

Buzzards Bay National Estuary Program

Implementation Activities

Federal FY 11 Funds Work Plan and Budget

Pursuant to Section 320 funding under a new Cooperative Agreement with the US EPA

For work beginning July 1, 2011 to June 30, 2012

Last modified: June 6, 2011

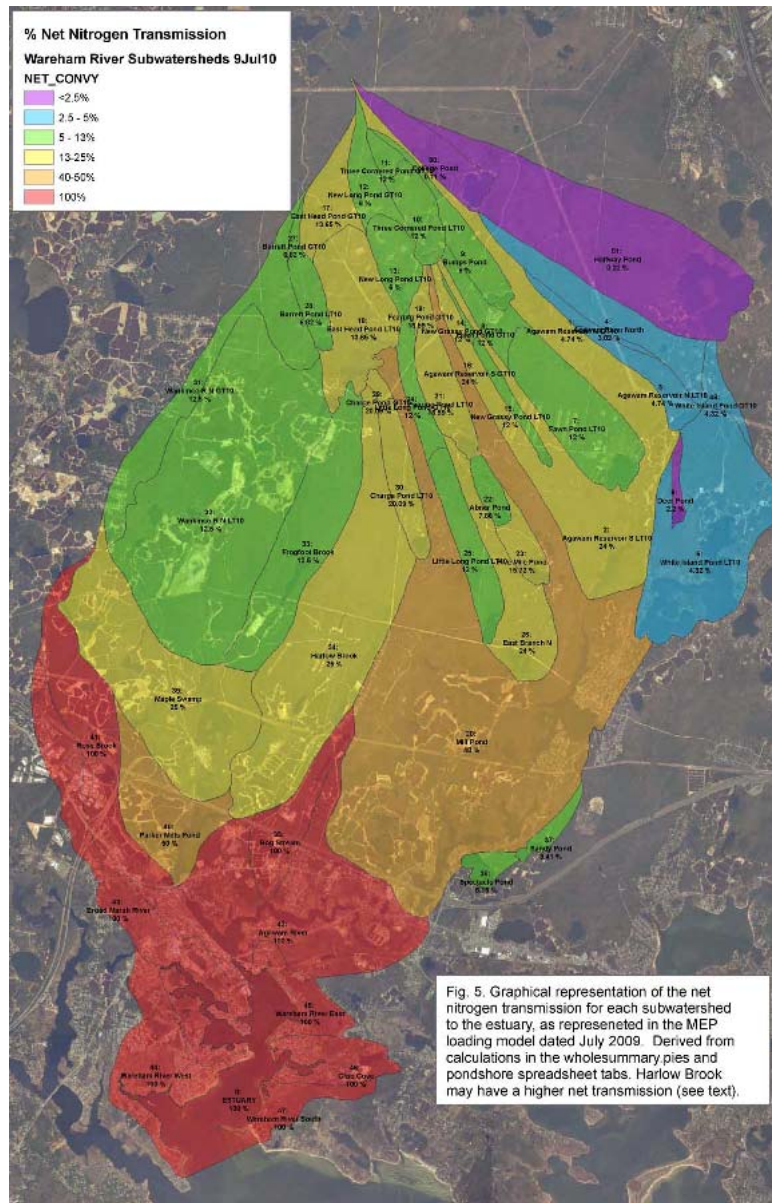


Table of Contents

Table of Contents	2
Section 1: Introduction and Overview	3
Section 2: FY10 Workplan Highlights and Accomplishments	4
Section 3: FY2011 Funds Work Plan Narrative Summary	15
Section 4: Budget Detail and Explanation	35
Section 5: Match to the Cooperative Agreement	39
Section 6: Planned Closeout of Previous Cooperative Agreement	42
Section 7: Buzzards Bay NEP Staff	44
Appendix I. Index of Tasks	46

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 [\$598,800] in Clean Water Act Section 320 funds. For this work plan funding, the US EPA is establishing a new 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 \$573,800 (\$598,800-\$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 Buzzards Bay Citizen Water Quality 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.

FY11 Budget Overview

Federal FY 11 Funding	\$598,800
Base Funding (less Coalition Funding)	\$573,800
Coalition Water Quality monitoring*	\$25,000
Match (\$573,800 required)	\$574,800
* match to Coalition funding provided through that organization	

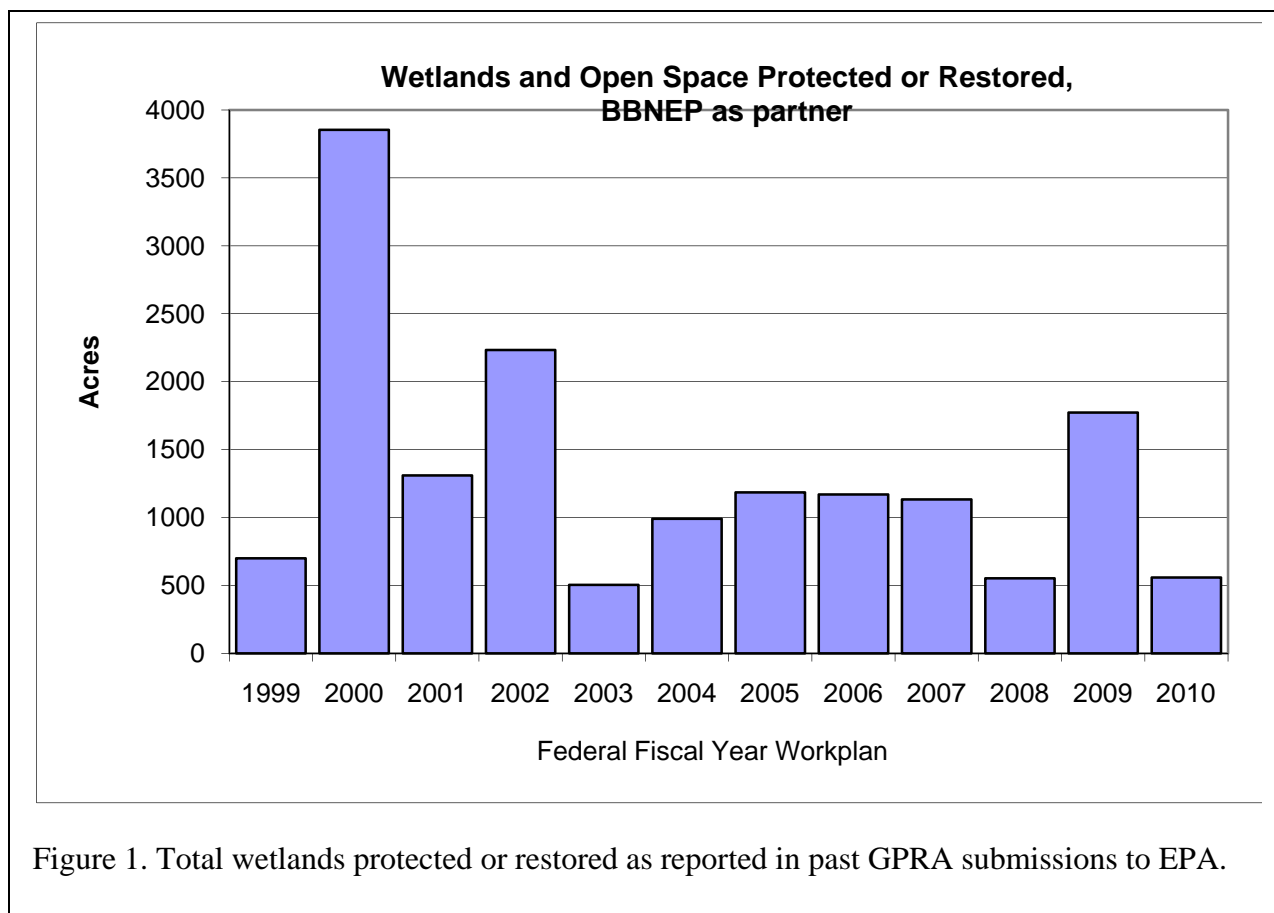
Section 2: FY10 Workplan Highlights and Accomplishments

Status of FY2010 Workplan, July 1, 2010 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 worked and collaborated with the Buzzards Bay Coalition, as well as with area lands 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 provided maps, helped develop state and federal grant applications, conducted land use analyses, and through the municipal grant program, provided funds for land protection purposes. Of special note was the coordination among Buzzards Bay municipalities and the Buzzards Bay Coalition in the protection of hundreds of acres in the Mattapoissett River Watershed. The success of this ongoing effort explains why 4,800 acres of wetlands and other important habitat were protected during the past four years in the Buzzards Bay watershed (Figure 1).



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. Work included the completion of a Fern ID pocket guide.

The Coalition completed the purchase of 54 acres of forest bordering the Mattapoissett River. The land, which includes over a quarter mile of frontage along the Mattapoissett River, is a critical piece of the plan to protect the water quality in one of the largest tributaries of Buzzards Bay. The property will eventually be transferred to the Town of Marion for the protection of drinking water resources. The Mattapoissett River Valley aquifer is a critical source of drinking water for more than 24,000 people in the towns of Rochester, Marion, Mattapoissett, and Fairhaven, making protection of lands in this area regionally important. This particular piece of land has been a priority for acquisition and protection for the Town of Marion for over a decade as the property abuts one of Marion's drinking water supply wells located in the Town of Rochester.

In Wareham's Fall Town Meeting, residents voted to appropriate funds from the Community Preservation Fund and to acquire 48-acres on the Weweantic River. The land sits adjacent to the Fearing Hill Conservation Area which the Coalition helped the town and Wareham Land Trust acquire in 2002. Between the two parcels, more than a mile of riverfront land is being permanently protected and made available for the public's use and enjoyment.

With a grant from American Rivers, the Coalition contracted a specialized engineering firm to analyze how to address the crumbling and dangerous Hathaway Pond Dam. The analysis indicated that removing the dam entirely is the most cost effective and environmentally beneficial option and that it would not harm adjacent cranberry bog operations. The Coalition is now moving forward with a plan to acquire the property and take down the failing dam.

The Town of Fairhaven was awarded a grant of \$254,200 to permanently protect 59 acres of land along New Boston Road in the Mattapoissett River Drinking Water Aquifer area. The Local Acquisitions for Natural Diversity (LAND) Grant is a matching grant program from the Massachusetts Executive Office of Energy and Environment. The Town has appropriated the required match from Community Preservation Act Funds for this project. The Buzzards Bay Coalition was integral in working with the Town to apply for the grant and applauds the Commonwealth for supporting land protection along the South Coast. The BBNEP created the maps for this proposal.

In a special Town Meeting held in Mattapoissett residents voted overwhelmingly in support of an article authorizing the Board of Selectmen to acquire the over 60 acre property along Acushnet Road in the Mattapoissett River Drinking Water Supply Area. The goal of the project would be to protect the land for drinking water and river conservation. At the meeting the Board of Selectmen explained that this action by the town enables the Coalition to leverage the necessary state and federal funds to acquire the land for preservation.

The Coalition assisted the Dartmouth Natural Resources Trust and the Town of Dartmouth in protection 22 acres fronting the Dike Creek Estuary off Apponagansett Bay by securing a grant to pay for the necessary survey costs. This was accomplished, in part by a grant from the

BBNEP. The landowner donated two conservation restrictions to the Trust and is preparing to donate an additional parcel.

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. Grants to New Bedford and Fairhaven, and occasional 319 grants from DEP like the Head of Westport stormwater project, continued to occupy staff in our collaboration with the projects, especially the review of draft designs and plans. New stormwater information, including additional data from the City of New Bedford, will be posted to the BBNEP website by June 30.

A \$15,000 BBNEP grant to the City of New Bedford for planning on how to treat stormwater discharges near public piers and wharves in the city's port was completed, and in 2012, the city is expected to apply for grant funds to finalize and implement designs. The city seeks to reduce stormwater pollutants in its harbor as part of its "green port" initiative. City officials will use the funds to evaluate seven candidate treatment sites, and develop stormwater treatment designs for the top candidates.

Task 3 - Stormwater Remediation and Technical Assistance

The Buzzards Bay National Estuary Program continues to provide assistance to towns on stormwater issues. During the past year, the BBNEP worked with Westport Planning Board and the New Bedford DPW to adopt LID stormwater regulations. Both entities were provided drafts, and both are expected to promulgate regulations in some form during 2011.

A \$10,000 BBNEP grant to fund a program to evaluate stormwater discharges to Little Bay, Nasketucket Bay and connecting streams, which are all designated as impaired and closed to shellfishing. Fairhaven has hundreds of discharge pipes and culverts that discharge to wetlands and surface waters. The program aims to identify the most problematic discharge areas by evaluating stormwater runoff from residential and agricultural areas and collecting and analyzing water samples. Using the gathered information, the town applied for 319 grant funding to remediate pollution sources. Although they did not receive the grant in the past grant round, they are expected to improve the application, and seek funding in a subsequent grant round.

An important success during the past year was the fact that the Town of Westport, using stormwater designs developed with BBNEP guidance and funding, received a \$234,096 319 NPS grant to treat stormwater at the Westport Middle School using a variety of stormwater best management practices. This grant is ongoing.

The BBNEP has continued working with the Westport Planning Board to develop stormwater regulations that compliment the Board of Health Stormwater Regulations. We also began working with the City of New Bedford on stormwater regulations in support of their MS4 permit.

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. In the summer of 2010 the Buzzards Bay NEP closed out 5 grants totaling \$85,045.50 (Fairhaven \$30,148, Marion \$1,897.50, Bourne \$15,000, Rochester \$3,000, Wareham \$35,000. One grant to the Town of Marion for \$7,500 was returned unspent and \$20,000 for a stormwater discharge design for the town of Westport was also returned and will be added into the next grant round). Examples of projects funded by these grants are a survey and engineering of a fishway to the Cape Cod Canal that leveraged additional funds for planning and redesign by the ACOE, final engineering and construction costs of structural improvement to a fishway at Leonard's Pond in Rochester and funded design and permitting of a culvert replacement at Pico Beach in Mattapoisett. This culvert was listed in the BBNEP Atlas of Tidally Restricted Salt Marshes.

In the fall of 2010, the Buzzards Bay NEP through the Massachusetts Office of Coastal Zone Management and the Executive Office of Energy and Environmental Affairs, awarded \$282,512 in grants to seven Buzzards Bay watershed municipalities. More information on the grant awards is available at <http://www.buzzardsbay.org/funding> and is as follows:

- **Town of Wareham** - \$45,000 to protect 180 acres of land in the Plymouth-Carver Aquifer, the principal sole source of drinking water for a large geographic area. The property includes frontage on the Agawam River (Glen Charlie Pond) and contains some of the best remaining pine barren habitat on the North Atlantic coast of the United States.
- **Town of Mattapoisett** - \$45,000 to purchase three parcels of undeveloped land totaling 63.6 acres within the Mattapoisett River Valley Aquifer, which acts as a drinking water supply source for surrounding communities. The property includes 1,500 feet of frontage on the Mattapoisett River and over 1,000 feet of frontage on one of its tributaries, Tripps Mill Brook. Completion of this project will permanently protect wetlands, wildlife corridors, rare species habitat and water resources. This project is a component of a larger effort to acquire and protect 195 acres in the Mattapoisett River Valley.
- **Town of Marion** - \$45,000 to protect 54.2 acres of undeveloped land in the Mattapoisett River Valley Aquifer which acts as a drinking water supply source for surrounding communities. The property includes a ¼ mile of frontage on the Mattapoisett River and contains critical wetland habitats.
- **Town of Bourne** - \$45,000 to conduct the necessary survey, engineering and construction work to replace an existing culvert under Little Sandy Pond Road in Bournedale. The culvert acts as the sole access point into and out of the 376-acre Great Herring Pond and 90-acre Little Herring Pond both of which serve as herring spawning grounds. The replacement of this culvert will ensure migrating herring will have safe and available passage through this section of the herring run.

- **Town of Rochester** - \$45,000 to acquire and protect a 35-acre property on the Rochester/Marion town line. Acquisition of this parcel will provide a key link to over 750 acres of existing permanently protected land and will create a greenway from Mary's Pond in Rochester to County Road in Marion.
- **Town of Dartmouth** - \$6,500 to hire a contractor to digitize the 2009 assessors' parcel map changes, incorporate the assessors data into digital format, bring existing parcel data and updates up to state mapping compliance, and correct any discrepancies in the data.
- **Town of Fairhaven** - \$30,506 to acquire and protect an undeveloped 18-acre property within the Mattapoisett River Valley Aquifer, which acts as a drinking water supply source for surrounding communities. The property proposed for protection has nearly 1,700 feet of frontage on the Mattapoisett River. Protection of this property will reduce development pressure on the Mattapoisett River aquifer, preserve critical wetlands and rare species habitat and result in a block of 210 contiguous acres of protected land
- **Town of Rochester** - \$20,506 to acquire and protect an undeveloped 10.7-acre parcel within the Mattapoisett River Valley Aquifer, which acts as a drinking water supply source for surrounding communities. The property proposed for protection has over 600 feet of frontage on the Mattapoisett River.

The Buzzards Bay National Estuary Program continues to provide technical assistance to non-profits and municipalities in preparing permits for restoration projects and stormwater designs.

The Buzzards Bay National Estuary Program produced over 377 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 lands 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 and provide technical support to 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. Our work with towns to require nitrogen removal septic systems for new development, or to treat and remediate stormwater discharges to open shellfish beds and prevent beach closures (through technical assistance and grants) directly supports EPA goals to better control non-point source pollution on a watershed basis. Our ongoing and expanding watershed stormwater atlas and data set initiative 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 wet-

lands 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 BBNEP Steering Committee met to review program activities in July 2010, May 2011, and June 2011. Final Government Performance Results Act (GPRA) were submitted on time in September and FY 10 reported leveraged funds and habitat protected or restored are shown in figures 1 and 2.

In the summer 2010, the Buzzards Bay NEP closed out 5 grants totaling \$85,045.50 (Fairhaven \$30,148, Marion \$1,897.50, Bourne \$15,000, Rochester \$3,000, Wareham \$35,000. One grant to the Town of Marion for \$7,500 was returned unspent and added into the next grant round.)

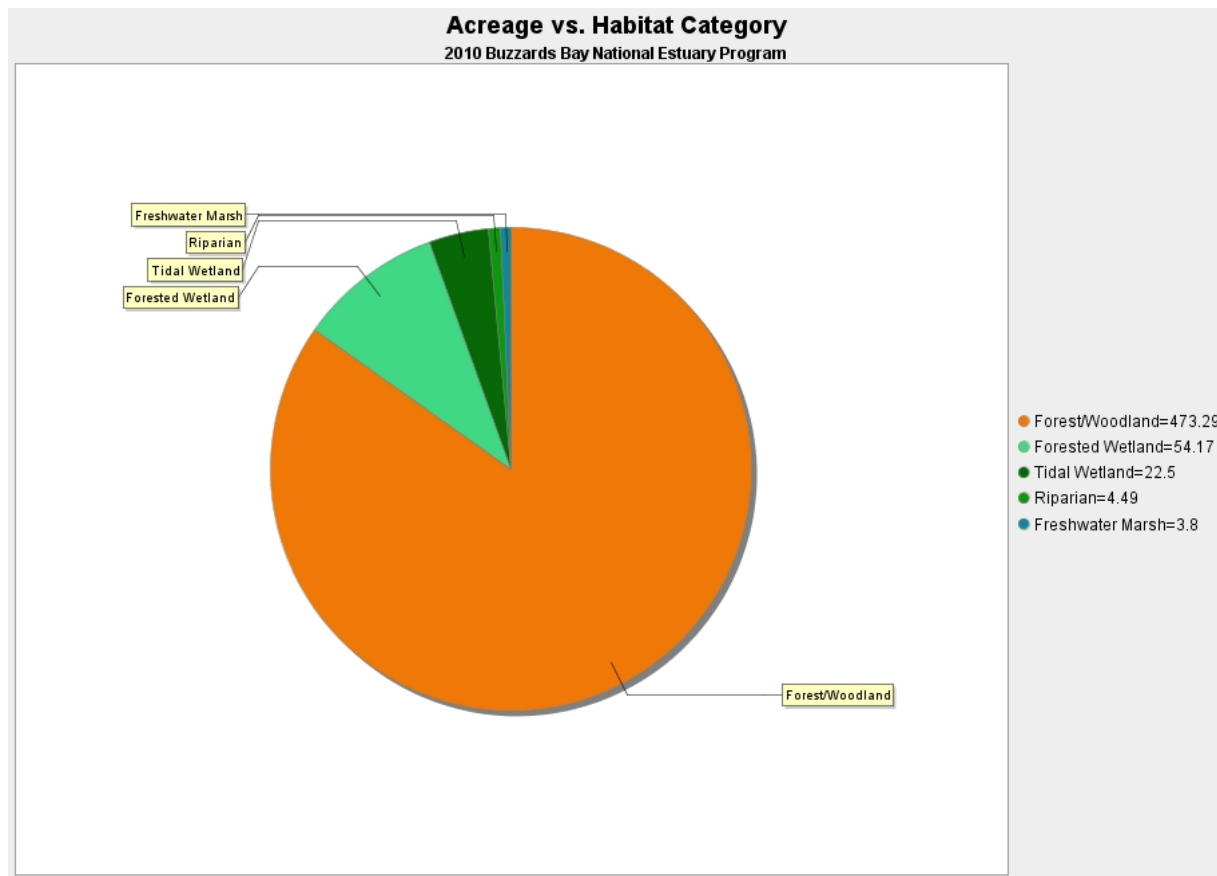


Figure 2. Types of habitat protected or restored as reported in the 2010 GPRA report to EPA.

In the fall of 2010, the Buzzards Bay NEP underwent an EPA desk audit, and EPA concluded the financial and grant administrative tracking programs were sound, and no corrective actions were needed.

Task 6 - Buzzards Bay Citizen's Water Quality Monitoring

In the spring of 2010, the Coalition submitted a data report for the 2009 year, and a data disk for 2010 is expected by July 2011. In 2010 the Coalition updated its website to include 2009 water quality monitoring data. This information is at: <http://buzzbaywatcher.org/baywatcher/>. A total of 135 volunteers participated in the Baywatchers Water Quality Monitoring Program's 19th water quality sampling season between May and September.

Task 7 - Environmental Indicators and Outcomes Tracking

During 2010, the BBNEP worked with the Division of Marine Fisheries to update shellfish bed closure GIS coverages to cover the July 1, 2010 status maps.

The BBNEP will have updated its website indicator page by June 2011 for the previous data. The Buzzards Bay Coalition has updated its website with water quality data to 2009 as of May, and will likely have the site updated with 2010 data before the 2011 sampling season begins.

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 2010 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 are at <http://www.savebuzzardsbay.org/page.aspx?pid=816>.

On July 29, 2010 the Coalition held their 17th 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. One hundred and forty-nine swimmers, more than half of which were newcomers, participated in the event demonstrating their care and concern for clean bay waters and a healthy environment.

The Buzzards Bay Coalition held the 4th Annual Watershed Ride on Sunday, October 3, 2010. The 76-mile Ride, which drew 100 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.

In 2010, the Coalition and the Conservation Law Foundation (CLF) filed suit against the Environmental Protection Agency under the Clean Water Act in an attempt to require that nitrogen pollution sources like septic systems be included in Waste Load Allocations of TMDLs.

In addition to the Coalition activities, the Buzzards Bay Action Committee has expanded its efforts to include environmental education in local schools. In 2010, they purchased a portable wa-

tershed table for hands-on classroom experimentation and other support materials. They plan to begin a school program utilizing this watershed table later in 2011. In addition, in March 2010, the Coalition hired a new education coordinator to address adult education needs. The Coalition has also purchased a new building which will contain educational exhibits for the public.

BBNEP helped MCZM hold a StormSmart Coasts workshop in February 2011.

Task 9 - CCMP Update and Watershed Action Plan Development

The Buzzards Bay National Estuary Program continues the review and update of the recommendations of the Buzzards Bay CCMP. In June 2010, the BBNEP Steering Committee asked that the draft plan be reorganized to eliminate specific recommended actions, and to instead list a suite of potential actions. Specific recommended actions will be included instead in a 5-year watershed action plan that will guide future BBNEP workplans. Completion of the document was delayed because of BBNEP work on GIS data in support of MASS DEP's TMDL development for the Buzzards Bay watershed. A completed draft final of the new CCMP is not anticipated for public review until June 30, 2011. New draft action plan recommendations are posted on our website (at <http://www.buzzardsbay.org/newccmp.htm>).

Task 10 - Other Specialized Technical Assistance

A special success of the BBNEP during the past year was that the Mass Department of Environmental Protection asked the BBNEP Executive Director to provide technical assistance to the Massachusetts Estuary Project to conduct certain GIS analyses for watersheds in Buzzards Bay. Specifically, the BBNEP agreed to re-evaluate parcel data, assessor's data, and water department data to accurately estimate the number of commercial and residential units in subwatersheds, and to identify properties served by septic systems or sewer for TMDL reports for New Bedford Harbor, Wareham River, Slocums River, and Little River estuaries. This information is one of the most critical components in the MEP's nitrogen loading analysis. The BBNEP also helped develop estimates of impervious surfaces in the watershed. The work required appreciable allocation of the Executive Director's time and was principally undertaken between May and December 2010.

The BBNEP completed its work with state and federal agencies reviewing and evaluating the environmental impacts of the 2003 Bouchard No. 120 oil spill in Buzzards Bay as part of the state-federal Natural Resources Damage Assessment, and assisted the state with the collection of documents associated with the Aquatic Resources Technical Workgroup for posting on the NRDA website. The Buzzards Bay National Estuary had Program represented the state on evaluating oil injuries on aquatic organisms and populations in the intertidal and near subtidal zone. The damage assessment phase was largely completed in 2010 through legal settlements (except the endangered bird component). The BBNEP expects to be involved with guiding restoration projects that will follow the final NRDA determination.

In March 2011, the BBNEP Director prepared testimony for the Massachusetts Attorney General's office about the cleanup costs of the Bouchard oil spill for the case American Waterways Operators, et al., versus Deval Patrick.

At the request of the Town of Fairhaven DPW, the Buzzards Bay NEP prepared a buildout analysis for the town. The buildout analysis was used by the Town to evaluate future sewer needs, determine needs for a new municipal Comprehensive Water Management Plan, and for the town to provide data to the Massachusetts Estuaries Project.

The BBNEP created a parcel level coverage for the Town of Gosnold. Such data is essential for land use planning, adopting environmental zoning regulations, identifying public lands to ensure their protection, and to help identify future acquisition and protection of sensitive wetlands and plant and animal wildlife

The Coalition received approval from the Marion Board of Selectmen to investigate whether nitrogen pollution in the wastewater lagoons at the Marion Wastewater Treatment Facility was leaching into the ground and negatively impacting Sippican Harbor. Working with Coalition staff, the environmental consulting firm Horsley Witten Group gathered detailed information about the lagoons and groundwater flow in the area. In 2011 The Coalition will review the data with the Town of determine whether or not the lagoons are leaching and to develop solutions. The Coalition's R/V Buzzards Baykeeper provided regular summer pumpout service to boaters on Cuttyhunk Island keeping nearly 2,000 gallons of sewage from 223 boats out of the Bay and educating boaters about clean boating practices.

The Buzzards Bay Coalition hosted and facilitated meetings involving town officials, cranberry growers, and other stakeholders in the town of Wareham that resulted in the Wareham Nitrogen Consensus Action Plan <http://www.savebuzzardsbay.org/Document.Doc?id=498>. The Action Plan is a result of a collaborative process driven by Wareham citizens to find comprehensive solutions to the nitrogen issue affecting the town's coastal waters. <http://www.savebuzzardsbay.org//Page.aspx?pid=729&srctid=1&erid=27706>. After passage of a nitrogen net-zero bylaw regulating new development advocated by the Wareham Clean Water Committee, the Coalition began working with the Board of Health to draft regulations in support of the new bylaw. The new bylaw was repealed in April 2011, and it is uncertain if the Wareham board of health will still adopt regulations, but the Coalition is continuing work with them to advance nitrogen management efforts.

The BBNEP distributed 2 ft contour LIDAR data and LIDAR digital elevation models to the municipalities and engineering firms. This data is being used by communities to identify areas susceptible to sea level rise and storm surge. Using this data, Mass CZM prepared sea level rise inundation maps for the Town of Westport. The Buzzards bay NEP is also using this data to determine stormwater flow at two sites where we are working with engineers to design stormwater treatment systems. The use of the LIDAR data in this way will illustrate the value of the LIDAR data for the development of similar stormwater treatment design projects around the watershed. The BBNEP expects to continue to work with the Massachusetts DEP and municipalities to review the GIS analysis of nitrogen loading contained in Buzzards Bay TMDL reports. This work will lay the foundation of working with Buzzards Bay municipalities to evaluate different strategies to meet these TMDLs.

Task 11 - Technology Transfer to Other Estuaries

Travel to National Meetings during past Fiscal Year.

EPA requires travel of NEP staff to attend EPA and non-EPA national meetings for the purposes of tech transfer and staff development. The BBNEP allocated \$4,900 for all travel in our work plan. It is important to recognize that this category includes both in-state travel of staff to meetings and site visits, and out-of-state-travel costs. Due to state budget restraints and policies BBNEP out-of-state travel was curtailed, however the BBNEP director did attend the February 2010 in Washington, DC and the fall 2010 NEP meeting in Florida. A summary of out of state and in state travel to date is provided below.

Executive Director	Fall ANEP Meeting in Florida	Nov-10	\$688.38
	Washington DC NEP Meeting	Feb-11	\$957.02
	National Meeting sub-Total		\$1,645.40
Staff In-state Travel	reimbursements (estimates to June 30)		\$3,100.55
	Total Travel		\$4,745.95

In October 2010, the EPA held a Coastal Wetland Review workshop in Woods Hole to discuss wetland loss and protection issues in the Northeast US. They had selected the federal HUC regional watershed that contained the Buzzards Bay NEP watershed, because of the previous extensive wetland loss data generated by DEP in Massachusetts, and because of the extensive work of the Buzzards Bay NEP and MassBays Program NEP in wetland restoration efforts. The BBNEP helped organize the meeting, identified attendees, and planned and conducted site visits for EPA staff. The meeting went well, EPA was appreciative of BBNEP involvement, and the agency will release its report later in 2011.

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.

An interactive Google Earth map (kmz file) for the Bristol County portion of the Buzzards Bay watershed from the updated FEMA maps for planning purposes only was created. Other Buzzards Bay watershed counties will be added when the digital FEMA maps become available.

Currently there are a total of 580 main pages, with an additional 720 downloadable pdf files and reports, as well as numerous graphic files and maps, for a total space use of 4.3 GB on the BBNEP website. The website currently receives more than 1200 unique visitors per day, and it remains a major resource for information about Buzzards Bay.

2010 Leveraged Funding (Federal FY09 fund workplan)

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, 2009 to September 30, 2010, the Buzzards Bay NEP's leveraged funds in the significant or primary category totaled \$600,000 and \$4.063 million respectively.

NEP Role (primary, significant, or support)	Total
Primary	\$600,000
Significant	\$4,053,000
Grand Total	\$4,653,000

We will report our FY10 2010-2011 leveraged estimates to EPA in the fall 2011.

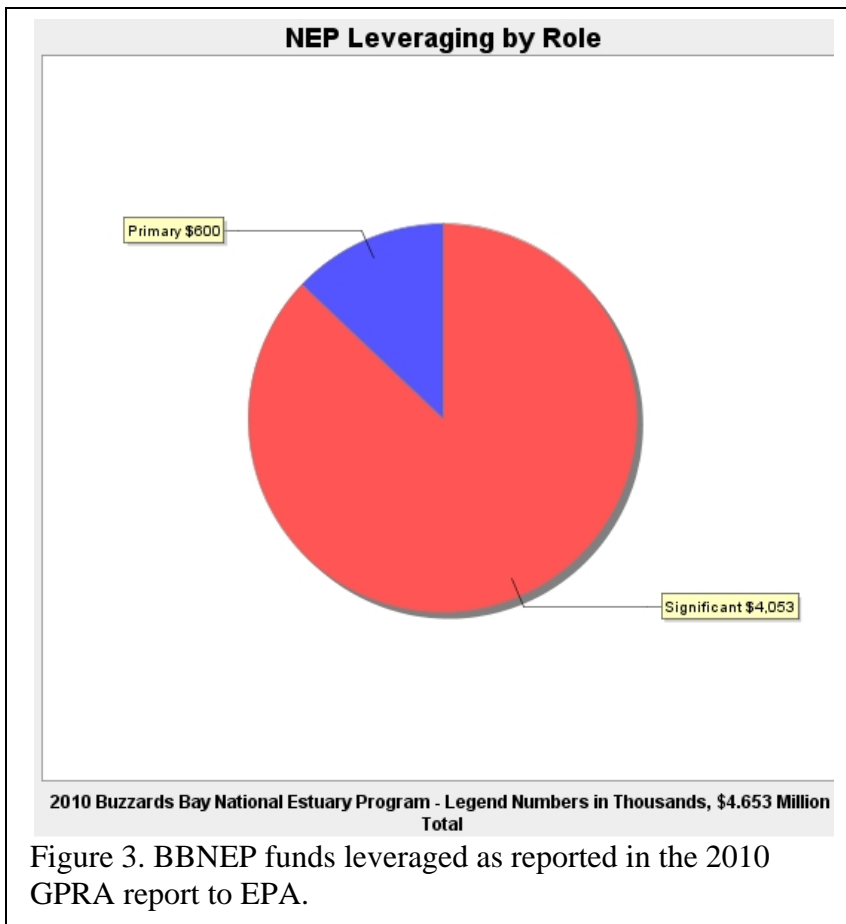


Figure 3. BBNEP funds leveraged as reported in the 2010 GPRA report to EPA.

Section 3: FY2011 Funds Work Plan Narrative Summary

Federal FY 2011 Tasks (July 1, 2011 to June 30, 2012)

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. Several wetland restoration projects funded through the NAWCA program, Ducks Unlimited and the Buzzards Bay Coalition are expected to be completed this year.

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 provided during the past 3 rounds has averaged 2.5 times the grant awards, and a conservative 3:1 match is presumed for the purposes of our match estimations.

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 2011, the RFR will be issued in May 2011 for an anticipated contract award date of August 2011.

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 issued May 30, 2011 for next RFR round.
2. Grant applications received July 16, 2011.
3. Grants awarded August 15, 2011.
4. Contracts closed June 30, 2012 with possible extension to December.

Budget:

Besides the cost of staff to oversee and assist in the completion of projects, a minimum of \$75,678 in federal FY11 Section 320 funds are dedicated to this effort (stormwater design plus regular grant awards). In addition, on May 3, 2011, the BBNEP Steering Committee directed an additional \$41,080 in unspent funds from the previous \$1.8 million three-year grant toward the municipal grant program (see explanation in Section 6: Planned Closeout of Past Cooperative Agreement of this workplan). In addition, any unspent funds in open municipal grants that are closed on June 30, 2011, will also be rolled into the next grant round (two grants were returned from the last round totaling \$65,000). Thus, the total in the next municipal grant round is estimated to be \$180,958.

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 by 12 September.
3. Draft 2011 work plan sent to Steering Committee in April 2011.

4. Approved Cooperative Agreement sent to EPA in June 2011.
5. EPA finalize award by 30 August 2011.

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 2010 monitoring by May 2011.

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. 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 State of the Bay report. We will also expand the website to include access to older information and data sets.

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 be posted on the Buzzards Bay Status and Trends webpage. 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 2011: Initiated August 2011, completed September 2011.

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.

Under this task are included expenditures of the Southeastern Regional Planning and Economic Development District (SRPEDD) will expend \$5,000 to support the activities of the Plymouth-Carver Aquifer Advisory Committee to educate the public about the need to protect water quality of the aquifer, which flows into Buzzards Bay Aquifer, continue to promote the development of a regionally consistent approach to natural resource planning and aquifer related local protective bylaws.

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 Coalition¹. 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 2011 Swim Buzzards Bay, their annual meeting, press events, and various publications, including the annual report to their members. The annual swim, part of an event titled "Celebrate Buzzards Bay 2011," 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 Buzzards Baykeeper Program (a boat providing pump-out service, monitoring, and other needs).

Additionally, the Buzzards Bay Action Committee has expanded its efforts to include environmental education in local schools. In 2010, the BBAC purchased a stream table for hands-on classroom experimentation, and they plan to use this device in a series of classroom lectures in the watershed. They also provide relevant speakers to the members for their monthly meetings and host workshops for Mass CZM and the BBNEP.

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

¹ 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.

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.

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.

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 and Watershed Action Plan Development.

CCMP/Work Plan Goal(s):

CCMP Actions: All.

Project/Activity Purpose and Description: (ongoing)

The Buzzards Bay National Estuary Program continues the review and update of the recommendations of the Buzzards Bay CCMP. Completion of the document has been delayed by insuffi-

cient staffing to complete the tasks. A completed draft final of the new CCMP is not anticipated for public review until August 2011. The BBNEP will ensure that the new plan is consistent with the state's new Ocean Plan. The EEA Watershed Initiative is continuing to participate and support the Buzzards Bay National Estuary Program to ensure the revised CCMP meets the goals and content requirement of EEA's Watershed Action Plans.

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. New draft action plans developed.
2. Action plans reviewed by agencies and BBAC.
3. Steering Committee meetings to review the updated actions and progress.
4. Public meetings to raise awareness of the new CCMP and its importance.
5. Finalization of the new CCMP by the state and EPA.

Milestones:

1. The BBNEP Steering Committee will meet in May 2011, June 2011, and August 2011 to finalize the CCMP.
2. Public presentations on the new combined CCMP and Watershed Action Plan in the fall of 2011 and into 2012.
3. Strategy finalized for new state received federal approval process by December 2011.
4. Document complete, published and posted by December 30, 2011.

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.

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 Na-

tional 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 meeting 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 2011 and spring 2012 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 (\$4,700) 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

CCMP/Work Plan Goal(s):

Supports principally the shifting shorelines action plan and a strongly encouraged FY11 funding guidance element.

Project/Activity Purpose and Description:

The Buzzards Bay National Estuary Program shall utilize LIDAR data released in 2009, and additional LIDAR data expected to be released in 2011 to prepare maps showing flood elevations and one, two, and three foot contours immediately along shore for all coastal municipalities in the watershed. For one municipality, a pilot sea level rise vulnerability project will be undertaken to quantify the assessed value of structures within the 1-3 foot zone immediately along the coast, and a quantification of properties that would be included with a 1-3 foot elevation of the 100-year flood zone. This community will be selected through a solicitation to the Buzzards Bay watershed coastal towns. Meetings will be set up with this municipality to refine how the data and information gathered from this assessment will be assembled into a report for the community. This task will require approval of a QAPP for the use and analysis of secondary data, and the BBNEP will prepare the QAPP

Principal Staff involved in these tasks:

Executive Director, Regional 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 Executive Director will be the lead on the GIS analysis and posting of web information, the planner will be responsible for some of the GIS management, map, and report preparation, as well as the solicitation for the pilot project. The Administrative Assistant will act as a liaison in gathering necessary data, and assist in report preparation.

Outputs/Products:

1. Development of QAPP in support of this task
2. Posting of new web pages, maps and GIS showing LIDAR contours and potential new 100-year flood zones.
3. Assessment values of properties in vulnerable areas and expanding flood zones.

Milestones:

Begin developing QAPP in July 2011. Begin the evaluation process with existing GIS LIDAR data in July 2011.

Solicitation for community pilot assessment in September 2011.

Pilot Project report issued in May 2011.

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.

Intermediate: This information can assist towns to develop adaptation strategies to deal with future storms and sea level rise.

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

Pressures affecting outcomes: LIDAR data is already available for Bristol and Plymouth County. LIDAR data is expected to be available for Barnstable County in the fall, but this is not guaranteed. Bourne and Falmouth would be omitted from the study if this latter data does not become by December 2011.

This task does not directly support any CWA core programs, but supports the agency's overall goals for all levels of government to develop adaptation strategies to address climate change and sea level rise.

Section 4: Budget Detail and Explanation

This workplan starts a new 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.

EPA Category Summary	FY2011
Separate grant: Coalition WQ Testing	\$25,000
Personnel	\$255,145
Fringe	\$89,709
Contractual: NRCS Stormwater Staff	\$40,000
Contractual: Municipal Grants Stormwater	\$20,000
Other: Municipal Grants non-stormwater	\$55,678
Other: Rent, cleaning, state fees	\$33,650
Supplies	\$2,419
Travel	\$4,700
Indirect	\$72,499
TOTAL	\$598,800

Federal FY11 Funds Budget Notes

Personnel

The FY11 budget is summarized in the table and pie chart below. 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: fulltime 6 months, 3/4 time 6 months; Financial Assistant 1/10 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.

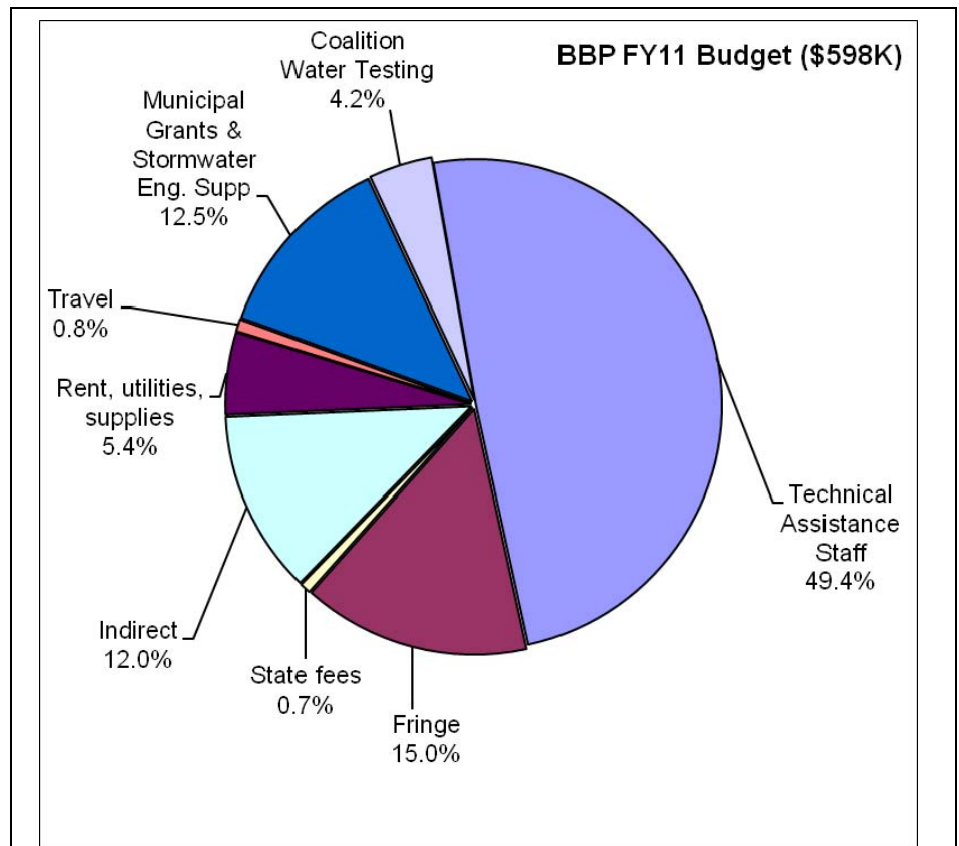


Figure 4. Pie chart of FY11 federal budget award summarized by functional categories.

Section 5: Match to the Cooperative Agreement

Below is a summary of the \$574,800 match that is being provided to meet the match requirement under this Cooperative Agreement to the Commonwealth (\$573,800 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. This total includes the salary of the director of monitoring, any assistants, supplies and water quality testing. This total does not include the hours donated annually by volunteers conducting the sampling and testing. We have valued this volunteer time at \$89,172 and is based on $\$26.32/\text{hr}^2 \times 121 \text{ volunteers} \times 28 \text{ hours per season}$ so the real value of the program exceeds \$250,000. The 28 hours per season is an underestimate since most volunteers contribute 40 hours per year.

Our match under this agreement (\$157,902) includes these specific expenditures of the program: supplies, travel, volunteer time, a small portion of the director of monitoring salary not used as match to the companion grant, and laboratory analyses. 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 (\$10,000).

The municipalities of Buzzards Bay pay \$10,000 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 (\$10,400).

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.

² Value - as reported at www.independentsector.org/program/research/volunteer_time.html

In addition to these meetings, the Buzzards Bay NEP will hold workshops and CCMP development 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 2009, 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 \$10,400 match from these activities.

4) Municipal Match to BBNEP grants (\$285,000).

The \$180,958 in the **BBNEP** mini-grant program will generate a minimum of \$60,319 in required municipal match because the project requires a 25% match of total project cost (=33% of award). However, our grants have been greatly overmatched, and we expect to easily achieve a match of \$285,000.

5) Other Coalition support: education programs and land conservation programs (\$106,498).

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 3 staff salaries from the land and watershed protection and education programs as well as travel expenses as match.

6) SRPEDD Plymouth Carver Aquifer Protection Initiative (\$5,000).

SRPEDD will work with towns in the Plymouth-Carver Aquifer area to help educate the public about why the aquifer is important and must be protected, water and pollution pathways in watersheds, and how all groundwater and pollution discharges to the groundwater eventually reach the waters of Buzzards Bay. The BBNEP will make one presentation to the Plymouth Carver Aquifer Advisory Committee on the efforts of Buzzards Bay municipalities and the BBNEP to manage nitrogen from the aquifer to protect Buzzards Bay embayments. SRPEDD's matching contribution is the cost of staff to conduct public education forums.

Detail Match Breakdown

	TOTAL	PERSONNEL	FRINGE	CONTRACTUAL	OTHER	SUPPLIES	TRAVEL	INDIRECT	TOTAL
Proposed MATCH (non-state)									
1. Coalition WQ Monitoring Program (1)	\$157,902	\$2,000		\$140,616	\$1,880	\$9,052	\$4,354		\$157,902
2. BBAC dues	\$10,000			\$9,000		\$1,000			\$10,000
3. BBAC, other municipal meetings, workshops	\$10,400	\$10,400							\$10,400
5. match to BBNEP minigrants	\$285,000				\$285,000				\$285,000
6. SRPEDD Plymouth Carver Aquifer protection Initiative	\$5,000			\$5,000					\$5,000
7. Coalition education and land conservation programs (2)	\$106,498	\$104,798					\$1,700		\$106,498
Summary	\$574,800	\$117,198	\$0	\$154,616	\$286,880	\$10,052	\$6,054	\$0	\$574,800

Footnote 1: The value of personnel is based on that portion of 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) x 28 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 these positions: VP Education & Public Engagement (\$55,000), VP Watershed Protection (\$50,000), Director of Land Protection (\$40,000).

Section 6: Planned Closeout of Past Cooperative Agreement

The previous Buzzards Bay NEP Cooperative Agreement, which totaled \$1.9 million federal dollars and covered Federal FY08, FY09, and FY10 fiscal year awards, will be closed out in 2012 after all tasks, particularly municipal grants are finalized and closed. Certain expenditures were not made under that agreement. These reductions in expenditures were the result of mandatory travel restrictions, mandatory employee furloughs (FY10 award), double accounting of Medicare and unemployment in two categories, the elimination of the purchase of a photocopy machine, and a reduced fringe rate in FY10 over projections. A summary of these savings are shown in the table below. On May 3, 2011, the BBNEP Steering Committee approved the internal reprogramming of these funds to the municipal grant category (EPA "Other" category).

Previous 3-year Coop. Agree. Funds Reprogrammed to Grants	
Furlough Savings, FY 10 budget	\$3,435.74
Other (1.91% Medicare/unemployment double allotment)	\$11,148.42
Change in Fringe Rate, federal FY10 budget	\$3,124.14
Indirect Costs from lack of Stormwater Grant in FY10, return of FY09	\$10,372.00
Unspent Travel	\$4,000.00
Unspent Supplies (including canceled copier purchase)	\$9,000.00
Total	\$41,080.30

The previous three-year grant was highly successful with respect to the municipal grant completed. For those projects where the work did not proceed, the awarded funds were returned to the municipal grant program for a subsequent grant round.

Completed and Ongoing Municipal Grants on the previous Cooperative Agreement

Town	Description	Award	Status	End Date
Wareham	Redesign and repair a fish ladder on Gibbs Brook, the second largest herring run in Wareham.	\$35,000	Funds returned to minigrant program	
Rochester	Feasibility study for improving the passage of anadromous fish at the Hathaway Pond Dam.	\$7,500	completed	\$6700 moved to 502
Fairhaven	Evaluate stormwater discharges to Little Bay, Nasketucket Bay and connecting streams, which are all designated as impaired and closed to shellfishing.	\$10,000	Completed	6/30/09
New Bedford	Design treatment for stormwater discharges near public piers and wharves in the city's port.	\$15,000	In Progress	
Fairhaven	Survey work and legal fees to support the acquisition of a 52 acre property called Nasketucket Woods in the Nasketucket River watershed.	\$25,000	completed	6/30/09
Acushnet	Survey work, appraisal fees, and closing costs for the acquisition of a 10-acre property on Keene Road along the Keene River.	\$8,000	completed	Moved to 502
Westport	Stormwater Designs for the Middle School and Library Complex	\$15,000	completed	6/30/09
New Bedford	Stormwater Mapping to update the BBNEP Stormwater Atlas	\$20,000	completed	12/30/08
Bourne	Stormwater design for Hen Cove	\$30,500	completed	6/30/09
	Grant Round SUBOTAL	\$166,500		
	Project Purpose and Deliverable			
Westport	Design treatment for stormwater discharges Phase II: Stormwater Solutions for West Side of Old County Road	\$20,000	Funds returned	
Mattapoisett	Salt Marsh Restoration designs– Pico Beach Road. Engineering plans completed.	\$9,900	completed	12/31/10
Fairhaven	Nasketucket Woods Land Acquisition Bridge Street Parcel. Property purchased.	\$35,000	Completed	6/30/10
Dartmouth	Dike Creek Hughes Conservation Restriction. Conservation restriction recorded.	\$16,000	completed	12/31/10
Rochester	Wolf Road Preservation Project. Appraisal report completed	\$5,000	completed	6/30/10
Rochester	Leonard's Pond Anadromous Fishway Improvement. Fishway improvements completed.	\$20,000	completed	12/31/10
Wareham	Marks Cove Conservation Corridor. Conservation restriction recorded.	\$35,000	completed	6/30/10
Bourne	Fishway Restoration Phase I. Feasibility study completed.	\$15,000	completed	6/30/10
Marion	Holmes Woods and Homes Lane Open Space Protection. Permanent protection measures completed.	\$3,600	completed	6/30/10

Marion	Grassi Bog Open Space Protection	\$7,500	Funds returned	
	Grant Round SUBTOTAL	\$499,500.00		
Dartmouth	Assessors' Parcel GIS Update	\$6,500	In progress - extending to 12/31/11	6/30/11
Wareham	Tucy North – Agawam River Land Protection	\$45,000	funds returned	6/30/11
Fairhaven	Wolf Island South Land Conservation	\$30,506	In progress - extending to 12/31/11	6/30/11
Mattapoissett	Decas Mattapoissett River Lands Protection. Property purchased.	\$45,000	completed	6/30/11
Marion	Acquisition of Rentumis Property. Property purchased	\$45,000	completed	6/30/11
Bourne	Bournedale Herring Run – Little Sandy Pond Culvert Replacement	\$45,000	In progress	6/30/11
Rochester	Mahoney Wolf Island North Land Conservation	\$20,506	In progress - extending to 12/31/11	6/30/11
Rochester	Doggett Family Bogs Land Preservation	\$45,000	In progress -- extended to 12/31/11	6/30/11
	Grant Round SUBTOTAL	\$282,512		

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 (3/4 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.

work planfy11

Appendix I. Index of Tasks

Task 1 - Wetland Restoration and Open Space Protection and Restoration.....	15
Task 2 - Buzzards Bay stormwater mapping, atlas and database update.....	16
Task 3 - Stormwater Remediation and Technical Assistance.....	18
Task 4 - BBNEP Technical Assistance and Municipal Grant Program.....	19
Task 5 - Program Oversight and Administration.....	21
Task 6 - Buzzards Bay Citizen’s Water Quality Monitoring.....	22
Task 7 - Environmental Indicators and Outcomes Tracking	24
Task 8 - Outreach and Education.....	26
Task 9 - CCMP Update and Watershed Action Plan Development.	27
Task 10 - Other Specialized Technical Assistance.....	29
Task 11 - Technology Transfer to Other Estuaries.....	31
Task 12 - Website Maintenance and Innovation.....	32
Task 13 - Climate Change Vulnerability	33