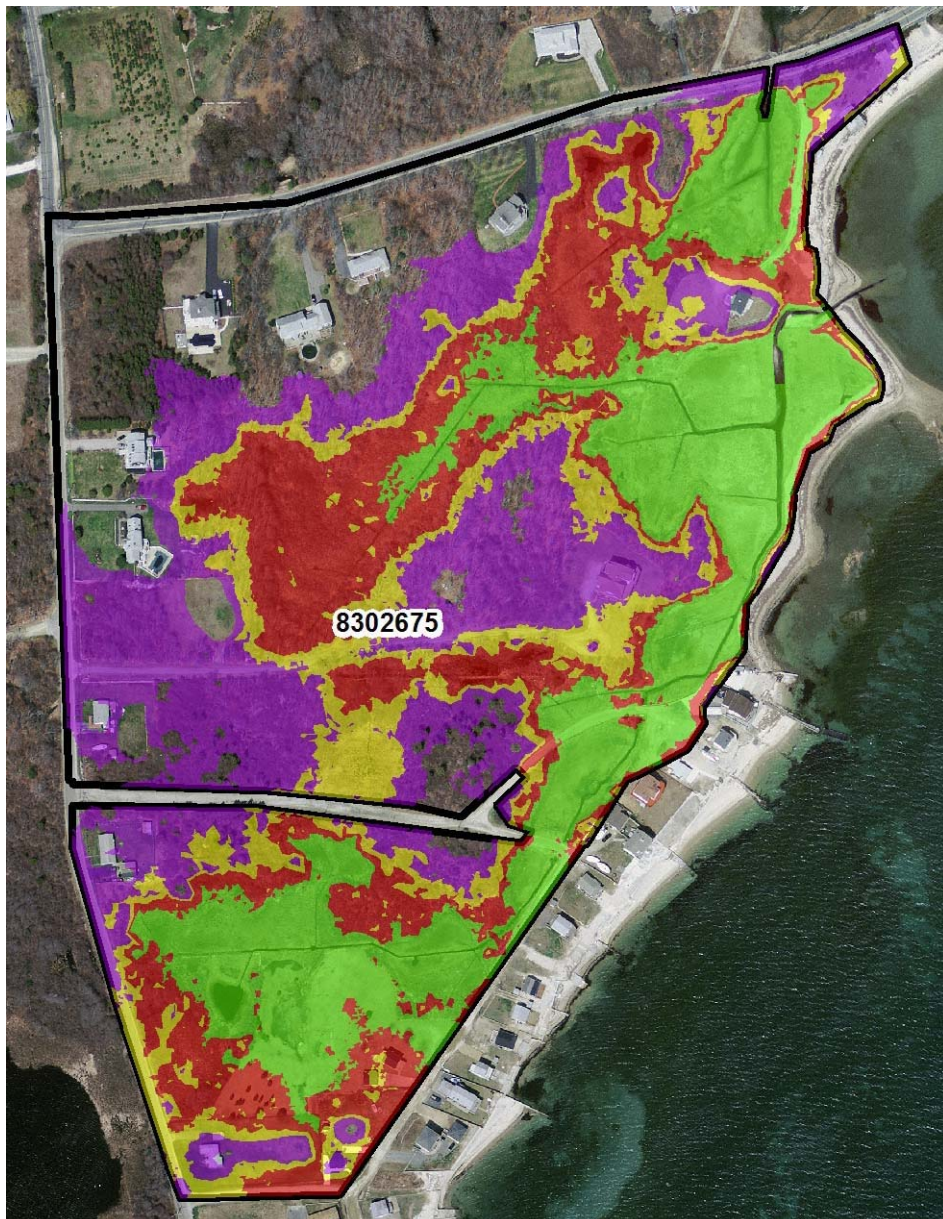
## Implementation Activities

### Federal FY13 Funds Work Plan and Budget

Pursuant to Section 320 funding under  
Cooperative Agreement CE-96144201 with the US EPA

For work beginning July 1, 2013 to June 30, 2014

Last modified: June 11, 2013



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Cover: Ongoing study of salt marsh expansion with sea level rise

## Section 1: Introduction and Overview

Since the completion of the watershed management plan titled the *Buzzards Bay Comprehensive Conservation and Management Plan* (CCMP) in 1991, the ongoing focus of the Buzzards Bay National Estuary Program has been to facilitate implementation of the recommendations contained in this CCMP. This year, the US EPA has made available to the Buzzards Bay National Estuary Program \$512,000 in Clean Water Act Section 320 funds. For this work plan funding, the US EPA is continuing the existing Cooperative Agreement with the Commonwealth of Massachusetts.

When reviewing this work plan, it is important to recognize that this US EPA Cooperative Agreement to the Commonwealth does not fund all tasks described here, or utilize the full NEP allocation of funds. Specifically, the US EPA is awarding \$512,000 -\$25,000 Coalition monitoring) directly to the Commonwealth under this grant application and work plan. For the balance of the NEP section 320 funds, the US EPA, at the request of the Buzzards Bay NEP, will directly award \$25,000 to the citizens group, The Buzzards Bay Coalition, for specific tasks in the Baywatchers Monitoring Program. The Buzzards Bay Coalition is directly providing the match under their separate grant agreement with the US EPA.

Some initiatives, like the USDA Natural Resource Conservation Service (NRCS) cost-share of personnel detailed to the Buzzards Bay National Estuary Program for technical assistance, are not considered match or a financial contribution under the terms of this Cooperative Agreement. Any grants or assistance from the Massachusetts Executive Office of Environmental Affairs (EEA) or Massachusetts Office of Coastal Zone Management (CZM) are not considered match to this award unless expressly identified in the “Match to Cooperative Agreement” section in the final Cooperative Agreement. Inclusion of any non-match efforts by other agencies in this work plan are meant to demonstrate the collaborative or coordinating role of the Buzzards Bay National Estuary Program in achieving specific recommendations contained in the watershed plan, the Buzzards Bay CCMP.

Federal FY 13 Funding	\$512,000
Base Funding (less Coalition Funding)	\$487,000
Coalition Water Quality monitoring*	\$25,000
Match (\$487,000 required)	\$487,757
* match to Coalition funding provided through that organization	

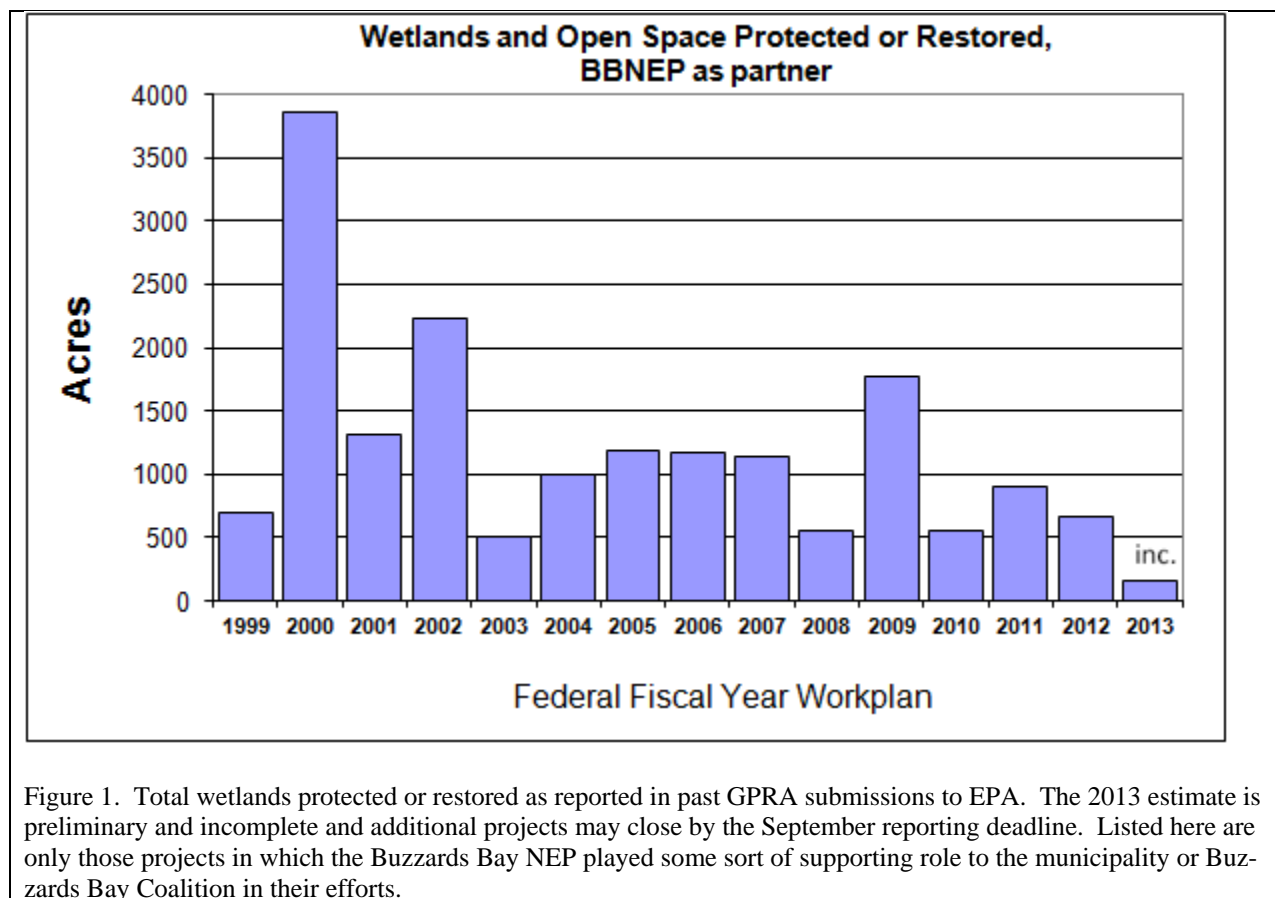
## Section 2: FY12 Workplan Highlights and Accomplishments

### Status of FY2012 Workplan, July 1, 2012 to present

In this section is a summary of the status of tasks in last year's workplan and a description of some key accomplishments by the BBNEP and our partners.

#### Task 1 - Wetland Restoration and Open Space Protection and Restoration

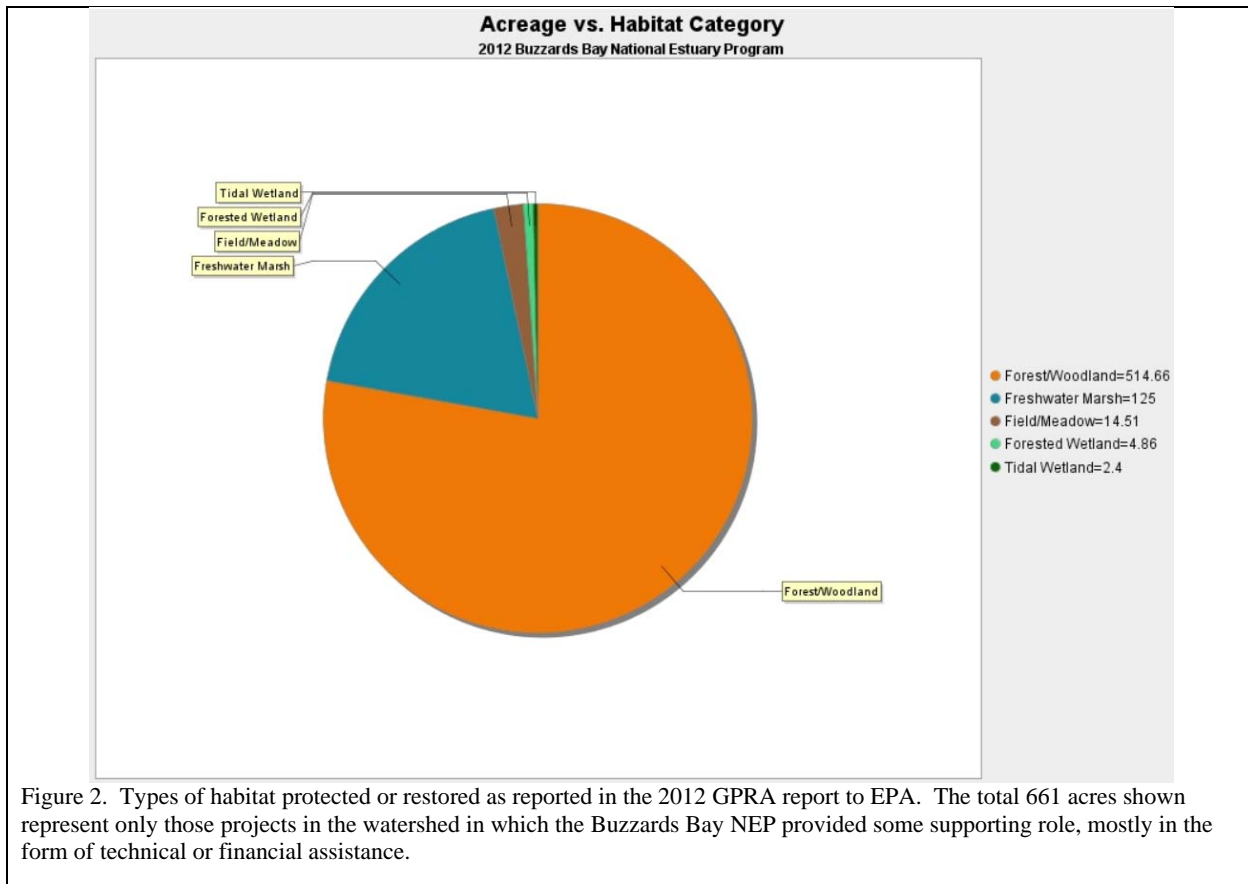
As we have done in the past, the Buzzards Bay NEP continues to work and collaborate with the Buzzards Bay Coalition, area lands trusts and municipalities in our ongoing effort to protect and restore valuable wetlands, and upland wildlife habitat throughout the Buzzards Bay watershed. Through this effort, the Buzzards Bay NEP provided maps, helped develop state and federal grant applications, wrote letters of partnership and support to granting agencies, conducted land use analyses, and through the municipal grant program, provided funds that help meet match requirements for leveraging grants from other programs (see Figure 1). The Buzzards Bay Coalition again had tremendous success in the past year coordinating grant efforts on several projects in the Buzzards Bay watershed, several of which received supporting funding or technical support by the Buzzards Bay NEP in the last or previous fiscal years.



For example, in 2012, the BBNEP awarded several open space and habitat protection grants including awards to Mattapoisett (Mattapoisett River Valley aquifer) and Wareham (Weweantic River). The Mattapoisett River Valley aquifer project award of \$35,000 is noteworthy because it helps acquire and permanently protect 19.5 acres of wetlands and forest in two parcels of land adjacent to existing protected town water department land and other protected properties. The entire property lies within the DEP Zone II area designated for the protection of the public drinking water supply. The land is also designated as BioMap Supporting Natural Landscape and Priority Habitat for Rare Species by the Natural Heritage and Endangered Species Program.

The \$3,000 awarded to the Town of Wareham will be used for a real estate appraisal on a 28.4-acre property along the shores of the Weweantic River. The site includes a diverse assemblage of forests, wetlands, and shoreline habitat, including freshwater and tidewater. This property has been a priority for acquisition due to its strategic location and the potential to create a large continuous block of protected land.

In Figure 2 we shows a summary of habitat type protected on the various projects in which the Buzzards Bay NEP was involved in some form of supporting role as reported in the 2012 GPRA report.



Throughout the year, the BBNEP wetland specialist provided technical review of projects for area conservation commissions including onsite field visits for the Fairhaven Conservation Commission. The Buzzards Bay NEP also prepared a brochure to accompany the release of the final updated Buzzards Bay CCMP.

### **Task 2 - Buzzards Bay Stormwater Mapping, Atlas and Database Update**

The BBNEP continued its work to assist municipalities to map stormwater drainage networks for meeting the anticipated new Phase II MS4 permit, upon request. In 2012, the Buzzards Bay NEP posted GIS files and easy-to-use Google Earth files, including maps of the New Bedford stormwater network, on its stormwater atlas page (<http://www.buzzardsbay.org/stormatlas.htm>). This map product enables those without any GIS experience or software to easily produce maps of specific areas of the watershed (see Figure 3). We also continue to make available through our website LIDAR GIS files to assist towns and engineers with stormwater planning and design efforts.

### **Task 3 - Stormwater Remediation and Technical Assistance**

Through our grant and technical assistance programs, the Buzzards Bay NEP helps towns develop stormwater treatment designs which lay the foundation for the construction and implementation of those designs through municipal funding, or through grant programs such as 319 non-point source grants, or MA CZM's CPR program. For example, an important success announced in 2012 was that the Town of Bourne, using stormwater designs developed with BBNEP guidance and funding, received a \$24,013 Massachusetts CZM Coastal Pollution Remediation (CPR) grant to explore treatment options and educate the public at Buttermilk Way (Figure 4). The Buzzards Bay NEP collaborated with the Town of Bourne and the Massachusetts Maritime Academy to develop stormwater designs for this project that were submitted with the grant application.

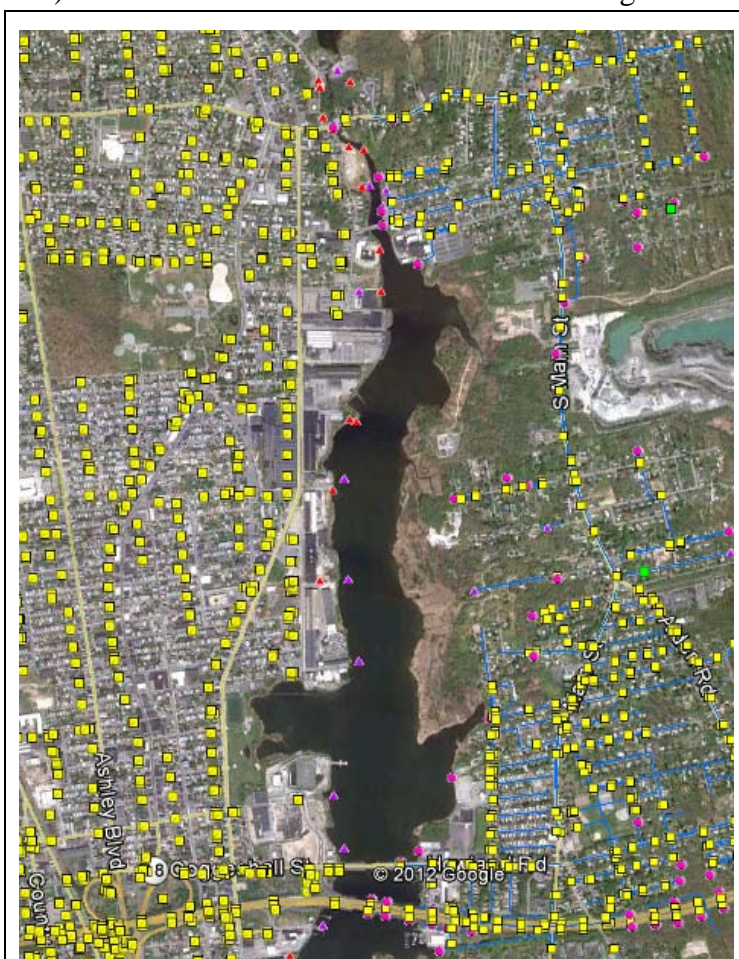


Figure 3. In 2012, the Buzzards Bay NEP converted stormwater atlas files into Google Earth files so those without GIS software or knowledge can easily make maps and identify discharges in their community.

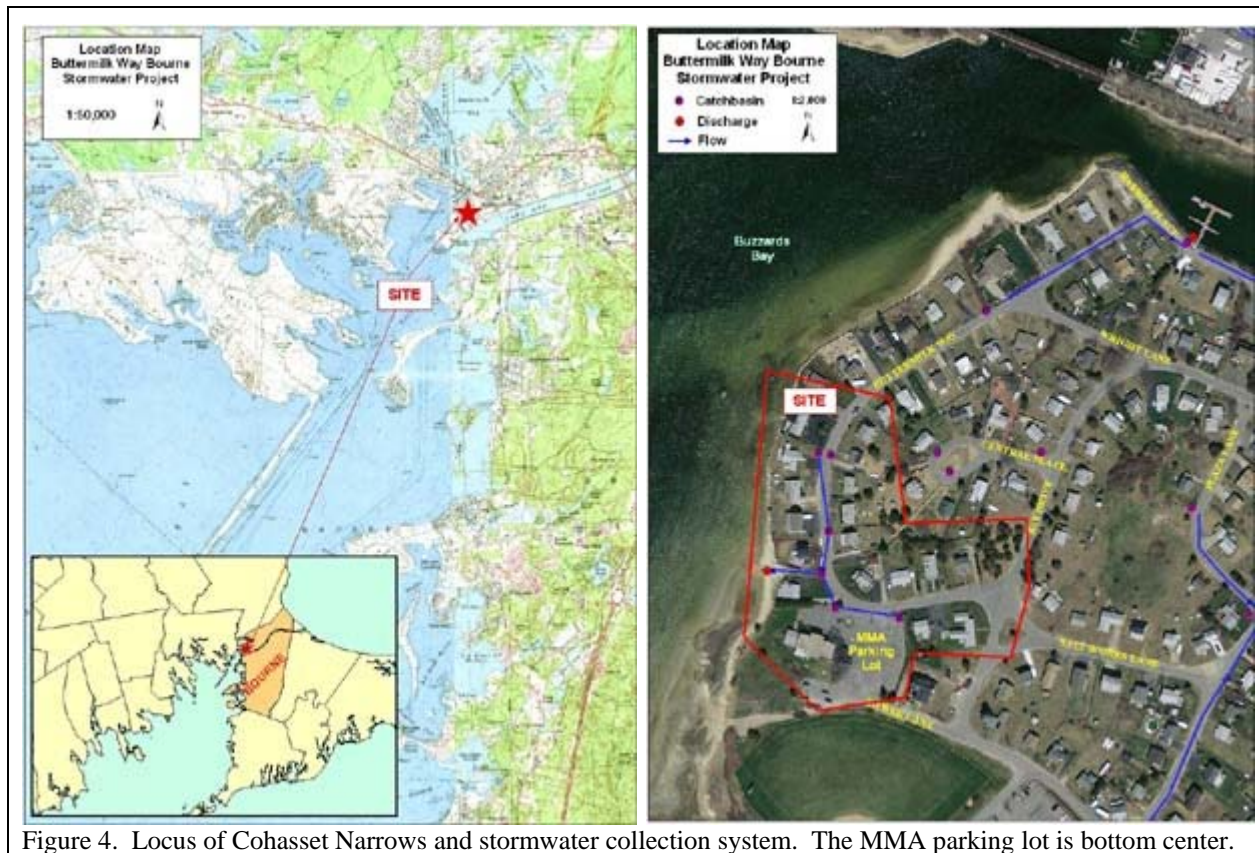


Figure 4. Locus of Cohasset Narrows and stormwater collection system. The MMA parking lot is bottom center.

In 2013, the BBNEP began reviewing stormwater regulations for the Town of Bourne at their request.

#### **Task 4 - BBNEP Technical Assistance and Municipal Grant Program**

The Buzzards Bay NEP's (BBNEP) primary mission is to provide technical support and, where possible, financial support to Buzzards Bay municipalities, and others, to help implement the recommendations in the Buzzards Bay Comprehensive Conservation and Management Plan. Much of the day to day work of Buzzards Bay staff revolves around specific projects, like helping a town develop stormwater treatment designs to treat a stormwater discharge contributing to shellfish bed closures, secure federal funding for environmental projects like herring ladder repair, or evaluate environmental impacts or determine compliance with local regulations of proposed development. Much of the staff workload is associated with overseeing and assisting towns to undertake projects funded through the municipal grant program.

During the latter half of 2012, the Wetland Specialist provided training to the CZM regional coordinator to help implement the combined CZM-NEP effort to map the expansion of the 1% floodplain with sea level rise.

During 2012 the Buzzards Bay NEP closed out 5 grants totaling \$88,957.98 (Rochester, \$15,000; Bourne, \$18,000; Acushnet, \$18,652.66; Wareham, \$18,652.66; Marion, \$18,652.66). Three grants were returned unspent (Mattapoissett, \$35,000; Fairhaven, \$35,000; Westport, \$20,000). Two minigrants (\$55,000 total) were returned early enough that they have already been recycled

to a previous minigrant round and awarded. One minigrant (\$35,000 total) will be recycled into the next minigrant round.

In the fall of 2012, the Buzzards Bay National Estuary Program announced that \$122,000 grants to five Buzzards Bay watershed municipalities. Funded by the U.S. Environmental Protection Agency (EPA) and administered by our program, these grants will aid towns in funding land conservation and infrastructure improvement projects designed to conserve open space and rare species habitat, protect drinking water resources, restore wetlands, study nitrogen update in cranberry bogs and help open shellfish beds.

This year's awards to Buzzards Bay watershed communities are as follows:

- Mattapoisett --\$35,000 to protect land in the Mattapoisett River Valley aquifer. The town proposes to acquire and permanently protect 19.5 acres of wetlands and forest in two parcels of land adjacent to existing protected town water department land and other protected properties. The entire property lies within the DEP Zone II area designated for the protection of the public drinking water supply. The land is also designated as BioMap Supporting Natural Landscape and Priority Habitat for Rare Species by the Natural Heritage and Endangered Species Program.
- Westport -- \$20,000 to develop engineering designs to treat a stormwater discharge at Drift Road. Drainage from the municipal stormwater system flows untreated into the East Branch of the Westport River via Sam Tripp Brook. This section of the Westport River is on the state's 303(d) list of impaired waters for bacteria and nitrogen and is closed to shellfishing for portions of the year. Treatment of the discharge is expected to contribute to improvements in water quality.
- Wareham -- \$20,000 to develop engineering designs to treat a stormwater discharge in the downtown Wareham Village area. This site discharges untreated stormwater into the estuarine portion of the Wankinco River, and these stormwater discharges contribute to shellfish closures. Treatment of the discharge is expected to contribute to improvements in water quality.
- Wareham -- \$3,000 for a land protection project on the Weweantic River. The Town will use the funds for a real estate appraisal on a 28.4-acre property along the shores of the Weweantic River. The site includes a diverse assemblage of forests, wetlands, and shoreline habitat, including freshwater and tidewater. This property has been a priority for acquisition due to its strategic location and the potential to create a large continuous block of protected land.
- Dartmouth -- \$17,000 for a tidal flushing feasibility study for a salt pond-salt marsh system. This work will help the town complete a comprehensive feasibility study as part of an effort to restore permanent tidal flushing to a salt pond at the corner of Gulf Road and Smith Neck Road. The channel connecting the pond and marsh to Apponagansett Bay periodically fills with sand, gravel and cobble, and requires regular maintenance dredging. The salt pond suffers from environmental degradation when the channel becomes blocked for an extended period of time, which has resulted in fish kills and noxious odors. The funding will be used to hire an environmental engineering subcontractor to conduct a feasibility study and develop conceptual designs.



- Carver -- \$27,000 for a study on nutrient loss from cranberry bogs to groundwater. The grant will enable measurements to groundwater at six cranberry bogs in the Weweantic and Wareham River watersheds. The proposed work builds on an existing project that aims to understand nitrogen loss from two configurations of cranberry bogs. By increasing the understanding of nitrogen loss from two common bog types, the study will support watershed nitrogen modeling and assist cranberry growers in identifying best management practices to control nitrogen releases from agricultural lands. Selected growers, USDA, the UMass Cranberry Extension, and Marine Biological Laboratory scientists are partnering with the town in the study.

The Buzzards Bay National Estuary Program produced over 464 new or revised maps and fulfilled dozens of requests for data, calculations, or graphics to be used for newsletters, grants, etc. Numerous maps and GIS evaluations were prepared for the Buzzards Bay Coalition, area land trusts, and municipalities. Examples include municipal open space maps, Buzzards Bay Coalition fundraising maps, maps used by municipalities in open space reports and their grant applications, maps used in the citizen monitoring program, and for other purposes.

The Buzzards Bay NEP's grant and technical assistance programs continue to fund or advance progress on EPA's Clean Water Act core programs. For example, the BBNEP continues to fund the citizen water quality monitoring program, which is being used as the basis for updates to the state's water quality assessment and integrated list of waters standards, and nitrogen total maximum daily loads being developed for Buzzards Bay embayment watersheds by the Massachusetts DEP. The town of Wareham's Board of Health, as a result of past efforts with the Buzzards Bay NEP, the Buzzards Bay Coalition, and the Wareham Clean Water Committee, passed local regulations requiring nitrogen removal for all new and renovated onsite septic systems within 500 feet of wetlands and waterways. This work, together with efforts to help towns reduce and treat stormwater discharges causing swimming beach or shellfish bed closures (through technical assistance and grants) directly supports EPA goals to better control non-point source pollution on a watershed basis.

Our continuing stormwater atlas and data set initiative, together with the use of new LiDAR data, not only helps towns map and evaluate their stormwater, but it is helping municipalities better comply with the NPDES Phase II MS4 stormwater program, and even placing towns on the fast track to take action as compared to other communities around the Commonwealth. This work, together with our efforts with towns to evaluate sewer and nitrogen removal onsite technology that could be used to meet soon to be enacted nitrogen TMDLs, is helping municipalities better understand the need for sustainable wastewater infrastructure. Finally, our efforts to help towns and applicants better comply with local, state, and federal wetland laws and our efforts to help towns restore impaired wetlands continue to meet broad Clean Water Act goals and new MS4 requirements expected in the coming year.

#### **Task 5 - Program Oversight and Administration**

The Buzzards Bay National Estuary Program Executive Director and Administrative Assistant and MCZM financial manager ensure administration of the EPA and other grants and ISAs

awarded to the Buzzards Bay NEP. The Buzzards Bay NEP Administrative Assistant and Director continue to enhance the processing of state and federal grant expenditure reports to improve grant and budget tracking. The BBNEP Steering Committee met to review program activities in May 2012, and June 2012. Final Government Performance Results Act (GPRA) data was submitted on time in September and FY 12 reported

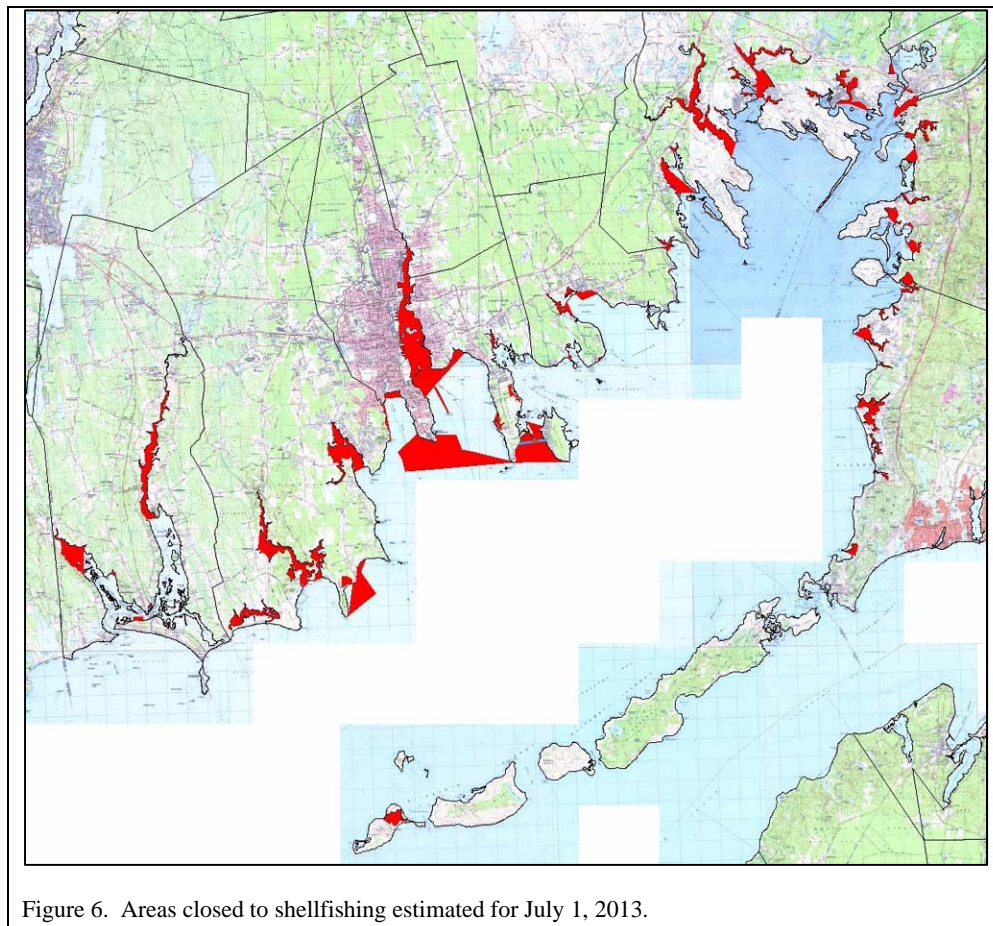


Figure 6. Areas closed to shellfishing estimated for July 1, 2013.

leveraged funds and habitat protected or restored are shown in Figures 1 and 2.

### **Task 6 – Buzzards Bay Water Quality Monitoring Project**

In the fall of 2012, the Coalition submitted a data report and disk for the 2012 year. More than 132 volunteers participated in the Buzzards Bay Water Quality Monitoring Project's 21<sup>st</sup> water quality sampling season between May and September.

### **Task 7 - Environmental Indicators and Outcomes Tracking**

The Buzzards Bay Coalition issued its 2011 (triennial) State of the Bay report in March 2012. The Buzzards NEP gave technical support analyzing data and preparing maps for the report. In particular, the Buzzards Bay NEP was the lead in developing the measures for eelgrass abundance trends and bacteria pollution. A summary of the scores for the last three State of the Bay reports is shown in Figure 5.

Since the issuance of the report, the Buzzards Bay NEP continued to update these databases for the Coalition's next triennial status and trends report. For example, in 2012, the BBNEP worked with the Division of Marine Fisheries to update shellfish bed closure GIS coverages to cover the July 1, 2012 status maps and prepare for the July 1, 2013 status maps (current tentative estimates for July 1, 2013 based on changes during the fall and winter of 2012 are shown in Figures 6.

7). The Buzzards Bay NEP will also continue it eelgrass cover map updates that were used for the 2011 State of the Bay report

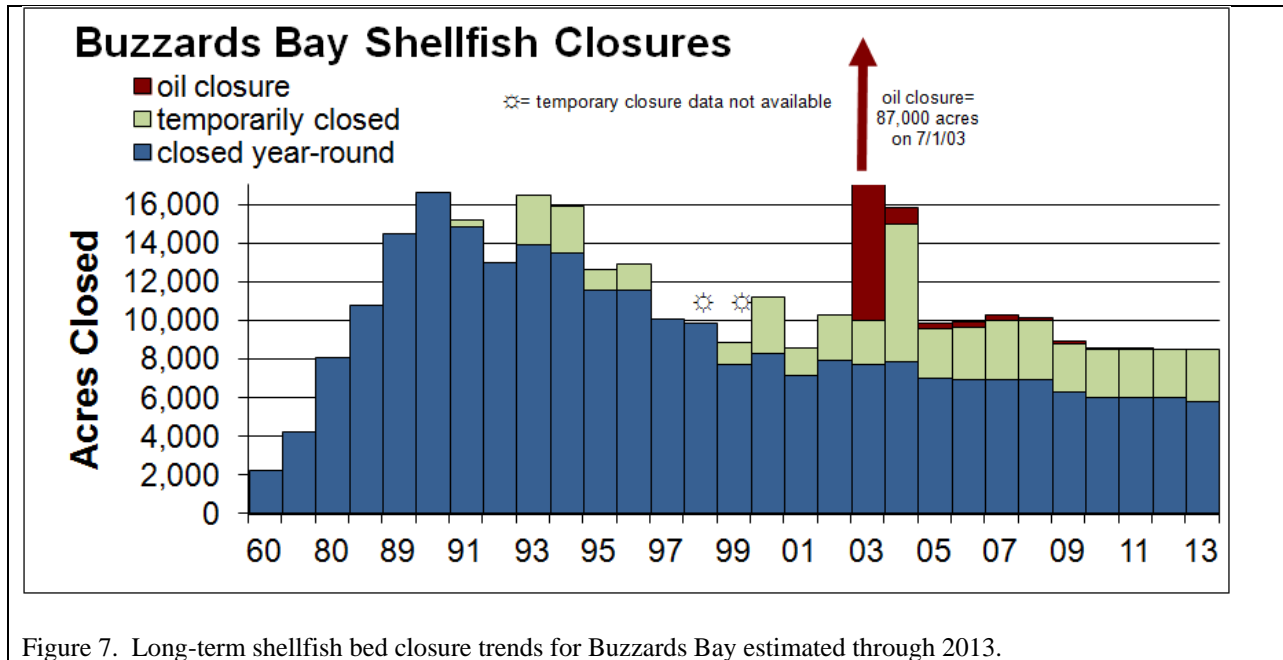


Figure 7. Long-term shellfish bed closure trends for Buzzards Bay estimated through 2013.

In the past year, the BBNEP has continued to analyze recent and historical aerial photographs to track eelgrass cover in Buzzards Bay. This effort was used as the basis of the Coalition's 2011 state of the bay report (Figure 8) and will be improved upon for the next report.

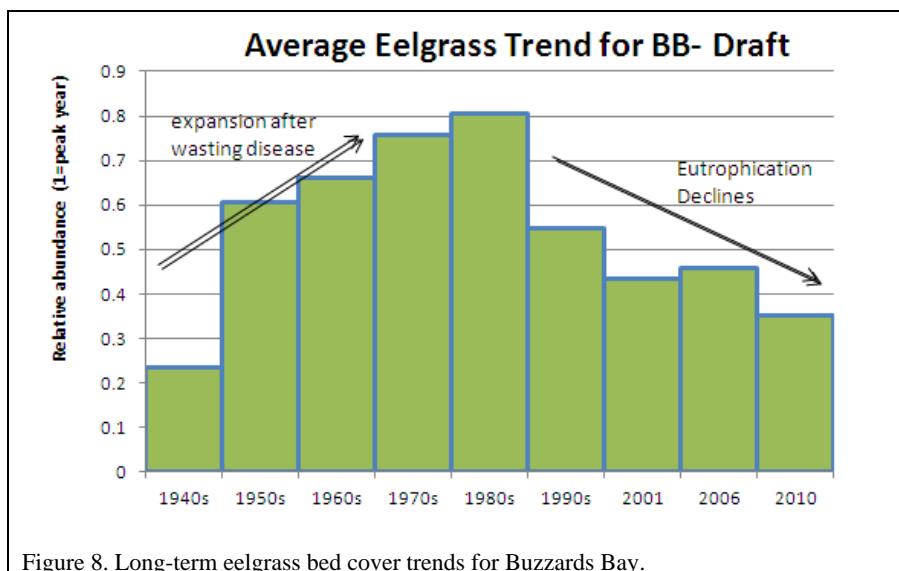


Figure 8. Long-term eelgrass bed cover trends for Buzzards Bay.

## **Task 8 - Outreach and Education**

The Buzzards Bay Coalition undertook outreach and education activities highlighting the condition and state of Buzzards Bay, progress toward restoration and protection goals, and collaboration with the Buzzards Bay National Estuary Program in their activities. These activities included the July 2012 Swim Buzzards Bay, their annual meeting, press events, and various publications, including the annual report to their members.

The Coalition also produces brochures, fact sheets, press releases, and other events about citizen action to protect and restore Buzzards Bay. Some information on these events is at <http://www.savebuzzardsbay.org/GetConnected>.

On July 7, 2012 the Coalition held their 19<sup>th</sup> consecutive Swim Buzzards Bay. This 1.2 mile swim from New Bedford to Fairhaven is open to swimmers from ages 12 to 73, every age, ability, shape, size, and fitness level. Two hundred and sixty-four swimmers participated in the event demonstrating their care and concern for clean bay waters and a healthy environment.

The Buzzards Bay Coalition held the 6<sup>th</sup> Annual Watershed Ride on Sunday, October 14, 2012. The 76-mile Ride, which drew 147 adventurous cyclists, begins at Horseneck Beach in Westport ending in Woods Hole. Perfectly timed to take advantage of the spectacular autumn foliage, the cools days of early fall, and the quiet off-season roads, the Ride is one of the best outdoor events of the season.

The Buzzards Bay Coalition held their first Golf Outing on May 23, 2012. The money raised at this event goes directly to projects that improve the water quality in New Bedford Harbor.

In 2012, the Coalition for Buzzards Bay continued to press US EPA to use the safest, best techniques to restore New Bedford Harbor.

During 2012 and 2013, the Coalition for Buzzards Bay continued to press the state, the Massachusetts Estuaries Project, and the US EPA to develop and finalize nitrogen TMDL in Buzzards Bay embayments.

During 2012 and 2013, the Buzzards Bay NEP continued to update and streamlined the navigation of its website, and add new pages and information related to stormwater pollution, nitrogen loading, habitat protection, and climate ready adaptation efforts in the Buzzards Bay watershed.

Buzzards Bay Action Committee launched their new website in October 2012. This website highlights the Buzzards Bay municipalities CCMP accomplishments.

## **Task 9 - CCMP Update**

In 2012 and 2013, the Buzzards Bay NEP updated and distributed the draft final CCMP (at <http://www.buzzardsbay.org/newccmp.htm>). In April 2013, Buzzards Bay NEP Steering Committee decided on the final approval strategy for the updated document.

### **Task 10 - Other Specialized Technical Assistance**

In 2012 and 2013, at the request of the Mass Department of Environmental Protection, the BBNEP Executive Director provided technical assistance to the Massachusetts Estuary Project to Mass DEP to review TMDL reports both inside and outside of the watershed. The effort involved appreciable time from both the Director and Administrative Assistant.

In 2012 the BBNEP give guidance to DEP on the planned expenditure of Natural Resources Damage Assessment funds in Buzzards Bay.

The Buzzards Bay NEP continues to provide technical guidance on nitrogen management issues to the Buzzards Bay Coalition and Town of Wareham. The Buzzards Bay Coalition hosted and facilitated meetings with the Town that, with additional inputs by the Wareham Clean Water Committee, resulted in 2012 Board of Health regulations to require nitrogen removal septic systems for new construction and system upgrades. The Coalition for Buzzards Bay has continued its nitrogen consensus meeting to advance nitrogen management in the town. The Buzzards Bay NEP participated in its April 2013 consensus meeting.

The BBNEP continues to distribute LIDAR data through its website to the municipalities and engineering firms or provide LiDAR related mapping products.

### **Task 11 - Technology Transfer to Other Estuaries**

#### **Travel to National Meetings during past Fiscal Year.**

The BBNEP director was unable to participate in person in the February 2012 ANEP meeting in Washington, DC, but did participate in the webinar. In addition, the Director gave a presentation early summer 2012 at an EPA Region 1's conference on Climate Ready Estuaries, and in 2012 and 2013, participated in EPA Region 1's planning and coordination efforts for EPA's proposed Southeast New England Coastal Watershed Restoration Partnership to transfer the successes learned in the Buzzards Bay watershed to other estuaries in southern New England.

### **Task 12 - Website Maintenance and Innovation**

The Buzzards Bay National Estuary Program continued to maintain an independent website to assist the BBNEP to promote new approaches, receive feedback, communicate successes, track trends in water quality, performance of government in implementing the CCMP, express the views and concerns of the NEP Steering Committee, create a forum for new initiatives and ideas of our partners, and support other obligations and tasks identified in this work plan. The website is also used to post results of the bay indicators and documents relating to the oil spill, and post procurement notices and grant announcements. The BBNEP has also been systematically scanning all old BBNEP reports and gray literature related to Buzzards Bay and posting it on our website.

Currently there are a total of 600 main pages, with an additional 767 downloadable pdf files and reports, as well as numerous graphic files and maps, for a total space use of 4.8 GB on the BBNEP website. The website currently receives more than 1400 unique visitors per day, and it remains a major resource for information about Buzzards Bay.

### **Task 13 - Climate Change Vulnerability and Salt Marsh Migration**

A major initiative of the Buzzards Bay NEP was its ongoing FY11 study of the likely expansion of the 100-year floodplain with sea level rise. This work was undertaken in partnership with MCZM. Originally this work was to be accomplished for just one community through a solicitation, but because Massachusetts CZM had a similar pilot project in its workplan, and because this project can be easily extrapolated to other communities, the Buzzards Bay NEP and MCZM agreed to work together to conduct this effort for all communities in the Buzzards Bay watershed. The BBNEP drafted a QAPP based on techniques developed in the preliminary analysis. The QAPP was approved in the fall of 2012. By January 2013, the Buzzards Bay National Estuary Program completed town-reports using LIDAR data to extrapolate the 100-year flood plain by 1, 2 and 4 foot increases in elevation to illustrate the expansion of the flood zone. FEMA never issued draft maps for Bourne or Falmouth, so they were not included. Draft reports were sent to all the towns earlier this year and all draft reports and data sets are available online on this page: <http://buzzardsbay.org/floodzone-expansion-slr.html>.

An important outcome of this effort was that we identified numerous errors in the new FEMA flood insurance maps. Essentially, some properties were included in the flood plain when they were not, and vice versa. FEMA retracted and corrected areas on two maps as a result of our work. The state's Hazard Mitigation Officer has asked us to produce a report and GIS data set summarizing all discrepancies between our analysis and the floodplain maps. We hope to finish this report in May.

The FY12 task of the Expansion of salt marshes with sea level rise began in early 2013. This task is ongoing, and should be completed by July 1. This work was to identify how marshes might expand and migrate inland with sea level rise. We are particularly focusing on tidally restricted marshes identified in our atlas of tidally restricted salt marshes. Specifically, the Buzzards Bay NEP will use the lidar data sets, particularly the digital elevation models, to evaluate the existing salt marsh high marsh boundary elevations based on field GPS position data, and add to that site specific elevation, one, two and four-foot increases in elevations to illustrate the likely inland migration of salt marshes with sea level rise. This project is explained more fully on this webpage: <http://www.buzzardsbay.org/salt-marsh-expansion-slr.html>.

At the request of EPA, the Buzzards Bay NEP amended its FY12 Cooperative agreement workplan with a new task, a Climate Ready Estuary planning effort to evaluate impacts to clean water act and habitat impacts to infrastructure in the greater New Bedford area. On February 26, 2013, we received final approval for a grant amendment for \$25,000 to evaluate and plan for climate change impacts (sea level rise and increased precipitation) to New Bedford's coastal and Clean Water Act-related infrastructure (e.g. the wastewater and stormwater drainage systems). Attached is the approved workplan task. We will set a meeting with New Bedford and Fairhaven later this month to finalize a contract scope. The indirect rate on this task will be amended.

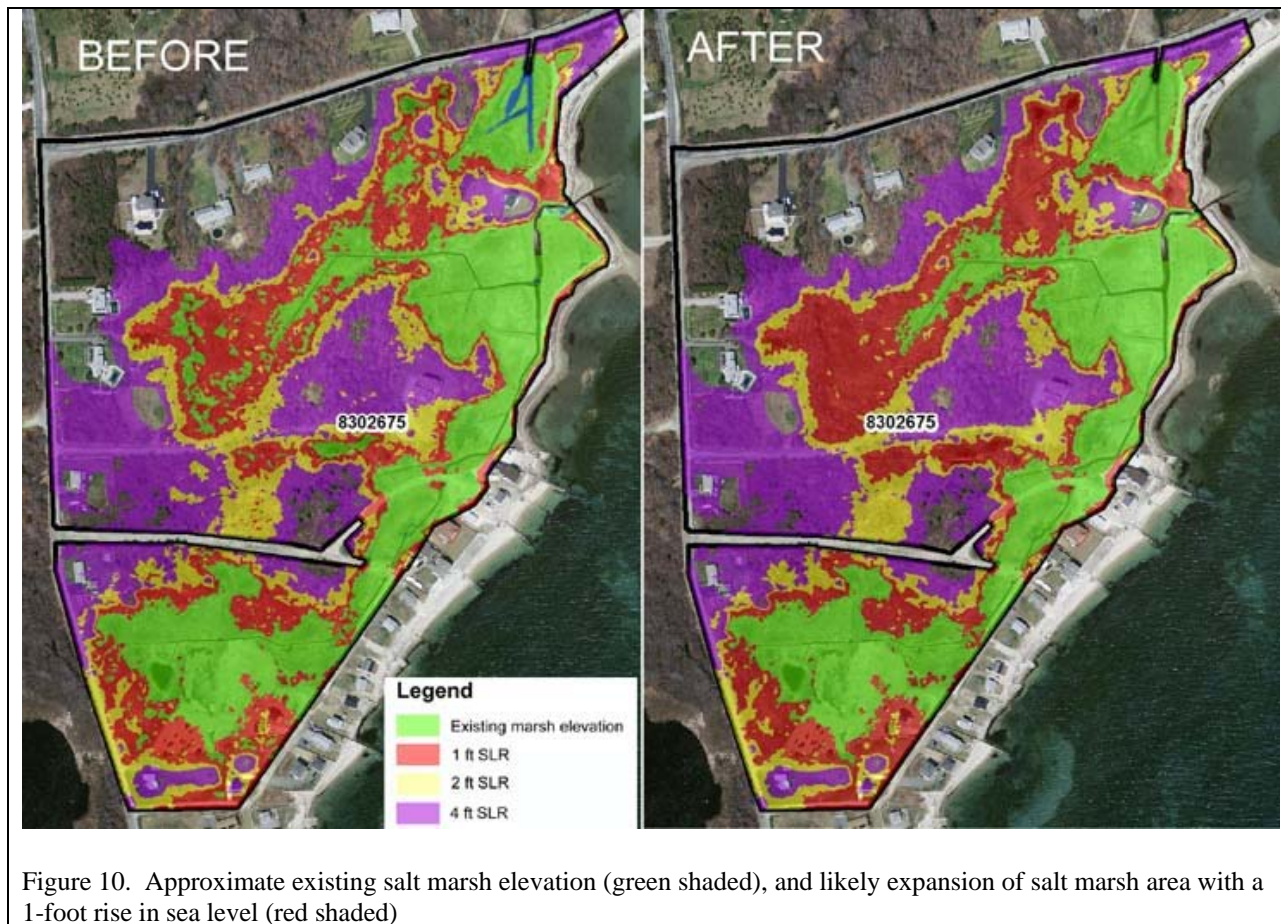


Figure 10. Approximate existing salt marsh elevation (green shaded), and likely expansion of salt marsh area with a 1-foot rise in sea level (red shaded)

### 2012 Leveraged Funding (Federal FY11 Workplan funds)

Each September, the Buzzards Bay National Estuary Program submits to EPA, as part of our Government Performance Reporting Act requirements, a summary of state, federal and local dollars and in-kind services leveraged by the Buzzards Bay NEP, or leveraged by our partners with technical support by the Buzzards Bay NEP, in support of the implementation of the Buzzards Bay CCMP. Some funds are leveraged through the municipal grant program; other funds are leveraged through other grant programs with our partners. For the period October 1, 2011 to September 30, 2012, the Buzzards Bay NEP's leveraged funds in the primary or significant category totaled \$1,586,556 and \$3,523,700 million respectively.

NEP Role (primary, significant, or support)	Total
Primary	\$1,586,566
Significant	\$3,523,700
Grand Total	\$5,110,266

We will report our FY12 2012-2013 leveraged estimates to EPA in the fall 2013.

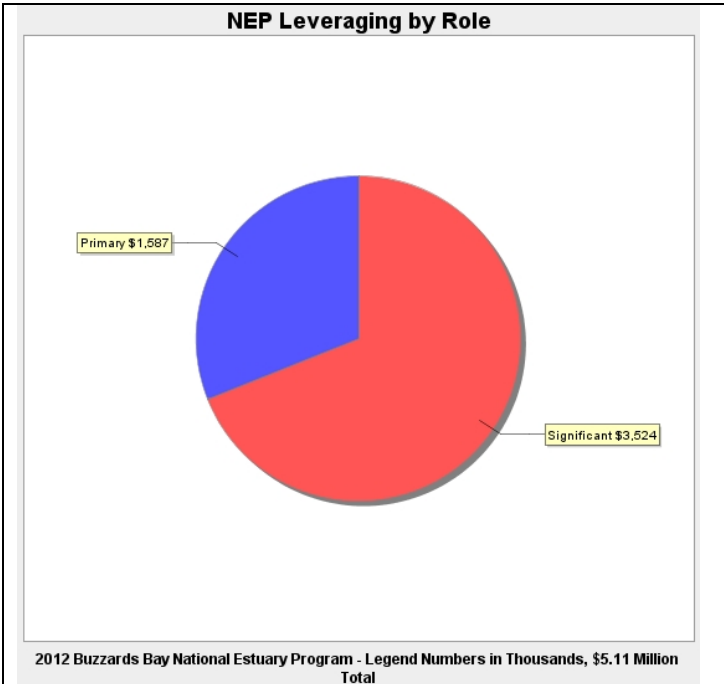


Figure 11. BBNEP funds leveraged as reported in the 2012 GPRA report to EPA.



## **Section 3: FY2013 Funds Work Plan Narrative Summary**

### **Federal FY 2013 Tasks (July 1, 2013 to June 30, 2014)**

We have organized the work plan narrative summary using our past work plan structures for the most part and EPA's recommended logic model to the greatest extent possible. In this effort, we have conformed to EPA's terminology defined as follows:

- Activities: NEP work plan projects;
- Partnerships: involvement of local community partner agencies, organizations and/or individuals;
- Outputs: products and services resulting from the work plan (i.e., deliverables);
- Short-term outcomes: changes in knowledge, learning, attitude, and skills; raising awareness amongst targeted NEP partners and stakeholder groups;
- Intermediate outcomes: changes in behavior, practice, decisions and involvement among targeted NEP partners and stakeholder groups;
- Pressures: changes, positive and/or negative, related to specific quantitative targets (e.g., percent of nitrogen reduction); and
- Long-term outcomes: changes in condition of the state, when possible.

### **Task 1 - Wetland Restoration and Open Space Protection and Restoration**

#### **CCMP/Work Plan Goal(s):**

Wetlands and habitat protection and restoration in the wetland action plans and the land use management action plans principally. (Sub-element: Habitat, Water Quality, Living Resources, Healthy Communities. Program goal: Ecosystem Restoration & Protection)

#### **Project/Activity Purpose and Description:** (ongoing)

As we have done in the past, the Buzzards Bay NEP will continue to work and collaborate with the Buzzards Bay Coalition, as well as with area land trusts, in our ongoing effort to protect and restore valuable wetlands, and upland wildlife habitat throughout the Buzzards Bay watershed. Through this effort, the Buzzards Bay NEP will continue to provide maps, help develop state and federal grant applications, conduct land use analyses, and through the municipal grant program, provide funds for land protection purposes. Work related to this task will be principally generated through the municipal grant program and in response to requests by area lands trusts, municipalities, and the Buzzards Bay Coalition.

#### **Responsible Partners and Their Role(s):**

The Buzzards Bay Coalition and area land trusts are key partners in our combined efforts. These non-profits are vitally important in the development of grant applications, and in building local financial and political support for new initiatives. These non-profits also work with private landowners to become partners in these protection efforts.

#### **NEP Staff:**

Principal Staff involved in these tasks: Regional Planner will provide technical support to the Buzzards Bay Coalition and area land trusts. Additional support will be provided from other Buzzards Bay National Estuary Program staff, with guidance from the Executive Director, as well as with input from the Coalition Executive Director and area land trusts. The Executive Director, Regional Planner, and Administrative Assistant complete the GPRA report.

**Outputs/Products:**

1. Grant applications to state and federal grant programs.
2. Additional applications will be submitted to the BBNEP municipal grant program in support of these efforts.
3. The BBNEP may provide support to towns to complete outdated local open space plans (which expire every seven years).
4. The permanent protection of new open space with wetlands and other important habitat in the Buzzards Bay watershed through conservation restriction or purchase in fee.
5. Annual GPRA reports on wetland and habitat protected or restored will be submitted through the NEPORT website.

**Milestones:**

1. Report to EPA each September via GPRA report on the NEPORT website. Other projects and activities as financial or local interest opportunities arise. Projects undertaken through BBNEP municipal grant program must comply with schedules established by the grant awards. State land conservation grant eligibility (and other grant programs) varies with communities. Maps prepared for area Land Trusts as need and upon request.

**Budget:**

Staff costs and those funds in the municipal grant program that are competitively awarded under this category. Roughly \$2,000 in office supplies and paper, and printer ink are projected to be expended on the production of maps, brochures, and outreach information.

**Outcomes:**

Short-term: Increased number of habitat acres protected and restored, including geographic information systems location data.

Intermediate: Increased number of wetland and habitat related actions in the Buzzards Bay Comprehensive Conservation and Management Plan that have been completed. Increased leveraging of resources committed to Buzzards Bay NEP activities or towards implementation of CCMP goals and recommended actions. Increased number of acres of protected open land through purchase or easement.

Long-term: CCMP Goal: Long-term increase of high-quality wetlands and coastal habitat in the Buzzards Bay watershed.

Supports CWA core program: CWA and state wetland protection efforts.

**Task 2 - Buzzards Bay stormwater mapping, atlas and database update**

**CCMP/Work Plan Goal(s):**

Principally Stormwater Management, Shellfish Bed Restoration, Nitrogen Management, and Toxics Reduction.

**Project/Activity Purpose and Description: (ongoing):**

The BBNEP will continue its work to assist municipalities to map stormwater drainage networks for meeting the anticipated new Phase II MS4 permit, upon request.

**Responsible Partners and Their Role(s):**

Buzzards Bay municipalities.

**NEP Staff:**

Principal Staff involved in these tasks: Regional Planner, Stormwater Specialist and Executive Director.

**Outputs/Products:**

1. Updated GIS databases, made available on the program's website.
2. Maps and GIS shapefiles to be on the program's website.
3. Maps prepared for municipalities and others upon request.

**Milestones:**

1. New maps and shapefiles posted online as needed.
2. Other tasks completed upon request or as needed.

**Budget:**

Staff costs and those funds in the municipal grant program that are competitively awarded under this category. Roughly \$500 in office supplies and paper is expected to be spent on the production of maps for this task. Joint projects with towns under our municipal grant program require a minimum match of 33% of total project costs, however, actual match has averaged 3-4 times the grant awards, and is this basis of the current match estimate.

**Outcomes:**

Short-term: Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

Intermediate: Increased number of shellfish resource areas protected and restored. Decreased acres of shellfish beds that are closed and increased acres of temporarily closed shellfish beds over time (reduced closures indicates a positive environmental outcome). Increased number of actions in the Buzzards Bay Comprehensive Conservation and Management Plan that have been completed.

Long-term: CCMP goals: Stormwater 1) Prevent new or increased untreated stormwater flows to Buzzards Bay that would adversely affect shellfish harvesting areas, swimming beaches, water quality, and wetlands. Stormwater 2) Correct existing stormwater runoff problems that are causing or contributing to water quality degradation or shellfish-bed closures in Buzzard Bay. Shellfish restoration: Increase availability of shellfish resources for recreational and commercial uses.

Pressures affecting outcomes: Other tasks relating to local map preparation and data analysis, QA, and other technical assistance demands and requests by watershed municipalities affects the programs abilities to meet these projects.

Supports CWA core program: 1) developing total maximum daily loads (for bacteria), 2) controlling non-point source pollution on a watershed basis, 3) strengthening National Pollutant Discharge Elimination System permits, and 4) supporting sustainable wastewater infrastructure.

### **Task 3 - Stormwater Remediation and Technical Assistance**

#### **CCMP/Work Plan Goal(s): Ecosystem Restoration and Protection:**

Principally Stormwater Management, Shellfish Management, and Wetlands and Habitat action plans, secondarily Land Use, On-Site Septic System management plans.

#### **Project/Activity Purpose and Description: (ongoing)**

There are several ways the Buzzards Bay National Estuary Program provides assistance to towns on stormwater issues. First, we review stormwater designs proposed by towns for remediation projects, or at the request of a town board as part of local permitting or site plan review. Second, we help towns prepare grant applications for federal monies to help fund remediation of priority sites. Third, we assist towns to develop and implement stormwater management plans, like the Phase II MS4 NPDES municipal plans. Finally, we work with town boards to adopt local stormwater regulations and LID strategies.

#### **Responsible Partners and Their Role(s):**

Our principal partners on these projects are the watershed municipalities. Other partners may arise in the course of project revisions, collaborations related to MEPA permit submissions, or projects commencing that are of regional significance.

#### **NEP Staff:**

Stormwater Specialist will conduct the stormwater design reviews, the Wetlands Specialist will assist in the implementation of stormwater regulations and the Stormwater Specialist and Executive Director will develop federal grant applications and attend meetings as needed or opportunities arise.

#### **Outputs/Products:**

1. Products include stormwater plan updates, review and analysis of stormwater calculations.
2. Proposals to fund stormwater designs developed by municipalities, minimize impacts of new development, towns adopt improved stormwater regulations and policies.
3. Assistance in the completion of past projects including facilitation of permitting, including past projects where the BBNEP prepared preliminary stormwater treatment designs, or where the BBNEP completed stormwater designs.

#### **Milestones:**

Most products and activities in this technical assistance program arise and are completed as needed on an ad hoc basis, and as permit applications are submitted, or as towns express interest and have match available to apply for federal and state grants. Some activities are defined by stormwater grants in the Buzzards Bay municipal grant program. Other specific milestones from projects already initiated.

#### **Budget:**

The only costs are BBNEP staff time, including the \$40,000 annual cost of stormwater services from the Natural Resource Conservation Service. Joint projects with towns under our municipal grant program require a minimum match.

**Outcomes:**

**Short-term:** Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

**Intermediate:** Increased leveraging of resources committed to Buzzards Bay NEP activities or towards implementation of CCMP goals and recommended actions.

**Long-term:** Actions taken to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

**Pressures affecting outcomes:** Interest and local match availability. The BBNEP can handle requests for technical assistance depending upon workload and ongoing projects.

Supports CWA core program: 1) improving water quality monitoring, 2) developing strategies to meet Buzzards Bay total maximum daily loads (for bacteria), 3) controlling non-point source pollution on a watershed basis, 4) strengthening National Pollutant Discharge Elimination System permits, and 5) supporting sustainable wastewater infrastructure.

**Task 4 - BBNEP Technical Assistance and Municipal Grant Program**

**CCMP/Work Plan Goal(s):**

Technical Assistance and Capacity Building

BBNEP technical assistance and municipal grant program

May address Stormwater, Nitrogen, Shellfish, Wetlands and Habitat, Land Use, On-Site Septic Systems, and other action plans.

**Project/Activity Purpose and Description: (ongoing)**

The BBNEP will continue to promote restoration and protection projects through the management and facilitation of grants awarded through the municipal minigrant program, and to promote the use of these limited funds to leverage other funding. Administration of the project will be by the Executive Director, Regional Planner, Administrative Assistant, and a technical lead by the staff member most closely specializing in the area of the grant. Thus, all staff members will be involved to some degree in the minigrant program. The funds will be directed to tasks necessary to implement priority action plans in the Buzzards Bay CCMP, and will be identified after consultation with the Buzzards Bay Action Committee and other partners. BBNEP staff guide projects and often complete tasks and assist with permitting to facilitate completion of projects.

In an effort to ensure that federal funds are expended in a timely way to meet new federal policies, funds in the new cooperative agreement will be announced in an RFR that will close in the spring, with all projects completed by June 30 of the following year. In 2013, the RFR will be issued in May 2013 for an anticipated contract award date of August 2013.

**Responsible Partners and Their Role(s):**

Buzzards Bay municipalities are of course the key partners in this effort, and are the only entities eligible to receive direct funding. However, for stormwater design grants, the BBNEP directly contracts with engineering firms to expedite this task and to ensure better consistency with state stormwater policies. The Buzzards Bay Action Committee (BBAC) is a key partner in ensuring

continued interest and participation in the program. Moreover the BBAC helps the BBNEP target grant funding areas in the program. The Buzzards Bay Coalition sometimes partners with Buzzards Bay municipalities in developing state and federal grant applications.

**NEP Staff:**

Principal Staff involved in these tasks: Executive Director, Stormwater Specialist, Regional Planner, and Administrative Assistant, CZM and other staff as needed.

**Outputs/Products:**

Scopes developed, contracts awarded, press releases prepared, website updated with projects, projects overseen, projects completed, match documents received, and contracts closed.

**Milestones:**

1. RFR expected to be issued early May for next RFR round.
2. Grant applications received end of June 2013.
3. Grants awarded by September 15, 2013.
4. Contracts close June 30, 2014 with possible extension to December 2014 if required.

**Budget:**

Besides the cost of staff to oversee and assist in the completion of projects, a minimum of \$3,062 in federal FY13 Section 320 funds are dedicated to this effort. In addition, on April 23, 2013, the BBNEP Steering Committee directed approved a reprogramming of \$29,317.49 in last year's budget that became unallocated when the state reduced the indirect rate and fringe retroactively to July 1, 2012. These funds, together with a \$35,000 municipal grant that was returned because a municipality was unable to leverage a matching state grant. In addition, we did not award the full amount of funds available in last year's municipal grant program because no grant was eligible to successfully utilize the balance of \$16,080 remaining after award of the top six grants. (This balance includes an adjustment for the indirect rate on a second stormwater grant). These additions will result in a total of \$83,460 for the 2013 municipal grant awards.

**Outcomes:**

Short-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Intermediate: Increased leveraging of resources committed to Buzzards Bay NEP activities or towards implementation of CCMP goals and recommended actions.

Long-term: Actions taken to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: There are two principal issues that can delay this effort. First, the state may delay the award or release of funds for various reasons. Second, municipalities may have problems meeting grant schedules for various reasons and request extensions in their grant agreements.

This task may support any of these CWA core program: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling

non-point source pollution on a watershed basis, 5) strengthening National Pollutant Discharge Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

### **Task 5 - Program Oversight and Administration**

#### **CCMP/Work Plan Goal(s):**

Supports all program activities.

#### **Project/Activity Purpose and Description: (ongoing)**

The Buzzards Bay National Estuary Program Executive Director and Administrative Assistant and MCZM financial manager ensure administration of the EPA and other grants and ISAs awarded to the Buzzards Bay NEP.

The Buzzards Bay National Estuary Program will submit complete Government Performance Results Act (GPRA) report information to EPA as specified in the EPA Funding Guidance. The GPRA report for NEPs includes annual estimates of habitat and wetlands protected or restored, and annual estimates of funds leveraged in some way by the NEP. As a requirement of this agreement, the BBNEP will provide information on the GPRA performance measures to EPA by their required date.

#### **Responsible Partners and Their Role(s):**

The BBNEP parent agencies of MCZM and EEA are responsible for the fiduciary and financial reporting requirements of the BBNEP.

#### **NEP Staff:**

Principal Staff involved in these tasks: BBNEP Executive Director and Administrative Assistant, with additional support from the MCZM financial management assistant.

#### **Outputs/Products:**

1. Financial reports to EPA.
2. Preparation of work plans, cooperative agreements, grant amendments.
3. Steering Committee meetings needed to review the work plan.
4. Performance reports to EPA.

#### **Milestones:**

1. Account draw downs and reports as needed and required.
2. GPRA and leveraging reports due to EPA annually in September.
3. Draft 2013 work plan sent to Steering Committee in April 2013.
4. Approved Cooperative Agreement sent to EPA in June 2013.
5. EPA finalize award by 30 July 2013.

#### **Budget:**

The only costs are BBNEP staff time.

**Outcomes:**

**Short-term:** Increased leveraging of resources committed to Buzzards Bay NEP activities or towards implementation of CCMP goals and recommended actions.

**Intermediate:** Increase and improve upon the information that the Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public has for making management actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

**Long-term:** Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

**Pressures affecting outcomes:** Various administrative delays are possible at levels in the hierarchy.

This task does not directly support any CWA core programs.

**Task 6 - Buzzards Bay Citizen's Water Quality Monitoring**

**CCMP/Work Plan Goal(s):**

Principally Nitrogen Management, but also some assistance toward goals in Stormwater, Shellfish, Wetlands and Habitat, Land Use, On-Site Septic Systems, Sewage Treatment Facilities action plans.

**Project/Activity Purpose and Description: (ongoing)**

With its support from the BBNEP, Commonwealth of Massachusetts, citizens, dues, and other sources, the Buzzards Bay Coalition will continue its nationally recognized water quality monitoring program, which costs roughly \$200,000 annually. The Buzzards Bay National Estuary Program provides technical support and funding to the program (\$25,000 this year). The Buzzards Bay National Estuary Program and the Coalition use data collected by the Coalition program to advocate for nitrogen management in Buzzards Bay watershed communities, the data is used by DEP's Massachusetts Estuaries Project in the development of TMDLs. The Commonwealth of Massachusetts for a number of years provided between \$100,000 and \$150,000 annually toward this program that was used as match to our program, but this has been discontinued.

**Responsible Partners and Their Role(s):**

The Buzzards Bay Coalition is the lead for the program, and is responsible for meeting state and federal QAPP requirements. The BBNEP Regional Planner provides GIS products in support of the program. The BBNEP Executive Director coordinates with Coalition Executive Director on needed program support, and provides technical assistance and guidance on biannual water quality and related state of the bay products.

**NEP Staff:**

Principal Staff involved will be the BBNEP Executive Director, Administrative Assistant, Regional Planner, and other NEP staff as required.

**Outputs/Products:**

1. Annual data disks provided to the BBNEP.



2. Updates posted to Coalition and BBNEP website.
3. Electronic rainfall database maintained for evaluating impacts to water quality.

**Milestones:**

1. Coalition submits data for summer 2012 monitoring by June 2013.

**Budget:**

The only costs of Section 320 funds under this Cooperative Agreement with EPA is the separate \$25,000 award provided by the BBNEP, and some BBNEP staff time, and some supplies for map products. The Coalition's budget for the monitoring program is \$200,000.

**Outcomes:**

**Short-term:** Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed. Increase involvement of citizens to protect the natural resources of Buzzards Bay by actively empowering people to get involved and make a difference in the sound management and restoration of the Bay's resources.

**Intermediate:** Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay. The advancement in knowledge on the effects of nitrogen pollution and documentation of the condition of localized water quality throughout Buzzards Bay harbors in relation to nutrient loads from the watersheds. Provide external water quality data for the Massachusetts Department of Environmental Protection to assess water body health and develop cleanup plans for impaired waters.

**Long-term:** Maintain, and ideally increase, the number of acres of eelgrass habitat in Buzzards Bay through reduced nitrogen loading. Meet nitrogen action plan goals: 1. Ensure that no beneficial water uses will be lost, nor will ecosystems adversely affected by excessive contributions of nitrogen to any embayment within Buzzards Bay. 2. Restore any beneficial water uses and ecosystems lost or impacted by the excessive contribution of nitrogen to any embayment within Buzzards Bay.

**Pressures affecting outcomes:** Turnaround time in receiving data and data analysis from the Coalition's analytical laboratory.

This task supports these core programs: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling non-point source pollution on a watershed basis, and CWA and state wetland protection efforts.

**Task 7 - Environmental Indicators and Outcomes Tracking**

**CCMP/Work Plan Goal(s):**

All Action Plans.

**Project/Activity Purpose and Description: (ongoing)**

The US EPA requires an assessment of environmental “outputs” and “outcomes”, and a method to measure achievement of outputs and outcomes in our efforts to implement the CCMP, and to

meet our overarching goal to protect and restore water quality, wetlands, and habitat in Buzzards Bay and its surrounding watershed. The Buzzards Bay National Estuary Program defines environmental outcomes and preliminary indicators through its annual Government Performance Reporting Act submissions.

The Buzzards Bay National Estuary Program submitted its first report to EPA in October 2003, and continues to submit this information annually. To a large degree, the Buzzards Bay National Estuary Program will measure this work plan's outputs and outcomes based on annual reporting of work plan tasks completed, CCMP recommendations implemented, remediation projects completed, and our GPRA/environmental indicators reporting. Each work plan will contain a summary of tasks and measurable outcomes accomplished over the previous year, and tasks ongoing through program extensions.

To meet the need for environmental indicators reporting, the Buzzards Bay National Estuary Program has set up a Buzzards Bay “status and trends” webpage at [www.buzzardsbay.org/trends.htm](http://www.buzzardsbay.org/trends.htm). This page summarizes information tracked by the Buzzards Bay National Estuary Program and the Buzzards Bay Coalition that is needed to evaluate the long-term progress on key environmental indicators for Buzzards Bay, and builds upon work developed for the Coalition’s 2003 State of the Bay conference, and also the 2007 and 2011 State of the Bay reports (the latter issued in March 2012).

Specifically the Buzzards Bay National Estuary Program continues to track and monitor key environmental indicators to document the success of the CCMP. Besides the ongoing water quality monitoring program of the Coalition, DEP eelgrass data, together with new historical eelgrass information collated by the Buzzards Bay NEP, will help create a new eelgrass area tracking system posted on our website for Buzzards Bay embayments. This information will continue to be posted on our website in for some sites. Other data tracked by the Buzzards Bay National Estuary Program will be the percentage of stormwater discharges with some form of stormwater remediation implemented, tracking of CCMP accomplishments, ongoing monitoring of two key Buzzards Bay herring runs, and the ongoing tracking of protected open space and new land acquisitions.

To more readily transmit information collected through the citizen water quality monitoring program (see Task 12), the Buzzards Bay Coalition plans to continue to enhance its website to include annual updates of its water quality testing program to show individual trends for Buzzards Bay embayments. The BBNEP believes this is an important endeavor to enable citizens and managers to see trends in embayments they are most concerned with.

**Responsible Partners and Their Role(s): (ongoing)**

The Buzzards Bay Coalition is a key partner in this effort and is the lead in the collection and tracking of several data sets. The Massachusetts Division of Marine Fisheries is the lead agency in collecting and assessing shellfish closures, and provides this data to the Buzzards Bay NEP. The BBNEP coordinates closely with DMF in creating Buzzards Bay GIS shellfish bed closures.

**NEP Staff:**

Executive Director and Administrative Assistant.

**Outputs/Products:**

1. Annually updated shellfish bed closure maps for Buzzards Bay posted at the program's annual summary shellfish closure web page.

**Milestones:**

1. Shellfish bed closure map for the summer of 2013: Initiated August 2013, completed September 2013.

**Budget:**

The only section 320 funds are BBNEP staff time, with some supplies for map products. The Coalition's budget includes staff and outreach and publication costs.

**Outcomes:**

Short-term: Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

Intermediate: Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay. The advancement in knowledge on the effects of nitrogen pollution and documentation of the condition of localized water quality throughout Buzzards Bay harbors in relation to nutrient loads from the watersheds.

Long-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: Unanticipated demands on staff time.

This task may indirectly support any of these CWA core program: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling non-point source pollution on a watershed basis, 5) strengthening National Pollutant Discharge Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

**Task 8 - Outreach and Education**

**CCMP/Work Plan Goal(s):**

CCMP Actions: Will address Stormwater, Nitrogen, Shellfish, Wetlands and Habitat, Land Use, On-Site Septic Systems, Sewage Treatment Facilities.

**Project/Activity Purpose and Description (ongoing):**

The Buzzards Bay NEP's outreach and education efforts principally focus on the general public thorough the program's website, and to more directed efforts in support of municipalities through training workshops, participation in public meetings, preparation of brochures and handouts as requested by towns. Some of these specific actions are included in other tasks of this workplan.

In order to avoid redundancy of public outreach efforts in the face of diminishing funds and staff resources, the BBNEP relies on more the general public outreach of the Buzzards Bay Coalition<sup>1</sup>. The Coalition will continue to undertake outreach and education activities highlighting the condition and state of Buzzards Bay, progress toward restoration and protection goals, and collaboration with the Buzzards Bay National Estuary Program in their activities. These activities include the July 2013 Swim Buzzards Bay, October 2013 Buzzards Bay Watershed Ride, their annual meeting, press events, and various publications, including the annual report to their members. The annual swim consists of a 1.2-mile open water swim across outer New Bedford Harbor. It highlights the role a clean and healthy Buzzards Bay plays in the lives of watershed residents.

The Coalition will continue to maintain their website. The Coalition will also continue its advocacy efforts through their various programs.

Additionally, the Buzzards Bay Action Committee has expanded its efforts to include environmental education in local schools. They also provide relevant speakers to the members for their monthly meetings and host workshops for Mass CZM and the BBNEP. They have also expanded their website to include recent actions and accomplishments such as their Earth Day activities.

**Responsible Partners and Their Role(s):**

The Buzzards Bay Coalition and the Buzzards Bay Action Committee are our principal partners, but we may partner with other organizations. The BBNEP may also periodically prepare newsletter articles for MCZM's Coastlines magazine. The BBAC promotes increased awareness in their municipalities intra town networking, and they are also attempting to create a school education program.

**NEP Staff:**

Principal Staff involved will be the BBNEP Executive Director, and other NEP staff as required.

**Outputs/Products:**

Coalition and Buzzards Bay NEP websites. Coalition newsletter, flyers, posters, press releases, and reports to their members and residents about actions to protect and restore Buzzards Bay. Improved Buzzards Bay NEP website information, brochures, and flyers. Helped update the Buzzards Bay Action Committee website.

**Milestones:**

Both the Coalition and Buzzards Bay Action Committee have established schedules to meet their own goals and guidelines and are not included in this work plan.

**Budget:**

The only section 320 fund costs are the BBNEP staff time.

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<sup>1</sup> This strategy was agreed to as part of a 2005 Memorandum of Understanding between the Buzzards Bay NEP, Buzzards Bay Coalition, and the Buzzards Bay Action Committee.

**Outcomes:**

**Short-term:** Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

**Intermediate:** Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay.

**Long-term:** Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

**Pressures affecting outcomes:** Many of the Coalition outreach efforts evolve around specific projects that may occur in the future. Unanticipated demands on staff time.

This task will principally support this CWA core program: 4) controlling non-point source pollution on a watershed basis, but may also indirectly support 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 5) strengthening National Pollutant Discharge Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

**Task 9 - CCMP Update Finalization.**

**CCMP/Work Plan Goal(s):**

CCMP Actions: All.

**Project/Activity Purpose and Description: (ongoing)**

The Buzzards Bay National Estuary Program is in the process of finalizing the Buzzards Bay CCMP. The draft Final document was completed in the Fall of 2012 and sent to all Buzzards Bay municipal boards and partners for comment. The final CCMP approval process for 2013 will be defined by the NEP's Steering Committee.

**Responsible Partners and Their Role(s):**

MCZM, DEP, the Buzzards Bay Coalition, the Buzzards Bay Action Committee, the Executive Office of Energy and the Environment, and the US EPA will be key partners in the development and update of the new Buzzards Bay CCMP and Watershed Action Plan, but we may partner with other organizations, and the BBNEP may also periodically prepare newsletter articles for MCZM's Coastlines magazine.

**NEP Staff:**

The BBNEP Executive Director will be the lead NEP staff member, but all NEP staff will be involved.

**Outputs/Products:**

1. Final CCMP approved and distributed.

**Milestones:**

1. The BBNEP Steering Committee will meet in July 2013 to approve the final CCMP.

**Budget:**

The only costs are BBNEP staff time, and we will complete the document in house. However, personnel in other agencies and organizations will contribute drafts of sections. No funds are available for contractual support for this project. The time commitment from other contributors is not included in our match estimates.

**Outcomes:**

Short-term: Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

Intermediate: Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay.

Long-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the new CCMP/WAP will be finalized that will contain town-specific and agency-specific recommendations to protect and restore water quality and living resources in the bay and surrounding watershed.

Pressures affecting outcomes: Time constraints on the NEP director or other staff are the principal pressures affecting progress on this task.

This task may directly or indirectly support any of these CWA core program: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling non-point source pollution on a watershed basis, 5) strengthening National Pollutant Discharge Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

**Task 10 - Other Specialized Technical Assistance**

**CCMP/Work Plan Goals:**

Various action plans including nitrogen management, stormwater management, land use planning, and open space protection.

**Purpose and Description: (ongoing)**

The Buzzards Bay Comprehensive Conservation and Management Plan (CCMP) is largely a non-regulatory document, with most recommendations directed toward municipalities because they have the greatest authority and capacity to address the growth related and non-point source pollution problems facing the bay and watershed. As a result, since completion of the CCMP, the focus of the Buzzards Bay National Estuary Program has been to provide technical assistance, and where feasible, financial assistance to towns in their efforts to implement the CCMP.

Because municipalities often lack adequate technical staff to develop or implement many of the recommendations contained in the CCMP, since 1992, the Buzzards Bay National Estuary Program has been providing essential and much needed specialized technical assistance to municipal boards. This technical assistance not only focuses on specific initiatives funded with NEP, state and federal funds, but a wide range of CCMP issues as well. This task includes items not included in the above tasks.

In 2012, the Bouchard Oil Spill NRDA Trustees requested participation by the Buzzards Bay NEP in the formulation of a restoration plan to target the use of several million dollars in NRDA settlement funds. The Buzzards Bay NEP expects to continue to participate in this effort through 2013-2014 when the funds are finally released.

A major focus of the BBNEP during the past year was to participate with DEP on the technical review of Massachusetts Estuary Project (MEP) TMDL reports, including those outside the Buzzards Bay watershed. Our reviews focused on the clarity and consistency of the information contained in the reports, assumptions used in the model, and accuracy of the GIS data and spreadsheets in capturing what are the actual land uses and activities. These reviews involved appreciable time from both the Director and Administrative Assistant and affected the schedule of other tasks. This effort will continue in 2013 and 2014 at the request of DEP and the discretion of the Buzzards Bay NEP Steering Committee.

**Responsible Partners and Their Role(s):**

The Buzzards Bay Coalition, the BBAC, Buzzards Bay municipalities, other state and federal agencies.

**NEP Staff:**

All NEP staff work on these projects as needed or required.

**Outputs/Products:**

1. Provide specialized technical assistance to municipalities to promote low impact development, remediate stormwater discharges and adopt stormwater management strategies, promote better management of on-site septic systems and innovative wastewater systems; improve local wetlands and habitat protection, manage nitrogen loadings, prepare and adopt open space plans.
2. Identify new local actions needed to support the development of an updated Buzzards Bay CCMP and EEA Watershed Action Plan.
3. Encourage towns to take actions that both support the updated Buzzards Bay CCMP and EEA Watershed Action Plan.
4. Encourage towns to complete their Commonwealth Capital applications and to take environmental actions that will improve their score (e.g. adopting smart growth and low impact development policies and regulations).
5. Promote Low Impact Development and Smart Growth strategies and stormwater management in Buzzards Bay communities.
6. Help towns develop concepts, remediation strategies and help prepare grant applications to implement programs and projects to implement CCMP recommendations.

7. Promote better management of on-site wastewater systems and use of innovative technologies.
8. Help municipalities improve local wetlands and habitat protection through regulatory and non-regulatory approaches.

**Milestones:**

Depends on future projects that cannot be anticipated at this time.

**Budget:**

The only costs are BBNEP staff time.

**Outcomes:**

**Short-term:** Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

**Intermediate:** The advancement in knowledge on the effects of nitrogen pollution and documentation of the condition of localized water quality throughout Buzzards Bay harbors in relation to nutrient loads from the watersheds.

**Long-term:** Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

**Pressures affecting outcomes:** We provide technical assistance on a first come first serve basis and as allowed by available staff time.

This task may directly or indirectly support any of these CWA core program: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling non-point source pollution on a watershed basis, 5) strengthening National Pollutant Discharge Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

**Task 11 - Technology Transfer to Other Estuaries**

**CCMP/Work Plan Goal(s):**

All CCMP actions to some degree.

**Project/Activity Purpose and Description:** (ongoing)

The BBNEP director anticipates attending both the spring and fall NEP national meeting. The US EPA requires NEP attendance at out-of-state conferences, particularly the spring and fall National Estuary Program meetings. Because of financial limitations, only the NEP director will attend these meetings. The EPA imposes an annual meeting attendance requirement to the BBNEP and for the Buzzards Bay Coalition as a condition for receipt of funding for the citizen monitoring program in their grant with the US EPA. As part of the funding to the Coalition for water quality monitoring, the Coalition monitoring director will attend a national water quality meeting. The BBNEP director has also agreed to participate in Waquoit Bay National Estuarine Research Reserve Research Advisory Committee to help this NOAA sister program update its



management plan. Other meetings will be attended as required or by invitation.

**Responsible Partners and Their Role(s):**

The Buzzards Bay Coalition and the BBNEP send the appropriate staff to these meetings.

**NEP Staff:**

The BBNEP Executive Director or his designee will attend spring and fall NEP meetings. Other NEP staff may attend meetings as required by the Executive Director.

**Outputs/Products:**

1. Attendance at NEP meetings.
2. Presentations at out of state meetings.
3. Information transfer to Buzzards Bay communities.
4. Informational materials to area legislators.

**Milestones:**

Attendance of fall 2013 and spring 2014 EPA-NEP meetings at a minimum. Staff may also attend other national conventions (on planning, wetlands, and stormwater as budget, availability, and staff time allows.)

**Budget:**

The travel budget (\$3,698) covers all out of state meeting expenses, as well as all in-state travel of staff.

**Outcomes:**

Short-term: Information and lessons from Buzzards Bay transferred to other entities.

Intermediate: Increased involvement of citizens to protect the natural resources of Buzzards Bay by actively empowering people to get involved and make a difference in the sound management and restoration of the Bay's resources.

Long-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: Unanticipated budget shortfalls can require elimination of out-of-state travel.

This task does not directly support any CWA core programs.

**Task 12 - Website Maintenance and Innovation**

**CCMP/Work Plan Goal(s):**

Supports all activities, in particular outreach and education components.

**Project/Activity Purpose and Description:**

The Buzzards Bay National Estuary Program shall continue to maintain an independent website to assist the BBNEP to promote new approaches, receive feedback, communicate successes, track trends in water quality, performance of government in implementing the CCMP, express the views and concerns of the NEP Steering Committee, create a forum for new initiatives and

ideas of our partners, and support other obligations and tasks identified in this work plan. The website is also used to post results of the bay indicators and documents relating to the oil spill, and post procurement notices and grant announcements. The BBNEP has also been systematically scanning all old BBNEP reports and gray literature related to Buzzards Bay and posting it on our website.

**Principal Staff involved in these tasks:**

Executive Director, Administrative Assistant.

**Responsible Partners and Their Role(s):**

The BBNEP coordinates with the Buzzards Bay Coalition to ensure that each of our indicator and tracking pages are consistent where we provide overlapping information.

**NEP Staff:**

The BBNEP Executive Director is the web master and principal author of the website. Administrative assistant does much of the updating of data. Other NEP staff contributes to the site with specific documents and materials, and review.

**Outputs/Products:**

1. Posting of new web pages and documents.
2. Update of existing web pages.
3. Modify all pages and documents to meet state and federal requirements for Accessibility of the site for those with disabilities including W3C, WAI, and Section 508 compliance.

**Milestones:**

Updates and postings as need or required.

**Budget:**

The only costs are BBNEP staff time.

**Outcomes:**

**Short-term:** Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay.

**Intermediate:** Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

**Long-term:** Assists in advancing all CCMP goals

**Pressures affecting outcomes:** creation of new pages limited by time availability of the Executive Director (webmaster) to add new information and links.

This task does not directly support any CWA core programs but may indirectly 2) improving water quality monitoring, 4) controlling non-point source pollution on a watershed basis, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

## **Task 13 - Climate Change Vulnerability and Adaptation: Annual High Tides**

### **CCMP/Work Plan Goal(s):**

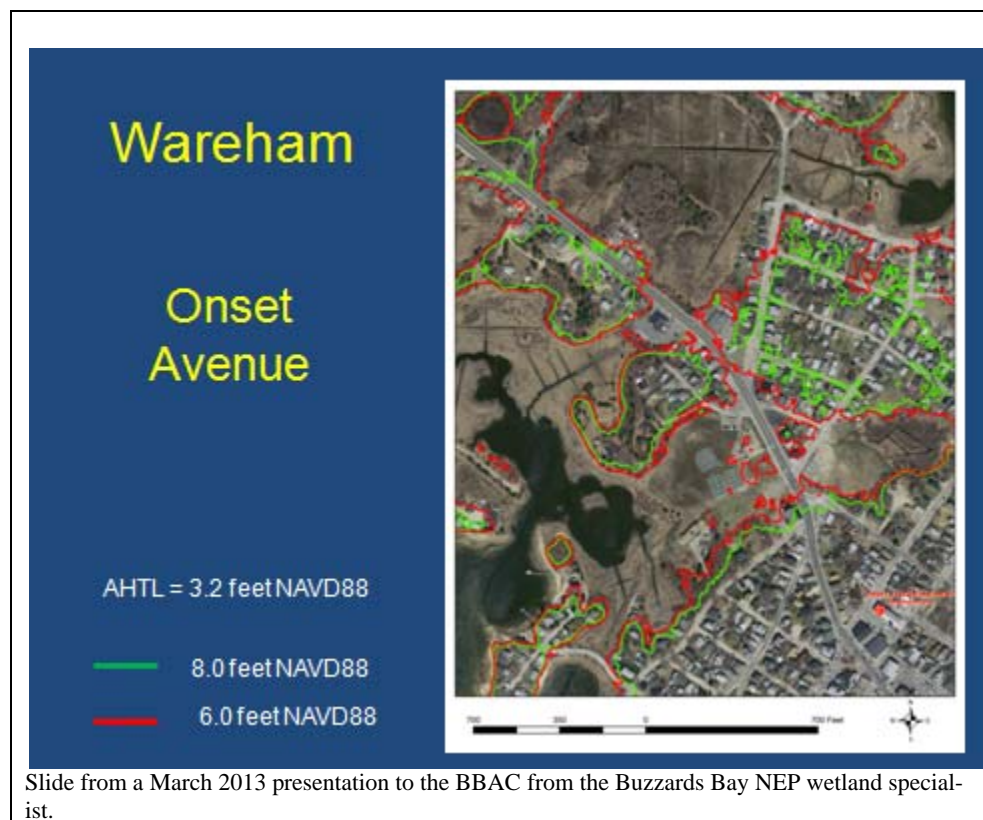
Supports principally the shifting shorelines action plan and a strongly encouraged FY13 funding guidance element.

### **Project/Activity Purpose and Description:**

#### **Mapping Annual High Tide Levels and Documenting King Tides**

Because of our mapping of the expansion of the floodplain and the migration of salt marshes inland with sea level rise, some additional needs and requests for information arose. First, from a regulatory point of view, elevations of mean high water, mean low water, and the annual high tide have very important regulatory implications for state and federal permitting of projects on the coast. The real world elevations of these markers actually change slightly around Buzzards Bay. Moreover, we have found these elevations and jurisdictional boundaries are often inaccurately or inconsistently delineated on site plans. One subtask in our new effort is to publish a report and post online elevation of tidal and land reference benchmarks from around Buzzards Bay (using the current elevation datum of NAVD88) for use by regulators and engineers in the watershed. Using LiDAR data we will also create coverages showing the approximate delineation of these areas in some sites.

The second subtask in this new task is to produce maps of each town showing the maximum annual high tide, together with an expansion of the annual high tide line with a 1, 2, and 4 ft increase in sea level rise. These maps will focus on showing what public infrastructure (roads, storm drains, pump stations) will be affected by rising sea level.



The maximum annual high tide is sometimes referred to as the "King Tide." In the final subtask, we will collect a photographic record of king tides affecting low-lying areas of Buzzards Bay. We will accomplish this task through a solicitation on our website, in cooperation with the BBAC and town officials, and possibly with support from Buzzards Bay Coalition members. This task

will help meet educational and outreach needs for our other climate change adaptation task.

**Principal Staff involved in these tasks:**

Executive Director, Wetlands Specialist Planner, Administrative Assistant.

Responsible Partners and Their Role(s): The BBNEP will coordinate with MCZM in its broader efforts under StormSmart coasts to avoid duplication of effort. The BBNEP will also coordinate with the BBAC on the watershed effort and with the selected community for the pilot project.

**NEP Staff:**

The BBNEP Wetland Specialist will be the lead on the GIS analysis, the regional planner will help prepare the report, and the Executive Director will post information on line. The Administrative Assistant will act as a liaison in gathering necessary data, and assist in report preparation. The Wetland Specialist will make a presentation to the Buzzards Bay Action Committee.

**Outputs/Products:**

1. Presentation to municipalities at Buzzards Bay Action Committee meeting.
2. Reports issued to municipalities.
3. Posting of King tide photographs to website.
4. Consolidation of the King tides webpage with other climate ready project webpages to a new subdomain website [climate.buzzardsbay.org](http://climate.buzzardsbay.org).

**Milestones:**

Begin the inundation evaluation in March 2013.  
Draft project report issued in July 2013.  
Photo of King tides posted to web by September 2013.  
Presentation to municipalities December 2013, report finalized.

**Budget:**

The only costs are those of BBNEP staff time.

**Outcomes:**

Short-term: Improved public and governmental understanding of the vulnerabilities of Buzzards Bay to sea level rise through maps and GIS data, and to understand likely tidal inundation zones for planning and adaptation.

Intermediate: This information can assist towns to develop adaptation strategies and plan for habitat restoration and land acquisitions.

Long-term: Assists in advancing the goals contained in the Shifting Shoreline Action Plan.

Pressures affecting outcomes: time limitations due to other projects and unanticipated new tasks.

This task supports CWA wetland restoration goals and also supports the agency's overall goals for all levels of government to develop adaption strategies to address climate change and sea level rise, and planning for adaptation.

## Section 4: Budget Detail and Explanation

This workplan is an amendment to the existing Cooperative agreement, and the previous three-year cooperative agreement will be closed out after the ongoing municipal grants and other tasks are closed out. The new budget is summarized according to these EPA grant categories.

Table 4. Summary of expenditures by EPA Grant category

EPA Category Summary	FY2012
Separate COOP: Coalition WQ Testing	\$25,000
Personnel	\$286,591
Fringe	\$79,099
Contractual: NRCS Stormwater Staff	\$40,000
Other: Municipal Grants non-stormwater	\$3,062
Other: Rent, cleaning, State Fees	\$36,509
Supplies	\$5,124
Travel	\$3,698
Indirect	\$32,917
TOTAL	\$512,000

### Federal FY13 Funds Budget Notes

#### Personnel

The FY13 budget is summarized in the table and pie chart in Figure 12. Personnel costs are based on the following staffing levels: Executive Director- full time, Administrative Assistant- 4/5 time; Regional Planner- 3/4 time; Wetland Specialist: full time.

#### WQ Testing

The Buzzards Bay Coalition WQ monitoring funding (\$25,000) is not included in this Cooperative Agreement, but will be provided to The Coalition under a separate agreement.

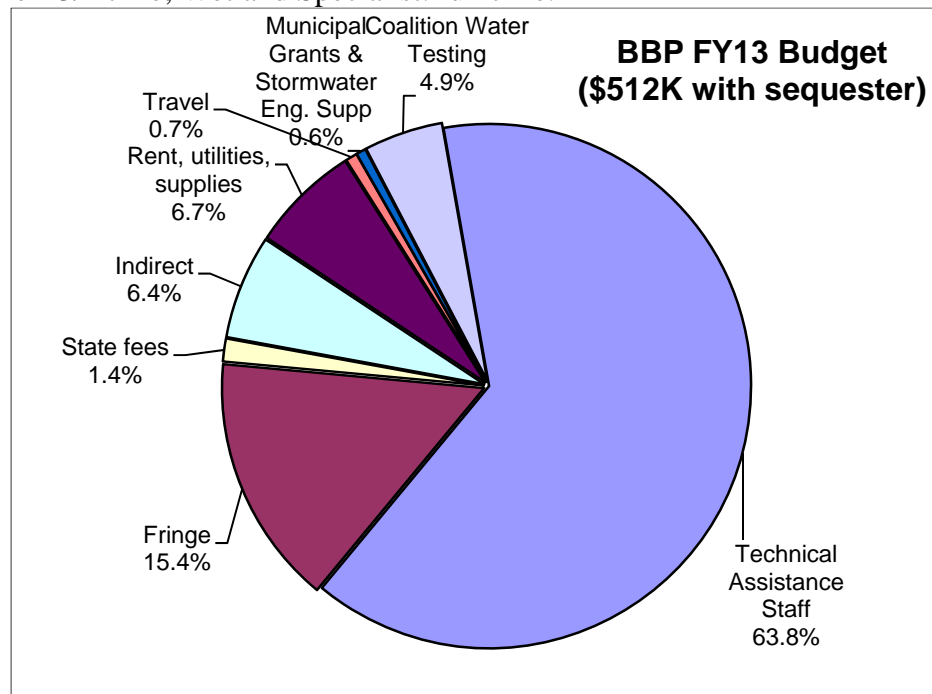


Figure 12. Pie chart of FY13 federal budget award summarized by functional categories.

## **Section 5: Match to the Cooperative Agreement**

Below is a summary of the \$487,757 match that is being provided to meet the match requirement under this Cooperative Agreement to the Commonwealth (\$487,000 required). The largest portion of the match is provided by the Buzzards Bay Coalition programs followed by the municipal grant program. The Buzzards Bay Coalition, which last year had an operational budget of over \$1.4 million, works in a close partnership with the Buzzards Bay NEP on a number of tasks, including application of the water quality testing program, and work in support of wetland and habitat protection and restoration. The Buzzards Bay Coalition also provides a vital role in assisting communities to develop applications to the Buzzards Bay municipal grant program. Another important contributor to the match total are the cash and in kind and cash contributions from the member communities of the Buzzards Bay Action Committee. These collaborations have led to a very high rate of leveraging in our municipal grant program continues to represent one of the core of the match to our cooperative agreement.

### **1) Buzzards Bay Coalition Water Quality Monitoring Program (\$157,902).**

For the past decade, the Coalition secured nonfederal funds through grants, member's dues, state earmarks, and donations to support its water quality monitoring program and related outreach.

The cost of the core elements of this program (staff, publications, contractual laboratory testing services, and supplies) approaches \$180,000 per year. The core program elements plus the volunteer time increases the value of the program to more than \$250,000. We have estimated this volunteer time at \$89,172 and is based on \$26.84/hr<sup>2</sup> x 121 volunteers x 28 hours per season which is underestimate since most volunteers contribute 40 hours per year.

Our match under this agreement (\$157,902) includes these specific expenditures of the program: a small portion (\$2,000) of the director of monitoring salary which is not used as match to the companion grant, contractual laboratory analyses and volunteer estimate (\$140,616), other (\$1,880), supplies (\$9,052), and travel (\$4,354).

The match to the Buzzards Bay Coalition's separate \$25,000 award will be met by an equal portion of the salary of the Buzzards Bay Coalition's director of monitoring which totals \$52,000.

### **2) Municipal support to BBAC (\$10,400).**

The municipalities of Buzzards Bay pay \$10,400 per year to the Buzzards Bay Action Committee to support projects to implement the Buzzards Bay CCMP. These funds pay the costs of a part-time Executive Director, defray organization costs, helped fund a school education pilot program, and pay for meeting and workshop expenses.

### **3) BBAC, CCMP, and workshop meetings (\$14,300).**

The BBAC is composed of high level municipal officials, generally Selectmen, Town Administrators, or Department heads that meet monthly (12 municipalities, about 10 officials typically attend, at 8 meetings per year for 2 hours per meeting. The average hourly rate assigned to these municipal officials is estimated to be \$65 per hour.

In addition to these meetings, the Buzzards Bay NEP will hold workshops and CCMP develop-

ment meetings, as part of BBAC meetings, or special meetings that will include town officials. We expect on average 20 municipal officials (excluding consultants or private citizens that may also attend these meetings). At least 2 of these meetings will be held, primarily in the summer and fall of 2013, and in partnership with MCZM. These municipal official contributions will also be valued at \$65 per hour.

The purpose of these meetings is to discuss CCMP implementation, specific progress on projects, and coordination with the Buzzards Bay National Estuary Program and Buzzards Bay Coalition. In the coming year, time will be set aside at each BBAC meeting to discuss an action plan topic as part of the planned re-write of the CCMP. The BBNEP conservatively estimates a minimum of \$14,300 match from these activities.

#### **4) Municipal Match to BBNEP grants (\$201,575).**

The BBNEP mini-grant program generates a minimum required match because the project requires a 25% match of total project cost (=33% of award). However, because match is a selection factor in the granting project, and because land acquisition projects often exceed the required match by multiple factors, we expect to easily achieve a match of \$199,857.

#### **5) Other Coalition support: education programs and land conservation programs (\$103,598).**

The Buzzards Bay Coalition's annual operational budget exceeds \$1.4 million and includes a wide range of activities that compliment this work plan. These activities include public education and outreach initiatives and publications, water quality data management updates for their website, in-stream monitoring program, oil spill area contingency plan updates with municipal officials, newsletters and events that include the cost of Director, outreach staff, and communication costs. The applicable matching amounts support and coincide with the BBNEP tasks identified in this work plan.

The Coalition also has vigorous land protection program to encourage Bay-focused watershed land protection, empower local land trusts, and educate private landowners about land conservation options. These efforts are supported by foundation and donor-supported programs, and include several staff members and has outreach costs. Expenditures under this program by The Coalition, especially land acquisition, continue to represent a large portion of this non-profit's expenditures. The activities support a key goal of the Buzzards Bay CCMP, the protection of wetlands, habitat, and open space to protect water quality, and living resources. Publicly accessible open space also helps build support for other environmental initiatives of both our programs. Coalition works with landowners, land trusts and town officials to encourage Bay-focused watershed land protection, empower local land trusts, and educate private landowners about land conservation options.

The Buzzards Bay National Estuary Program is a key partner with the Coalition, preparing hundreds of maps and conducting GIS land use evaluations for targeted acquisitions. Our support is integral in the Coalition's outreach for their program, and has helped the passage of municipal town meeting legislative articles in support of conservation land acquisitions.

The Coalition will provide a portion of 5 staff salaries from the land and watershed protection

and education programs as well as travel expenses as match.

Proposed MATCH (non-state)	Total	Personnel	Fringe	Contractual	Other	Supplies	Travel	Indirect	TOTAL
1. Coalition WQ Monitoring Program (1)	\$157,902	\$2,000		\$140,616	\$1,880	\$9,052	\$4,354		\$157,902
2. BBAC dues	\$10,400			\$9,400		\$1,000			\$10,400
3. BBAC, other municipal meetings, workshops	\$14,300	\$14,300							\$14,300
5. match to BBNEP minigrants (3)	\$201,757				\$201,757				\$201,757
6. Coalition education and land conservation programs (2)	\$103,398	\$101,698					\$1,700		\$103,398
<b>Summary</b>	<b>\$487,757</b>	<b>\$117,998</b>	<b>\$0</b>	<b>\$150,016</b>	<b>\$203,637</b>	<b>\$10,052</b>	<b>\$6,054</b>	<b>\$0</b>	<b>\$487,757</b>
<b>local (municipal, NGO total)</b>	<b>\$487,757</b>								

Footnote 1: The value of personnel is based on that portion of the the salary of the water quality monitoring coordinator (\$52,000) not used as match to the companion grant (\$25,000). Contractual are costs related to the laboratory services for the water quality testing program (\$51,444), plus the value of volunteers (\$89,172). The value of volunteers is based on 121 volunteers x \$26.32 (see [http://www.independentsector.org/programs/research/volunteer\\_time.html](http://www.independentsector.org/programs/research/volunteer_time.html)) x 27 hours per season. This represents an underestimate of CBB volunteer time. We estimate actual average time per volunteer as more than 40 hours per year with retraining and samplings times for participants in the regular monitoring program (22 oxygen samplings and 4 nutrient samplings), but as little as 6 hours per year for a minority of volunteers who sample only the four nutrient dates. Travel includes both in-state and out-of-state estimated reimbursements. Supplies includes chemicals, replacement and new test kits, sampling devices and repairs, handheld monitoring devices, and a wide range of support materials related to the operation of the program. Other includes postage, printing, and program insurance.

Footnote 2: Portions of Buzzards Bay Coalition Staff in these positions: VP Education & Public Engagement (\$55,000) VP Watershed Protection (\$50,000), Director of Land Protection (\$40,000), Communications Specialist (\$40,000), Director of Land Protection (\$49,000), and Restoration Specialis (\$45,000) .

Footnote 3: Based on match expected on reprogrammed money and expected large match contributions related to land acquisitions.

## Section 6: Reprogramming of FY12 Funds:

This year's amendment to the cooperative agreement includes the reallocation of funds in the fringe benefit and indirect category due to a rate reduction for FY 12 (see Table 7). The workplan and budget as submitted had a fringe rate of 29.09%. The 2012 fringe rate was reduced to 26.60%, the indirect rate was 20.05% and was reduced to 11.31%. These reductions resulted in a savings of \$29,317.49. On April 23, 2013 the Buzzards Bay Steering Committee approved the reallocation of these funds to the next round of minigrants.

Additionally, the \$25,000 amendment will have a shift in budget categories due to the reduction in the indirect rate. This will increase the value of the contract we issue for the climate ready estuary task for New Bedford harbor.

Budget Category	Original Amount	Revised Amount
Contractual Services	\$19,987	\$22,172.50
Indirect	\$5,013	\$2,827.50



The current (FY12) indirect rate is 11.31% which may be renegotiated at a later date and could affect the FY13 workplan budget after it is approved and enacted by EPA.

Table 7. Reallocation of Funds from FY12					
EPA categories	FY12 original	Climate Ready Estuary Amendment	Reprogram	FY12 New	Comments
Personnel	\$277,628		\$0	\$277,628	FY11: contract step approved.
Fringe	\$80,762		(\$5,052.83)	\$75,709.17	The fringe rate was reduced from 29.09% to 26.60%.
Contractual- NRCS	\$40,000		\$0	\$40,000	
Climate Ready Estuary Amendment		\$19,987	\$2185.50	\$22,172.50	
Municipal Grants-Stormwater	\$20,000		\$0	\$20,000	
Municipal Grants-Non-Stormwater	\$51,550		\$29,317.49	\$80,867.49	Excess funds redirected to municipal grants.
Other - program costs	\$34,679		\$0	\$34,679	
Supplies	\$3,316		\$0	\$3,316	
Travel	\$3,698		\$0	\$3,698	
Indirect	\$60,567		(\$24,264.67)	\$36,302.33	The indirect rate was reduced from 20.05% to 11.31%
Indirect on Climate Ready Estuary Amendment		\$5,013	(\$2,185.50)	\$2,827.50	The indirect rate was reduced from 20.05% to 11.31%
Redirect to CBB Grant	\$25,000		\$0	\$25,000	
TOTAL Federal Funding	\$597,200		\$0	\$622,200	

## Section 7: Buzzards Bay NEP Staff

Dr. Joe Costa is Executive Director of the Buzzards Bay NEP. Besides overseeing and administering the Program, he provides technical assistance on nitrogen loading assessment and management, water quality analysis, watershed planning, build-out analysis, data analysis, and software support. His research in Marine Ecology, particularly nitrogen loading effects on eelgrass beds and coastal ecosystems has been put to use in the Coalition's citizen monitoring program and the NEP's nitrogen management approach. The director is also the program's webmaster.

John Rockwell did a Master's thesis on wetlands delineation techniques, and as a former conservation agent, conservation commission chair, and MACC board member, he brings with him a

wealth of experience on wetland protection. John conducts workshops, drafts bylaws, and conducts wetland delineations for towns.

Bernadette Taber is an employee of the USDA Natural Resource Conservation Service and has been detailed to the Buzzards Bay National Estuary Program office since 1991. She evaluates and develops engineering solutions for stormwater remediation in both agricultural and urban environments. She has reviewed many engineering plans at the request of Buzzards Bay municipalities, and has also developed the preliminary designs identified in many Buzzards Bay National Estuary Program and town grant proposals.

Tracy Warncke is the Buzzards Bay NEP's Administrative Assistant (4/5 time). She not only handles administrative duties including federal grant administration at the Buzzards Bay National Estuary Program office and updates data for the website, but also has designed many reports, brochures, and fact sheets for the NEP and municipalities alike. Tracy spent four years with the Bourne Board of Health testing water for fecal coliform bacteria, experience she has put to work at the BBNEP.

Sarah Williams is the NEP's Regional Planner (3/4 time). She provides assistance to municipalities on land use and watershed planning, land conservation, buildout analysis, habitat restoration, and mapping. She is a coordinator between the towns and the Buzzards Bay National Estuary Program on our Municipal Grant Program, and is preparing the NEP's regional open space plan. Sarah was also a former member of the Fairhaven-Acushnet Land Preservation Trust and Fairhaven Conservation Commission, and brings this valuable experience to bear on her activities.

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