

Buzzards Bay Project National Estuary Program

Implementation Review:
Progress Made from January 2002 to January 2005



*A summary of the successes of the Buzzards Bay Project and its partners
in our joint efforts to facilitate the implementation of the
Buzzards Bay Comprehensive Conservation and Management Plan*

Buzzards Bay Project National Estuary Program
draft final
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II. Overview

The Buzzards Bay Project National Estuary Program is an advisory and planning unit of the Massachusetts Office of Coastal Zone Management. For the past three years, the Buzzards Bay Project National Estuary Program has made considerable strides in fulfilling its mission “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](#) (CCMP).” The Buzzards Bay Project has achieved these successes through a broad range of technical assistance programs and grants to support municipalities, non-governmental organizations, and citizens of the Buzzards Bay watershed.

These achievements were not accomplished in a vacuum. More than most other National Estuary Programs, the Buzzards Bay Project has partnered with other bay-wide organizations to achieve its goals. The other organizations are [The Coalition for Buzzards Bay](#), a nonprofit, membership organization dedicated to the restoration, protection and sustainable use and enjoyment of Buzzards Bay and its watershed, and the [Buzzards Bay Action Committee](#), a nonprofit organization composed of municipal officials seeking regional strategies for protecting the environment. Our three Buzzards Bay organizations share the goal of implementing the recommendations in the CCMP, and we have partitioned our responsibilities to reduce redundancy of efforts and to maximize success with limited resources.

The Buzzards Bay Project’s focus during the past three years roughly fell in five broad categories:

- The Buzzards Bay Project (BBP) developed a series of atlas inventories of impaired resources and pollution discharges. These atlases included assessments or prioritizations of sites for remediation. The atlases have been pivotal in helping attract and target both state and federal grants to deserving projects. These atlases have also raised local awareness of sites needing restoration.
- The Buzzards Bay Project awarded nearly \$150,000 in municipal mini-grants to initiate and leverage local financing and action. These awards, together with \$145,000 in water quality monitoring grants to the Coalition for Buzzards Bay, have been instrumental in keeping our partners effectively advancing the efforts to protect and restore water quality and living resources in the bay and watershed.
- The Buzzards Bay Project has been instrumental in helping municipalities develop grant applications and open space plans that have enabled Buzzards Bay municipalities to garner more than a million dollars in state and federal grants.
- The Buzzards Bay Project has diligently provided technical assistance to Buzzards Bay municipalities, residents, and non-governmental organizations on a wide range of issues.
- Finally, in 2003, an oil spill of nearly 100,000 gallons of Number 6 fuel oil in Buzzards Bay garnered national attention. The Buzzards Bay Project and our partner the Coalition for Buzzards Bay played pivotal roles during the clean-up phase of the oil spill. Today, the Buzzards Bay Project continues to play an important role in the ongoing Natural Resources Damage Assessment of the oil spill. With the Coalition and various partners throughout Buzzards Bay, the BBP is also helping to protect bird habitat around the bay by preparing grant proposals to target \$7 million in federal oil spill fines that were directed through the North American Wetlands Conservation Act (NAWCA) grant program.

The 2003 oil spill is also particularly noteworthy because it affected deadlines and priorities of all three Buzzards Bay organizations. For example, the State of the Bay conference organized by the Coalition for Buzzards Bay had to be postponed for 6 months because the event was scheduled 10 days after the oil

spill. In a judicious move, the Coalition transformed the planned State of the Bay conference into a “State of the Oil Spill” conference.

Another transforming event was the elimination of the Commonwealth of Massachusetts’ Watershed Team programs in 2003 because of budget cuts. Tasks identified in the 2002 Implementation Review or 2003 Work Plan that related to the Buzzards Bay Watershed Team had to be redirected.

III. Introduction

The Buzzards Bay Project National Estuary Program developed this report to comply with the triennial Implementation Review process. This process, established by the U.S. Environmental Protection Agency (EPA), evaluates the 28 programs composing the National Estuary Program (NEP) and their efforts to implement their Comprehensive Conservation and Management Plans (CCMPs). The intent of the review was to enable each NEP to highlight successes and strengths of their program, identify areas for improvement, facilitate technology and information transfer among NEPs and other watershed programs, and to demonstrate stakeholder commitments and community support for the programs.

The Buzzards Bay Project National Estuary Program is considered a “Tier I” NEP because it was among the first NEPs incorporated into the program. The EPA has scheduled Tier I NEPs for their implementation review during 2005.

While the focus of this report is the activities of the Buzzards Bay Project, because the Buzzards Bay Project has partnered with two other bay-wide organizations to achieve our goals, the activities of these organizations are highlighted as well. The other two organizations are [The Coalition for Buzzards Bay](#), a nonprofit, membership organization dedicated to the restoration, protection and sustainable use and enjoyment of Buzzards Bay and its watershed, and the [Buzzards Bay Action Committee](#), a nonprofit organization composed of municipal officials seeking regional strategies for protecting the environment. Together, our three Buzzards Bay organizations share the goal of implementing the recommendations in the CCMP, and we have partitioned our responsibilities to reduce redundancy of efforts and to maximize success with limited resources.

This report exists in both paper and electronic form. The Buzzards Bay Project has distributed the electronic form of the document on CD, and the document has hot links to all attachments and referenced documents. Most of these documents are simultaneously linked to the Buzzards Bay Project’s website, www.buzzardsbay.org, and some are found on the Coalition’s website, www.savebuzzardsbay.org. [Appendix A](#) and [Appendix B](#) contains the required Work Plans and GPRA reports needed for this submission. Additional appendixes contain other documents referenced throughout this report.

IV. Background and Organization

In 1985, Congress designated Buzzards Bay as an Estuary of National Significance, one of five estuaries so designated at that time. The designation by Congress eventually led to the creation of the National Estuary Program in Section 320 of the reauthorized Clean Water Act of 1986. In 1987, the Buzzards Bay Project National Estuary Program formally became a U.S. EPA designated National Estuary Program.

Between 1985 and 1990, the Buzzards Bay Project funded water quality and living resource characterizations and assessments of Buzzards Bay. Based on these findings, the Buzzards Bay Project (BBP) examined management options to address the identified problems and conducted financial assessments of these management solutions. These efforts culminated when the BBP wrote the draft Buzzards Bay Comprehensive Conservation and Management Plan (CCMP) in 1989, the first NEP to do so. This Management Plan was approved by then Massachusetts Governor Weld in September 1990, and by the US EPA in April 1991.

The Buzzards Bay CCMP was one of the country's first watershed plans and one of the first to focus so strongly on non-point source pollution and the cumulative impacts of development on water quality and living resources. The Buzzards Bay CCMP broke new ground, including a nationally acclaimed nitrogen management strategy. Also unique was the fact that nearly three quarters of the recommendations contained in the Buzzards Bay CCMP were directed at local government. This was a reflection of Massachusetts' environmental regulatory framework, where "home rule" laws empower municipalities and local government, giving them the greatest authority for dealing with cumulative non-point impacts in Massachusetts.

Since the Buzzards Bay Project completed the CCMP, it has transformed itself into a technical assistance and implementation program unparalleled in the National Estuary Program. Historically, the Buzzards Bay Project has always been one of the smaller and less-well funded Estuary Programs. The Buzzards Bay Project adapted to its many unique features and transformed potential weaknesses into assets, and reformed itself into a small, but highly effective program, with a remarkable track record at both getting projects accomplished and in securing state and federal funding.

These accomplishments were achieved despite some unconventional approaches, such as the complete abandonment of the Project's Public Outreach program in 1994, which included elimination of the Project's newsletter. The one exception regarding public outreach is that the Buzzards Bay Project has diligently maintained its website (www.buzzardsbay.org), which now stands as a comprehensive repository of Project activities and progress. This website has received considerable traffic. (see the [webstats](#) webpage).

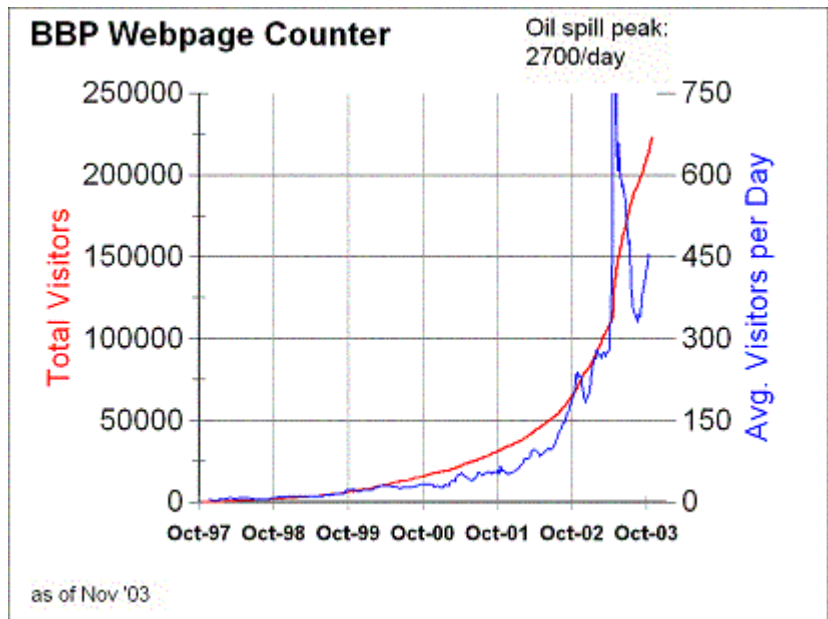


Fig 1: Average visitors per day to the Buzzards Bay Project's webpage

Elimination of the general outreach program in 1994 was a strategic decision by the BBP to rely on the outreach activities of two not-for-profit organizations – the Coalition for Buzzards Bay, a citizen's group, and the Buzzards Bay Action Committee, an association of municipal officials. Rather than focus on public outreach, the Buzzards Bay Project would instead seek to fulfill the environmental technical assistance needs of Buzzards Bay municipalities. In 1997, the three Buzzards Bay organizations formalized this arrangement through a [Memorandum of Understanding](#)^a. This approach was feasible only because both non-profits were also committed to the implementation of the Buzzards Bay CCMP, an unsurprising fact since both groups arose from the dissolution of the Buzzards Bay Project's Citizen Advisory Committee in 1988. This triad partnership among the three Buzzards Bay organizations has helped ensure that the Buzzards Bay Project remains one of the most successful National Estuary Programs.

Because of the interaction and collaboration of the three Buzzards Bay organizations, and our mutual primary goal of implementing the CCMP, progress made by all three organizations toward that goal is

^a An new draft updated MOU was developed in 2004 (see [Appendix C](#)) and is expected to be finalized in 2005

presented in this report. [Appendix D](#) includes documents produced by the Coalition for Buzzards Bay that relate to this common goal.

V. Challenges Identified in 2002 Implementation Review

In 2002, the EPA Implementation Review team found that the Buzzards Bay Project National Estuary Program was continuing to make significant progress toward implementing the Buzzards Bay Comprehensive Conservation and Management Plan (CCMP), and that “the overall progress in implementation and its many achievements are very impressive.” However, the report did identify several challenges that the BBP needed to address. These challenges and the Buzzards Bay Project’s actions are summarized below.

1) Increase Outreach to All Municipal Officials on the Buzzards Bay Action Committee

EPA Comment: “While Implementation Review materials and on-site discussions made it very clear that the Buzzards Bay Project works closely with the Buzzards Bay Action Committee on a range of CCMP issues, the Team recommends that the BBP become more actively involved with local regulatory boards to increase their understanding of BBP efforts.”

BBP Response: The Buzzards Bay Project has greatly expanded its involvement with Buzzards Bay municipal boards during the past three years. This stance is illustrated by our efforts to promote the Phase II MS4 stormwater NPDES permits with municipalities. To accomplish its goals, the BBP held workshops and meetings with key boards and officials and directly mailed flyers and outreach materials to multiple municipal departments (see [Phase II alert letter](#) and [Phase II fact sheet](#) in [Appendix E](#)). Because of our efforts, many municipalities used the BBP’s model Phase II stormwater plan and other materials. The information made available can be found on the BBP’s [Phase II stormwater webpage](#). This Phase II technical assistance program was typical of how the Buzzards Bay Project assists municipal boards. Sample correspondence and materials on other topics are shown in [Appendix F](#) and sample presentations are shown in [Appendix G](#). The Buzzards Bay Project staff met frequently with municipal officials on a wide range of issues and was more actively involved with the topics of the Buzzards Bay Action Committee meetings.

2) Work with the Coalition for Buzzards Bay and the Massachusetts Watershed Initiative to Raise BBP Visibility

EPA Comments: “The Team is impressed with the extent to which the partnership among the Buzzards Bay Project, the Buzzards Bay Action Committee, and the Coalition for Buzzards Bay effectively implements CCMP recommended actions. Nonetheless, the Team believes that even more could be done to increase public awareness of BBP and partner activities, and recommends that: the Buzzards Bay Project, Buzzards Bay Action Committee, the Coalition for Buzzards Bay and other interested partners jointly host a "State of the Bay" conference whose goal would be to publicize CCMP implementation progress and improvements in watershed water quality to the broadest possible audience; the conference could be held in conjunction with an effort to update the CCMP and re-evaluate BBP and partnership priorities; the conference could take the form of a kick-off event, could serve as an interim outreach effort, or could celebrate completion of a CCMP re-evaluation effort; a new Memorandum of Understanding (MOU) could be developed to include the State's Buzzards Bay Watershed Team as a fourth signatory; this would make clear to partnership stakeholders and the general public the relationship

between the Watershed Team and the partnership, and would ensure coordination and continuity of support should the leadership of any partner organization change; the Coalition for Buzzards Bay and the State's Buzzards Bay Watershed Team acknowledge their relationship to the Buzzards Bay Project; acknowledgements could include hotlinks from the Coalition's and the Massachusetts Watershed Initiative's websites to the BBP website, references to the partnership MOU in Coalition and State Buzzards Bay Watershed Team annual reports and newsletters, and inclusion of regular BBP updates in Coalition for Buzzards Bay and State Buzzards Bay Watershed Team publications.”

BBP response: In April 2003, the elimination of EOEAs Buzzards Bay Watershed Team due to budget cuts altered these priorities. The Coalition for Buzzards Bay organized a State of the Bay conference, which was postponed until November 2003 because of the oil spill. Buzzards Bay Project staff helped develop the document for the State of the Bay, and the Buzzards Bay Project's Director presented at the conference (see information on the BBP's [eelgrass webpage](#)).

Part of the justification for updating the MOU was to incorporate tasks and responsibilities of the Buzzards Bay Watershed Team. With the elimination of that program, this task was delayed until 2004. However, by 2005, the BBP drafted a new document with input from each Buzzards Bay organization. The updated MOU is expected to be finalized sometime in the spring of 2005.

The rewrite of the CCMP did not begin until after the State of the Bay conference. The BBP established a CCMP workgroup composed of key state, federal, and local personnel. The BBP will present proposed changes in Action Plan goals and objectives, and where appropriate, propose new recommendations. The CCMP Rewrite Work Group will focus particularly on what new recommendations should be included in the updated CCMP. This exercise will largely be asking: “What can the agencies and towns be doing, or doing better?” and turning that statement into a recommendation. After this review, the proposed revision will be presented to the Buzzards Bay Action Committee.

To date, only three action plans have undergone this review, but the BBP will renew the effort in the spring of 2005 and we will incorporate new Action Plans in the updated CCMP. [Appendix F](#) includes results from a questionnaire sent to BBAC members about what topics they felt were priorities for the updated CCMP ([bbac-update-12-04-ccmp.pdf](#)) or appropriate for discussion at BBAC meetings.

Although EOEAs disbanded the watershed teams, it has decided to keep the goal of developing 5-year watershed action plans for Massachusetts watersheds. The Buzzards Bay Project is currently negotiating with EOEAs about additional staff or financial support to include elements of the Massachusetts watershed plans into the new CCMP.

3) Increased Coordination and Visibility Under Auspices of Massachusetts Coastal Zone Management (CZM)

EPA Comment: “During a discussion between two Team members and the Assistant Director of the Massachusetts Coastal Zone Management office, several issues were raised that EPA would like to call to your attention. For example, the CZM official concurred with the Team that the BBP is a very effective force for coastal water quality improvement in the watershed. However, she noted that the BBP could better publicize its activities and accomplishments. For example, the BBP could make a greater effort to participate in the quarterly meetings sponsored by Massachusetts CZM for all the State coastal programs. BBP's increased participation in these meetings would facilitate cross program information sharing and technical transfer and assistance. CZM also suggested that coordination between the BBP and the Massachusetts Bays NEP could be improved to the benefit of both watersheds. For example, the suggestion was made that the two Massachusetts NEPs collaborate by co-sponsoring a beach monitoring

workshop for municipalities in their watersheds.”

BBP Response: The Buzzards Bay Project increased participation with state agencies, the Mass Bays Program, and EOEAs watershed initiatives. BBP staff joined the EOEAs Low Impact Development (LID) workgroup, Stormwater workgroup, Oil Spill Natural Resources Damages Assessment (NRDA) workgroups, the EOEAs Coastal WEB initiative, and participated in joint agency conferences on monitoring and Mass Bays events. The BBP director also wrote newsletter articles for the MCZM newsletter to keep Massachusetts residents and officials apprised of our activities.

VI. BBP NEP Achievements, 2002-2005

Wetland and Habitat Protection Grants

In 2003 and 2004, the Buzzards Bay Project awarded \$147,500 in mini-grants for wetland and habitat protection. The Secretary of the Executive Office of Environmental Affairs participated in the awarding of the 2004 mini-grants at a ceremony held at Hens Cove, Bourne (on Buzzards Bay) in the Fall. The funds were to assist Buzzards Bay watershed municipalities in the protection of open space, rare and endangered species habitat, or freshwater and saltwater wetlands; to help restore tidally restricted salt marshes; to purchase oil spill containment equipment; to restore anadromous fish runs; and to remediate stormwater discharges threatening water quality.

- Rochester received \$5,500 for a land survey needed to place a conservation restriction on a privately owned 14.5-acre property. The conservation restriction will prohibit any future development of the parcel.
- Acushnet received \$3,500 for a land survey to confirm the boundaries of the town-owned Scouts Pond conservation area and to delineate existing wetlands on the parcel. This work is being done to assess the conservation area's potential for future recreational uses.
- Wareham received \$6,500 for the restoration of a town-owned salt marsh in the Briarwood area that has been damaged by vehicular traffic and the illegal construction of a boat ramp.
- Falmouth received \$22,000 for land surveys and signage to protect existing town-owned conservation properties. The grant will help the town address problems with encroachment, dumping and extraction on three protected open space parcels.
- Fairhaven received a grant for \$15,000 to purchase oil spill remediation materials and equipment. The town will act as a central purchasing agent to obtain equipment for itself and for oil spill coordinators in other participating Buzzards Bay municipalities including: Westport, Dartmouth, New Bedford, Mattapoisett, Marion, Wareham, Bourne, and Falmouth. Later in the Fall, the Buzzards Bay Project will fund oil spill response training for municipal oil spill coordinators.
- Plymouth received \$15,000 to remove and replace a partially crushed metal culvert at the northern end of Halfway Pond that connects a bordering vegetated wetland to the pond. The town will also implement Best Management Practices (BMPs) at the intersection of Mast Road and the Agawam River to remediate a sediment plume and channelization problems being created by stormwater runoff. Stormwater will be directed into a rain-garden to remove suspended solids prior to being discharged into the Agawam River.
- Marion received a grant for \$20,000 for a Low Impact Development (LID) stormwater remediation project. The town will install 4 bio-filters, and the necessary drainage and pretreatment structures to treat the first flush of pollutants from the Marion Village 5-acre watershed prior to discharging it into Sippican Harbor. The existing storm water discharges adversely impact shellfish beds and a public swimming area.
- Marion received a second grant for \$8,000 for the purposes of acquiring two appraisals and performing a title search on the Marion portion of the 780-acre Eastover Farm, which straddles the

towns of Marion and Rochester. The Marion Open Space Acquisition Commission will purchase 238 acres of land as permanently protected open space. Two appraisals were needed in order to apply for a Division of Conservation Services (DCS) Open Space Land Acquisition Grant. The Buzzards Bay Project subsequently wrote the \$325,000 DCS grant, which was just recently awarded to the town for the purchase of the property.

- Rochester (\$20,000), in partnership with Mattapoisett (\$11,000) and Fairhaven (\$11,000), received a total of \$42,000 to purchase a conservation restriction on approximately 164 acres of land located within the primary recharge area for a regional municipal drinking water supply. The parcels to be protected include mature pine and oak forests, floodplain wetlands, vernal pools, and meadows. They will be protected in perpetuity through a conservation restriction to be held by the Rochester Conservation Commission and the non-profit Wildlands Trust of Southeastern Massachusetts.
- Westport received \$10,000 to replace a collapsing culvert under River Road, which is impeding herring passage into Cockeyeast Pond.

Municipal Open Space Plans

The Buzzards Bay Project assisted four municipalities (Carver, Rochester, Marion, and Wareham) with updating their existing Open Space and Recreation Plans. Portions of the Carver Open Space Plan are shown in [Appendix I](#) or the entire report can be viewed at [Carver OS Plan.pdf](#). These 5-year plans are required by the Commonwealth to be eligible for Division of Conservation Service (DCS) land protection grant funds, such as Self-Help and Urban Self-Help. The BBP's assistance with the Rochester plan (and the BBP's additional assistance with two DCS grant applications) enabled the town to receive a \$64,000 grant to protect the 164-acre Rounseville Homestead and \$250,000 to protect the Rochester portion of Eastover Farm. The BBP's assistance with Marion's Open Space Plan and the writing of two DCS Self-Help grants, allowed the town to receive \$325,000 to purchase the 238-acre Marion portion of the Eastover Farm property and an additional \$250,000 to protect 102 acres of land surrounding Washburn Park.

Regional Open Space Plan Development

The idea for a regional open space plan for the Buzzards Bay watershed was first discussed as part of the now defunct Watershed Initiative (Buzzards Bay Watershed Team), sponsored by the Executive Office of Environmental Affairs. Due to strained economic conditions in the Commonwealth, the Watershed Initiative was discontinued prior to the initiation of a contract to provide funding to the Buzzards Bay Project to create this Plan. The Buzzards Bay Project decided to proceed with the Plan's creation, despite the lack of funding, because it was felt the project had significant regional importance.

Development of a Regional Open Space Plan is far more complex than a municipal Open Space Plan, as it deals with the entire watershed region, and required an intensive review and update of open space GIS data for every town. While this data layer is essentially complete, due to the fluctuating nature of land protection, it will continue to undergo constant revisions. The text of the Regional Open Space Plan is currently being drafted.

Low Impact Development Presentations, Outreach Materials and LID Webpage

As part of the effort to provide technical support to Buzzards Bay municipal officials, the BBP has made presentations on Low Impact Development to area planners, planning board members, and other interested municipal officials. Additionally, LID Presentations were given to the BBAC, Citizen Training Collaborative, Cape Cod Commission, and the South Shore Science Center. The BBP also assisted the town of Marion in obtaining a \$154,000 grant to install a bio-retention system to treat stormwater, worked with three towns to develop a stormwater management bylaw encouraging LID principles, and established an [LID webpage](#). The BBP is also an active participant in the Commonwealth's LID workgroup. This

group, comprised of state agencies, the private sector, and NGOs, is working to bring LID techniques to Massachusetts.

Atlas of Stormwater Discharges in the Buzzards Bay Watershed

This 100+ page report includes maps of more than 2,600 stormwater discharges and more than 12,000 catch basins along the shores of nearly all of Buzzards Bay. (The City of New Bedford and the Elizabeth Island chain of Gosnold were not included in the study.) A hard copy of the report was mailed to Buzzards Bay municipal Boards of Selectmen, Departments of Public Works, Boards of Health, and Conservation Commissions. The document could also be downloaded at the BBP's [stormwater atlas webpage](#).

Summary Report on Nitrogen Removal Performance of Alternative Septic System Technologies

The BBP published a report in September 2002 in the Environment Cape Cod Journal. The [Costa et al.](#) article can be downloaded from the BBP website.

Inventory of Potential Wetland Restoration Sites in the Buzzards Bay Watershed: Phase I

This report identifies 75 freshwater and saltwater wetland sites in the southern portion of the Buzzards Bay Watershed that have been filled or altered in some way. These sites were located on public lands, conservation properties and abandoned cranberry bogs. A hard copy of the report was mailed to Buzzards Bay municipal Conservation Commissions. The document can also be downloaded at the BBP's [filled wetland atlas](#) webpage. Phase II of the Atlas, which covers the northern and eastern portions of the watershed and includes nearly 130 additional sites, is expected to be released this Spring.

October 2003 Update of the Wareham Planning Board's Nitrogen Brochure

This brochure is an updated version of a 2000 brochure, which includes changes requested by the Planning Board to meet the current needs of the municipality to develop a nitrogen management strategy to minimize impacts from new growth. (See [Appendix I](#))

Bouchard No. 120 Oil Spill- Largest in Buzzards Bay in Nearly 35 Years

On April 27, the tank barge *Bouchard No. 120* ran aground and spilled an estimated 98,000 gallons of Number 6 fuel oil in Buzzards Bay. Dr. Joe Costa, Executive Director of the Buzzards Bay Project, prepared a series of web pages to provide residents, municipal officials, and managers, information about the spill, its environmental impacts, and about the progress of cleanup and restoration of affected areas. The information on those pages was compiled from various sources and contained BBP analysis of the event.

While the Buzzards Bay Project was not directly responsible for either oil spill response, clean up, or assessment; these roles are prescribed to the Coast Guard, the state Hazmat contractor, municipal first responders, the Bouchard Oil Company, the Massachusetts DEP, and other agencies. The BBP provided important technical support to state agencies and the Coast Guard in support of these actions, such as the production of maps with living resource information. BBP staff also assisted in the wildlife rescue efforts in the first ten days when there was a shortage of trained personnel. Perhaps most importantly, the BBP maintained a detailed website about the spill because it was recognized that full, unbiased disclosure of events, and keeping the public and municipal officials informed about the spill and clean-up efforts, would help speed the protection and restoration of Buzzards Bay.

One of the BBP's most important contributions was the critical analysis of the volume of oil spilled, which dispelled claims by the responsible party that the amount of oil spilled was only half to a third of the amount reported. The BBP's report and other materials relating to the oil spill are contained in

[Appendix H.](#)

Salt Marsh Atlas

In June 2002, the Buzzards Bay Project completed, printed and distributed its inventory of tidally restricted salt marshes. The "Atlas of Tidally Restricted Salt Marshes in Buzzards Bay" inventories 257 tidal restrictions to salt marshes. This document (included in this submission) is intended to provide information on the effects of tidal restrictions and to help municipal officials, state agencies, and environmental organizations identify potential restoration projects. Because of the development of this atlas, seven salt marsh restoration projects have been initiated or completed in Buzzards Bay.

As an accompaniment to the Salt Marsh Atlas initiative, the BBP was able to secure \$50,000 in grant funds from the Massachusetts Environmental Trust to create a tidal restriction remediation and education program in Buzzards Bay. BBP staff gave presentations to municipal Boards of Selectmen, Conservation Commissions, homeowners' associations, and other private groups about the use of the Salt Marsh Atlas. Additionally, landowners with tidal restrictions on their property were contacted via a brochure mailing. This mailing explained the effects of tidal restrictions and the landowner's options. BBP staff met with interested individuals and work on some of these potential remediation projects continues today.

NAWCA Grant Support

Seven million dollars in fines from the *Bouchard 120* oil spill were directed to the USFWS' North American Wetlands Conservation Act (NAWCA) grant program for projects in the Buzzards Bay watershed. In anticipation of the NAWCA funds becoming available, a group of 27 bay organizations called the "Buzzards Bay Watershed Partners" was organized, originally by the Massachusetts Environmental Trust. After the first two meetings, it was agreed that the citizens group, the Coalition for Buzzards Bay, would take the lead and prepare grant applications for several land protection projects for the Fall 2004 grant deadline. The Buzzards Bay Project participated in the effort, and prepared the maps and evaluated land use and habitat data that were used in the grant applications. On January 14, 2005, it was reported in the press that three of the Buzzards Bay Watershed Partners' grants would be awarded a total of \$2.3 million through the federal NAWCA program. The BBP continues to work with the Watershed Partners on a second round of grant applications, due in March, for the remaining \$4.7 million.

Marion Watersheet Zoning Model Dock and Pier Bylaw

The Marion Marine Resources Commission developed a [model watersheet-zoning bylaw](#) with the assistance of the Buzzards Bay Project. It was anticipated that the bylaw would be presented at the Fall 2004 town meeting for approval after review by the Planning Board. The Planning Board, however, was unable to hold the hearing on the language of the zoning change, as required to bring the bylaw to town meeting. The issues that prompted the development of this bylaw remain unaddressed. This bylaw is still planned to come before the Planning Board and will eventually come to a vote at a future Town Meeting in Marion. Several other towns are studying the approach laid out here to determine its applicability in their community.

DEP Appeals Falmouth Conservation Commission Decision on BBP's RDA.

Only occasionally does the Buzzards Bay Project file a Request for Determination of Applicability for a project under the Massachusetts Wetland Protection Act. The Buzzards Bay Project discovered that the Falmouth Department of Public Works failed to obtain a wetlands permit for a major road project in Falmouth that caused damage to a wetland. The BBP created a [Gifford Street Wetland Case webpage](#) to explain this action by the Buzzards Bay Project. [Appendix F](#) contains sample correspondence from this case.

Eel Pond Study

The state legislature has provided in the FY05 budget, a line item (within the Division of Conservation and Recreation) that provides funding for Buzzards Bay water quality restoration projects “including, but not limited to engineering and permitting costs for restoration in Mattapoisett of the Eel Pond drainage culvert.” The Buzzards Bay Project is administering these funds on behalf of the DCR and EOEA. We began our first meetings with the Town of Mattapoisett in the Fall of 2004 (Read this [New Bedford Standard Times article](#)). In January 2005, the Buzzards Bay Project awarded a contract to the Town of Mattapoisett.

Eel Pond has two tidal channels. One at the eastern end, which has been in place since the 19th century (and passes under an abandoned railroad bridge), and one at the western end, which appeared in the 1960s or early 1970s. In the past few decades, the western channel to Eel Pond has been widening, while at the same time the eastern channel has been filling in. There are several ramifications to these trends and issues that need to be addressed. First, the Town of Mattapoisett’s sewer line travels under the barrier beach that forms Eel Pond. With the migration and widening of the western channel, and the erosion of the shoreline, there is a concern that, in the event of a severe hurricane, a shifting beach may expose and destroy the sewer line buried there. Second, Eel Pond suffers from excessive nutrient loading and is among the most eutrophic systems in Buzzards Bay. Improving tidal flushing in the embayment can improve water quality. Improving flushing at the eastern end may also potentially slow the rate of movement and expansion of the channel in the western end.

Estuaries Live!

Estuaries Live! is an interactive internet virtual field trip event that has been held every September in the days leading up to Estuaries Day for the past several years. It is a free interactive broadcast experience accessible via the Internet for classrooms and individuals around the country. Teachers register for the class, and students and individuals have the opportunity to participate by submitting online questions for scientists and other experts. The program, hosted by different estuaries, includes live, interactive, 50-minute field trips to various sites around the country.

In 2004, the Buzzards Bay Project participated in Estuaries Live! in conjunction with the Waquoit Bay National Estuarine Research Reserve (WBNERR), located in Falmouth, Massachusetts. WBNERR hosted one of the live virtual field trips and BBP Executive Director, Joe Costa, was featured on-line discussing the impacts of development on Buzzards Bay.

Creation of New Web Pages

The Buzzards Bay Project created many new web pages during the past three years to address inquiries to the BBP, and to more easily disseminate information to students, residents, and managers. These new web pages included an [eelgrass page](#), a [right to know page](#), an [Enjoy Buzzards Bay page](#), an [Estuaries Day page](#), an [LID page](#), a [seafood safety page](#), a [public access page](#), a [Status and Trends page](#), and a [finfish and fishing page](#), to name a few.

VII. Financing Municipal Strategy

Current Approach

The Buzzards Bay Project has had an extremely successful municipal grant program in place since 1990. This program, funded through EPA Section 320, EPA demonstration project funds, Congressional additions and state match programs, has been highly effective at facilitating CCMP actions. The Project has also been very successful in securing state and federal competitive grants either on its own or in partnership with municipalities. The successful technical assistance offered to the municipalities in grant development is illustrated by the number of grants awarded to Buzzards Bay municipalities by the MCZM Coastal Pollution Remediation (CPR) Program and the DEP Section 319 program.

For example, Buzzards Bay municipalities account for 12.5% of all Massachusetts coastal communities, yet during the existence of the CPR programs, grants to Buzzards Bay communities for projects in the Buzzards Bay watershed, account for more than 31% of all CPR grants. Similarly, Buzzards Bay municipalities account for less than 4% of all Massachusetts municipalities eligible for Section 319 Non-point source pollution grants. Buzzards Bay towns and BBP partners have accounted for nearly 22% of all grants awarded (including awards to state agencies) between 1994 and 2001.

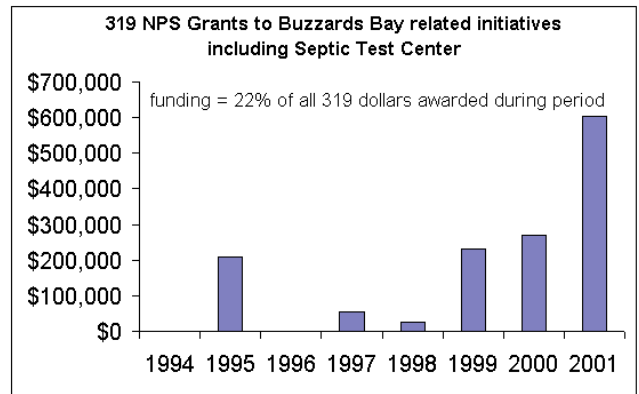


Fig. 2: 319 grants to Buzzards Bay related initiatives

The financing of implementation activities and leveraging of CCMP actions is part of an ongoing aggressive strategy by the Buzzards Bay Project to tap into various state and federal financial and technical assistance programs. Other Buzzards Bay Project partners similarly have had success in attracting state and federal dollars. For example, this year the Coalition was again able to obtain \$100,000 of dedicated state funds to implement their citizens' water quality monitoring program.

The success of grant and other funds acquired by the Buzzards Bay Project and partners is illustrated by the figures to the right showing Buzzards Bay Project funding. Figure 2 includes some 319 NPS grants to municipalities in which the Buzzards Bay Project received no direct funding, but which was a partner in the grant. Also included in the graph are any 319 grants that supported the Septic System Test Center.

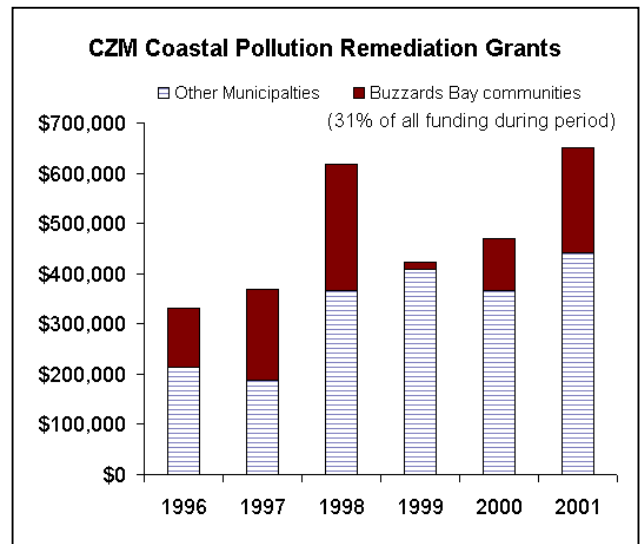


Fig 3: CZM Coastal Pollution Remediation Grants

It is clear from these figures that modest federal "base funding" through the NEP has paid big dividends for Buzzards Bay. With funding of project staff secure, the Buzzards Bay Project was able to focus its grant proposal writing on securing funds for municipalities or specific implementation initiatives.

VIII. Institutional Coordination and Public Participation

The Buzzards Bay Project (BBP) staff has successfully forged strong institutional arrangements with local, state and federal stakeholders. The emphasis, however, has been on fostering partnerships with town regulatory boards because most CCMP actions are directed at local government. The staff's focus has been on providing technical assistance to planning boards, boards of health and conservation commissions. This assistance takes the form of bylaw development, workshops, open space planning, septic system tracking, stormwater treatment designs, GIS capability and other useful implementation tools. Since CCMP approval in 1992, the BBP staff has had the opportunity to work in all 11 major Buzzards Bay towns to varying degrees. The expertise that the staff has been able to provide has strengthened local capacity and accelerated CCMP implementation. Besides technical assistance, the BBP has helped local grant writers with proposals to secure highly competitive state and federal funds that were probably otherwise out of reach.

Throughout this document, the highly productive collaboration between the Buzzards Bay Project and the Coalition for Buzzards Bay has been highlighted. Another excellent example of the BBP's coordination with its partners is its work with the Buzzards Bay Action Committee (BBAC) to update the CCMP. The BBAC has agreed to include in its monthly meetings discussions about specific new actions and goals needed in a new Buzzards Bay CCMP. These sessions have allowed discussions that both promote the BBP's activities and provide an opportunity to hear from town representatives about community needs. The BBAC has used their meetings and exchanges to help establish the BBP's funding priorities and refine the Project's annual work plan to ensure that the municipal perspective is integrated into the overall yearly agenda.

Another collaboration with the BBAC has been in the area of stormwater mapping. For several years, the Buzzards Bay Project worked to develop the "Atlas of Stormwater Discharges in the Buzzards Bay Watershed." In 2003, The BBP distributed hard copies and CD versions of the Atlas to town boards and libraries in the Buzzards Bay watershed. The Atlas was also posted on the BBP's website. As valuable as that effort was, the BBP knew more information was needed. While the Buzzards Bay Project focused on discharges and drainage networks near to shore, Buzzards Bay municipalities wanted a similar mapping effort for their entire community. They needed this information for their Phase II permits and to implement town-wide strategies to manage and maintain their stormwater infrastructure. The Buzzards Bay Project, however, did not have the personnel or resources to undertake the mapping of the entire watershed.

The BBAC suggested a solution. Recognizing that, in the past, the Buzzards Bay Project had used student interns to do routine mapping of stormwater drainage network features in the field, hiring interns were suggested as a plausible option. In 2003 and 2004, through the BBAC's Executive Director's ties with a regional vocational school, the BBAC funded vocational high school students through a vocational work-study program and summer internship program, to map municipal infrastructures to meet the needs of the communities.

In 2003, the Buzzards Bay Project formalized this partnership with the Greater New Bedford Regional Vocational Technical High School (VocTech) and the BBAC to establish a stormwater mapping collaborative partnership program to assist Buzzards Bay municipalities. As part of the pilot effort, the BBAC provided more than \$10,000 to pay for students and buy equipment and software to get the program off the ground. The Buzzards Bay Project provided technical support to guide the effort.

Because of the success of the pilot effort, the BBAC sought to expand and continue the program with support from the Buzzards Bay Project and Voc Tech. With the help of the Buzzards Bay Project they applied for and received an \$18,000 MCZM Non-Point Source Pollution grant to continue the effort.

Beyond establishing strong local relations, the BBP has also developed a solid working arrangement within state government. This starts with the Project being housed within the Massachusetts Office of Coastal Zone Management (CZM), which provides a special institutional advantage. The Project has used the prestige of CZM and the expertise of key staff to further the accomplishment of many program priorities within the Buzzards Bay watershed. CZM also provides valuable administrative support to the Project.

Because nitrogen management is a key component of the CCMP, the BBP has concentrated much of its focus on increasing the state's profile in nitrogen-related issues. The BBP is participating in the Massachusetts Department of Environmental Protection's effort to establish nitrogen TMDLS in 89 Massachusetts embayments.

In the 1990s, the BBP and DEP also joined as partners in the development and construction of the Alternative Septic System Test Center at the Massachusetts Military Reservation. The BBP secured funding for the project through an Environmental Technology Initiative grant in order to evaluate and promote new onsite technologies with an emphasis on nitrogen removal. This will help with CCMP implementation, as the widening use of de-nitrifying systems is a major action called for in the CCMP.

About 2002, the Barnstable County Health Department agreed to manage the facility, and DEP agreed to help fund it. Today, the Test Center is nearly self-sustaining with user fees from participants and funds from grant partners, like the National Sanitary Federation. In 2004, the Buzzards Bay Project facilitated the renewal of a new 5-year lease of the land with the US Air Force. It will also serve DEP by providing state program managers with consistent testing protocols and a high level of confidence in the effectiveness of new technologies prior to permitting. The center will accelerate the regulatory process and allow for more alternative systems sooner.

At the federal level, the Project has also institutionalized close working relationships with two key federal agencies, EPA and the Natural Resources Conservation Service (NRCS). The BBP continues to have strong ties with the EPA Region I project officer for the Buzzards Bay Project. Because of the management structure of Region I, the project officer is also the 319 program coordinator for Massachusetts, and this dual responsibility has helped ensure that 319 priorities to help fund watershed management plans is considered for projects in the Buzzards Bay watershed.

The NRCS collaboration began in 1992, and as of early 2005, the Massachusetts Executive Office of Environmentally Affairs is about to negotiate a new 2-year agreement with NRCS for this technical assistance to the Buzzards Bay Project.

Finally, the BBP receives overall policy direction and budget approval from its five member Steering Committee. Members represent EPA-New England, CZM, BBAC, the Coalition for Buzzards Bay, and the Southeastern Regional Planning and Economic Development District. The committee provides the proper blend of federal, state, regional, and local government, as well as citizen representation. It makes the difficult funding decisions implicit with a shrinking resource base, but allows the Project director and staff the necessary management flexibility to administer the details of ongoing projects.

IX. Implementation Tracking and Monitoring

One of the hallmarks of monitoring in Buzzards Bay has been The Coalition for Buzzards Bay's citizens' water quality monitoring program. This citizen-based monitoring program, which has been jointly implemented by the Coalition for Buzzards Bay and Buzzards Bay Project National Estuary Program, was designed by Dr. Joe Costa and Dr. Brian Howes to address the need to monitor and evaluate nitrogen impacts to coastal waters, as outlined in the Buzzards Bay Comprehensive Conservation and Management Plan. The Coalition organizes and trains the citizen volunteers and coordinates data collection and entry. This monitoring program was funded principally by the Buzzards Bay Project between 1992 and 1996. Between 1997 and 2000, the Coalition exclusively funded the monitoring program through grants and its supporters. However, to meet the needs of the program, the Buzzards Bay Project has provided between \$25,000 and \$60,000 annually to support the program between 2002 and 2005.

Besides past monitoring reports, a notable achievement during the past few years by the Coalition has been the printing and distribution of harbor signs with results of the monitoring program. These signs can be viewed at the Coalition's [water quality publications web page](#).

To communicate other aspects of tracking CCMP progress and outcomes, the Buzzards Bay Project established a [Status and Trends](#) web page that includes a variety of water quality, living resource, and management tracking parameters. The Buzzards Bay Project continues to track and post information on CCMP implementation projects and is currently using this information to help guide the development of an updated CCMP described in the preceding section. The website is still undergoing development, but will be finalized by June 30, 2005.

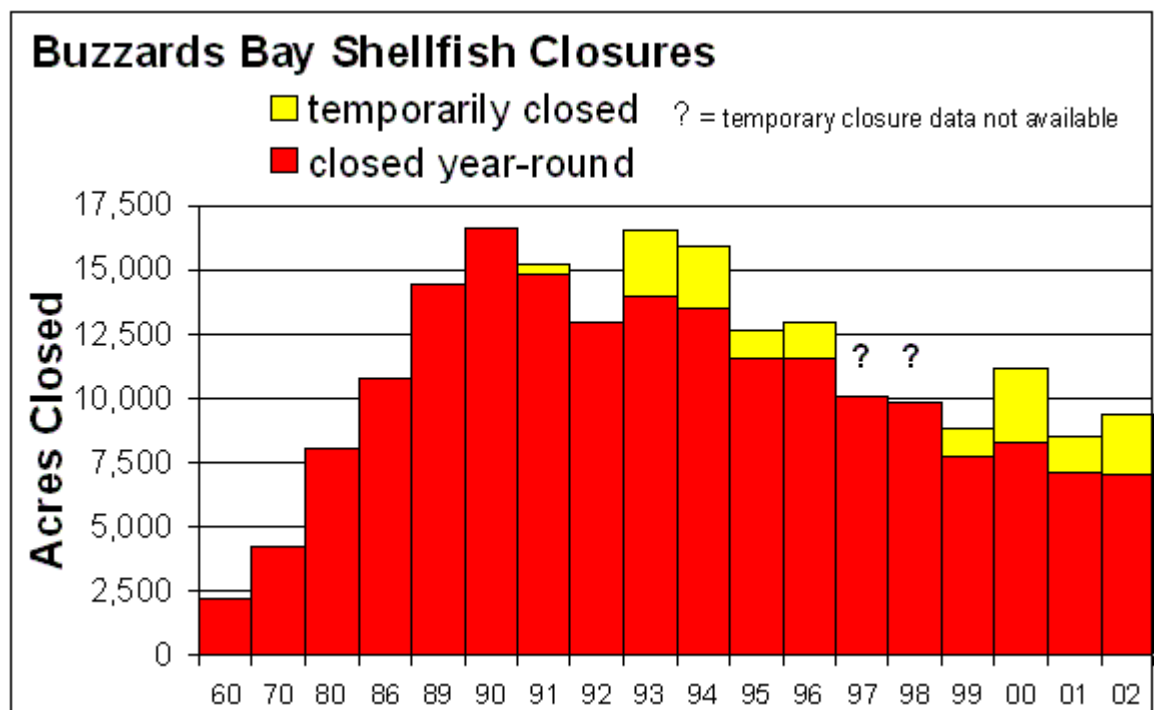


Fig. 4: Example of the type of information available on the Status and Trends webpage.

Appendix A. 2002-2004 Work Plans

This appendix contains printouts of these files:

- 1) 2002 work plan file [workplanfy02.pdf](#),
- 2) 2003 work plan file [workplanfy03.pdf](#),
- 3) 2004 work plan file [workplanfy04.pdf](#),

Appendix B. 2002-2004 GPRA Reports

This appendix contains printouts of these files:

- 1) 2002 GPRA report file [gpra-bbp-02.pdf](#),
also available at : <http://www.buzzardsbay.org/download/gpra-bbp-02.pdf>.
- 2) 2003 GPRA report file [gpra-bbp-03.pdf](#),
also available at : <http://www.buzzardsbay.org/download/gpra-bbp-03.pdf>.
- 3) 2004 GPRA report file [gpra-BBP-04.pdf](#),
also available at : <http://www.buzzardsbay.org/download/gpra-bbp-04.pdf>.

Appendix C. Draft Updated Buzzards Bay MOU

This appendix contains printouts of this file: [mou-bb-2005.pdf](#)

The original MOU adopted in 1997 can be viewed at:
<http://www.buzzardsbay.org/download/mou-bb-1997.pdf>

Appendix D: Coalition for Buzzards Bay Publications

This appendix contains printouts of these files:

2002 Annual Report - [2002annual-report.pdf](#)

2003 Annual Report - [2003-annual-report.pdf](#)

State of the Bay Report – [state_of_the_bay.pdf](#)

Currents Newsletter (Fall 2004) - [Currents-Fall2004.pdf](#)

Currents Newsletter (Winter 2004) - [Currents-Winter2004.pdf](#)

Appendix E: Sample Outreach Materials for Phase II Program

This appendix contains printouts of these files:

- 1) Phase II web page [phase2.pdf](#),
also available at: <http://www.buzzardsbay.org/phase2.htm>

- 2) Phase II alert [phase2alertcover-web.pdf](#),
also available at : <http://www.buzzardsbay.org/phase2/phase2alertcover-web.pdf>.

- 3) Phase II 2003 Fact Sheet [phase2factsheet.pdf](#),
also available at : <http://www.buzzardsbay.org/phase2/phase2factsheet.pdf>.

Appendix F: Sample Correspondence and Outreach

This appendix contains printouts of these files:

Quorums and voting procedures for Conservation Commissions - [deegan-quorum-part2.pdf](#)

Offer of technical assistance to Lawrence Lynch Corp.- [lawrencelynchtechassistance.pdf](#)

Comment letter on Bay Club ENF - [matt-bayclub-comm1.pdf](#)

Guidance brochure for developers - [falmouth-wetland-brochure1.pdf](#)

Understanding Falmouth wetlands bylaw brochure - [falmouth-wetland-brochure2.pdf](#)

Summary of questionnaire responses for CCMP Action Plan item update - [bbac-update-12-04-ccmp.pdf](#)

Buzzards Bay Project 9/9/02 comment letter on proposed Tihonet Pond ([tihonetupdate.pdf](#))

Wareham letter on oversight of nitrogen removal septic systems ([boh-denitsystems.pdf](#))

August 2002 letter to Board of Health on Mattapoisett Beach Brook Sampling. ([mattbeachbrook-results3.pdf](#))

BBP Report on water quality issues surrounding a Rochester Piggery ([rochester-sol2.pdf](#))

Appendix G: Sample Presentations

This appendix contains printouts of these files:

Low Impact Development PowerPoint Presentation - [lid-show-wareham.pdf](#)

Docks and Piers Bylaw - [docksandpiersbylaw.pdf](#)

Eelgrass and jet clamming PowerPoint presentation - [eelgrass-jetclamming-issues.pdf](#)

Appendix H: Information Relating to the April 2003 Oil Spill

This appendix contains printouts of these files:

Report on initial estimates of oil spilled by *Bouchard 120* - [bbpreviewoilvolume.pdf](#)

Cover letter to above report - [bbpreviewoil-cover.pdf](#)

Rebuttal to oil spill report comments - [bbpoilvolumerebutal1.pdf](#)

Past updates from webpage on *Bouchard 120* oil spill - [oilspill-pastupdates.pdf](#)

CZM newsletter article on oil spill by Dr. Joe Costa

Appendix I: Buzzards Bay Atlases, Brochures and Publications

This appendix contains printouts of these files:

[Stormwater Atlas](#)

[Selected Inventory of Potential Wetland Restoration Sites \(Phase I\)](#)

Carver Open Space Plan (excerpts printed in Appendix, full report [Carver OS Plan.pdf](#) and [survey](#))

Outreach [Brochure](#) for Tidal Restriction Remediation and Education Program

[Wareham 2003 Nitrogen Brochure](#)

Appendix J: Examples of Materials Distributed at Workshops and Presentations

This appendix contains CDs that were distributed to all participants at Buzzards Bay Project workshops and presentations:

Stormwater Outreach Materials

Model Stormwater Management Bylaws and Regulations

Low Impact Development: Putting the Lid on SWM

Low Impact Development Practices and Smart Growth: An Introduction for Town Officials

The Basic Wetland Package

S.E. Massachusetts Soil Survey CD

Society of Soil Scientists of Southern New England: Soil Documentation and Training CD

Green Neighborhoods: Open Space Residential Design in Massachusetts