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Response to USEPA Questions
Commonwealth of Massachusetts
October 12, 2012
New Bedford Marine Commerce Terminal (NBMCT)

Introduction

Thank you for this opportunity to provide USEPA additional information related to the development of the NBMCT. Development of this facility represents an important opportunity to deliver lasting environmental benefits to the New Bedford region, as well as accelerate economic development throughout the region.

This document provides responses to some of the USEPA's questions and requests for information submitted by e-mail from USEPA dated August 13, 2012, and by letter dated October 5, 2012.

The format of the document will follow a comment–and-response outline, where each of the USEPA Comments will be listed in the order in which they were presented in the USEPA's Memoranda with the Commonwealths Response to each Comment presented immediately thereafter.

Question 1 (Item 11 From EPA's August 13, 2012 Request for Information): Disposal of Contaminated Sediment Dredged from Footprint of Proposed CDF and Floatation Dredging – Identify Into Which CAD Cell These Sediments Will Be Disposed

Contaminated sediment (identified by the Commonwealth as "Top of Dredge" material on the project drawings within the Commonwealth's June 18, 2012 submittal to EPA) dredged from the footprint of the CDF will be placed by the Commonwealth within CAD Cell #3.

Question 2 (Item 13 From EPA's August 13, 2012 Request for Information): Confirm in writing whether or not the resulting flood storage capacity gain from Marsh Island restoration work is currently, or is anticipated to be, identified as mitigation for any other project or activity occurring or scheduled to occur in New Bedford Harbor. To the extent that such information is currently available, confirm that the flood storage mitigation work will occur on a schedule that will, to the extent practicable, parallel the loss of flood storage capacity from construction of the South Terminal.

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The Commonwealth is unaware of any other project in New Bedford Harbor that is currently, or is anticipated to be identified as mitigation for any other project or activity occurring or scheduled to occur in New Bedford Harbor. The Commonwealth is in a unique position in that it (specifically MassDEP through both its Wetlands and Waterways divisions) would be the permitting agency for any project that includes filling sufficient to require flood storage offsets similar to the Marsh Island restoration project. Therefore, the Commonwealth is certain that if such a project existed, the Commonwealth would be aware of it.

As of June 2012, a fact sheet issued by the New Bedford Harbor Trustee Council (see **Appendix 1**) stated that the Marsh Island restoration is anticipated to begin in late 2013. Assuming that EPA issues its Final Determination as of November 1, 2012, and the construction of the New Bedford Marine Commerce Terminal began on January 15, 2012, filling in association with the project would be unlikely to begin before late 2013 (dependent upon sequencing by the Contractor selected by the Commonwealth). Assuming that the Commonwealth is on schedule and that the Marsh Island restoration project is on schedule, it appears that the flood storage mitigation work will occur on a schedule that will, to the extent practicable, parallel the loss of flood storage capacity from construction of the New Bedford Marine Commerce Terminal.

Question 3 (Item 4 From EPA's October 5, 2012 Letter): In the draft determination, EPA told the Commonwealth we need further information on its request to include blasting as an option for dealing with any bedrock that might be found during dredging/construction of terminal bulkhead and channels. Both the Corps and NMFS raised concerns about blasting including potential effects on the Hurricane Barrier and Atlantic Sturgeon and other fish species, respectively. More recently, the Commonwealth indicated that due to the time constraints involved in getting approvals from those two agencies, it could live with a final determination that did not allow blasting, as long as it had the ability to seek a modification to EPA's final determination in the future to include blasting if blasting turns out to be necessary. EPA has advised the Commonwealth that before EPA could consider such a modification, the Commonwealth would need to provide evidence to both the Corps and NMFS that blasting would not harm the Hurricane Barrier or fish, respectively, and secure approval from the two federal agencies.

EPA position: We are willing to go forward with a final determination that does not include blasting if, before the determination, we receive a detailed description of alternate non-blasting methods of subtidal rock removal (instead of blasting) and the impacts of alternate

non-blasting methods on aquatic resources. This approach is premised on the assumption that the impacts of the alternate methods will not be significantly adverse. Furthermore, we need, in advance of the determination, a statement from the Commonwealth that it is committed to utilizing the alternate techniques if the Commonwealth determines in the future that it prefers to blast but is unable to obtain all required approvals. The Commonwealth must provide the information about the alternate techniques and their impacts, as well as the commitment to use them in the event that it is unable to obtain all necessary approvals for blasting, no later than October 12 (other than acoustical studies, which are scheduled for delivery on October 22).

In the Commonwealth's June 18th, 2012 reply to the EPA's comments on the January 2012 submittal, the Commonwealth requested that the EPA consider blasting for rock removal in its assessment of potential impact sources for the New Bedford Marine Commerce Terminal (NBMCT). However, after numerous discussions with EPA, the National Marine Fisheries Service (NMFS) and the Army Corp of Engineers, the Commonwealth requested of EPA, by e-mail dated September 24th, 2012, to move forward with a final determination that does not include blasting, provided that the Commonwealth be provided the opportunity to seek approval from EPA, NMFS and the Army Corp for blasting activities in the future.

In reviewing the Commonwealth's request to include blasting in the State Enhanced Remedy, the National Marine Fisheries Service (NMFS) expressed concern for the effects of blasting on fisheries resources, and specifically for potential adverse effects on the Atlantic Sturgeon. Furthermore the USACE expressed concern for potential effects of blasting on the New Bedford Hurricane Barrier.

In order to address these concerns, the Commonwealth is in the process of modeling the potential impacts of the shock or pressure wave, vibrations, and noise generated by underwater blasting on aquatic species, and is also modeling the impact of blasting vibrations on the stability of the Hurricane Barrier. The Commonwealth anticipates that both NMFS and USACE will allow blasting to proceed once the modeling of blasting impacts has been completed and reviewed by both agencies, and suitable controls have been put into place. Indeed, our confidence in this resolution is redoubled following a series of meetings between the Commonwealth, NOAA Regional Administrator Bullard, and NMFS staff. The result of those meetings, as communicated in the Commonwealth's letter to USEPA dated October 4, 2012, was a process that all the participants agreed would meet NMFS' concerns regarding blasting-related impacts to fish while keeping the project on schedule.

Although the Commonwealth is confident that NMFS and USACE will ultimately allow blasting to proceed, time constraints involved in getting approvals from those two agencies may force the Commonwealth to proceed with construction utilizing only non-blasting options to remove rock in association with NBMCT construction, with the hope that NMFS and USACE will approve blasting at a later date, and that EPA will subsequently allow blasting to be added to the project. EPA has stated that it requires a statement from the Commonwealth that it is committed to utilizing non-blasting techniques for rock removal if the Commonwealth is unable to receive the approvals for blasting. The Commonwealth responds in the following manner:

- If rock removal is required, the Commonwealth would prefer to utilize blasting as a potential option, due to its known effectiveness and the speed at which it could be implemented to achieve the goals of rock fracturing in a time-sensitive environment.
- Rock removal utilizing the non-blasting techniques listed below are technically feasible, and therefore, the project may be completed whether blasting is approved or is not approved by NMFS or USACE, even if rock is found to be located within the target dredge footprint for the project; however, the techniques are labor intensive, more expensive than blasting, and may take a considerable amount of time to achieve the required goal.
- As EPA knows, the Commonwealth is under a great deal of pressure to complete its terminal on time; the Commonwealth cannot afford the potential delays associated with using non-blasting techniques, unless it were forced to utilize them, due to a refusal by USACE or NMFS from allowing blasting;
- Should USACE and/or NMFS refuse to allow blasting, the Commonwealth, as a last resort, will have no choice but to utilize non-blasting rock removal techniques, and will do so.

EPA cited the need for additional information on non-blasting alternatives and their potential impacts on the environment in an email dated September 19, 2012, and reiterated in a letter summarizing outstanding data needs and time tables dated October 5, 2012. The potential impacts to the environment may be characterized as acoustic and non-acoustic. The Acoustic modeling currently underway will estimate acoustic environmental impacts. This document provides a list and descriptions and their potential impacts on the environment of the potential non-acoustic, non-blasting rock removal techniques that are being evaluated for use at the NBMCT.

NON-BLASTING ROCK REMOVAL TECHNIQUES

The Commonwealth anticipates that in the event that blasting is not subsequently permitted, the following four techniques may be employed to either fracture rock to facilitate its removal, or to directly remove rock:

1. Hoe Ram
2. Bucket Removal
3. Drill and Fracture
4. Cutter Head Dredging

The following sections describe each of the four techniques and their potential environmental effects:

1. Hoe Ram

Prior to the development of explosives for fracturing rock, direct applications of force in the form of hammering was often used to propagate fractures into a rock body. The Hoe Ram is a modern extension of that technique in which a manually driven hammer is replaced with a hydraulically actuated one on the end of an excavator arm (see below for an example of above-water hoe ram use).

The weight of the excavator is leveraged onto the tip of the Hoe Ram (Ram), and hydraulic force is used to drive the tip into the stone. Eventually the impact of the Ram causes fractures to propagate through the rock mass, and the rock splits. The method is repeated until the rock in the targeted removal area has been reduced to sizes which can be removed by an excavator bucket, or similar method.

Hoe ramming is time consuming and equipment intensive. However, the technique propagates no pressure wave into the surrounding environment, and is the method expected to generate the least turbidity of the four non-blasting techniques under consideration. The equipment is loud however, and although the peak noise level of blasting is predictably higher, the Ram is continuously operated and may under some noise assessment models actually generate more "noise" (acoustic modeling will further evaluate the noise impacts). The equipment also employs hydraulic fluid to actuate the hammer (similar to a hydraulic dredge), which will be heated during use. The heated hydraulic lines will radiate heat into the surrounding water, but the expected thermal input to the water would be similar to a marine vessel's engine heat exchanger, and would be negligible.

2. Bucket Removal

Fracturing of a rock mass can also be accomplished using high point loads beyond the compressive strength of the rock, or to exploit and expand existing fractures within the rock mass. This method is sometimes referred to a rock ripping. Standard excavator buckets can in some cases generate the required forces, but there are also specialized attachments specifically engineered to maximize the excavator's force in ripping applications. An example of a ripping attachment for an excavator is shown below.

Similar to hoe ramming, ripping is time consuming and equipment intensive in comparison to blasting, and as a result is typically more expensive. Additionally, the teeth on the bucket will limit the amount of rock that can be removed from the bottom (in some estimates, up to a foot of broken material may be left in place when missed by the teeth of the bucket). However, the technique propagates no pressure wave into the surrounding environment. Turbidity generated by this technique is highly dependent on the type of rock being removed, as well as the content of any fractures present. It is anticipated that this method would generate turbidity levels similar to dredging, and greater than those generated by the hoe ram. The equipment is loud however, and although the peak noise level of blasting is predictably higher, ripping is continuously operated and may under some noise assessment models actually generate more "noise" (acoustic modeling will further evaluate the noise impacts). The equipment also employs hydraulic fluid to actuate the bucket, which will be heated during use. The heated hydraulic lines will radiate heat into the surrounding water, but the expected thermal input to the water would be similar to a marine vessel's engine heat exchanger, and would be negligible.

3. Drill and Fracture

Drilling and fracturing is the basic technique by which blasting is accomplished, but can be accomplished without the use of explosives. Many products have been developed for mining where the use of explosives were undesirable, either because of the presence of explosive gasses within the mine, or where poor ventilation would prevent the quick removal of smoke or generated gasses. In order to place the compound into the rock mass, a series of narrow (usually approximately 2.5 inch) shafts are drilled in a pattern across the target removal area using a rotary air hammer. Once the hole pattern has been drilled, the fracture compound is mixed, and placed into the individual holes. The compound expands within the drilled shaft, and the expanding compound exerts pressure against the rock mass until the tensile strength of the rock is overcome, and fractures radiate out from the drilled shafts. Images of rock masses fractured by an expansive compound are shown below.

Drilling and fracturing with expanding compounds requires careful planning and precise positioning of the drilling equipment. The makes the technique more effective for land based removal operations, where the operator of the drilling equipment has direct visual confirmation of the drill position in relation to the planned hole pattern. Underwater applications present technical problems which make the method more difficult and therefore more expensive, but it is still effective. The most common expansion compounds used are expansive grouts, which are composed primarily of quicklime (Calcium Oxide CaO) or slack lime (Calcium Hydroxide CaOH), which are mixed with water to initiate hydration. The hydrated grout cures to form cement but expands during the curing process and releases no hazardous materials into the surrounding environment. The technique propagates no pressure wave into the surrounding environment. Turbidity generated by this technique is related solely to the drilling operation, and typically less than that generated during dredging, but is highly dependent on the type of rock being

removed, as well as the content of any fractures present. It is anticipated that this method would generate turbidity greater than those generated by the hoe ram, but less than those generated by bucket removal. The equipment generates noise levels which are similar to those of other heavy machinery found on road construction projects. The mechanical drive for the drill rig is above water, and therefore there is no anticipated heat generation from the drilling equipment. The expansive compound curing process is an exothermic curing process similar to curing concrete, so there will be some heat generation. However, the rock mass will absorb the majority of the generated heat making the heat generation component of this technique inconsequential.

4. Cutter Head Dredging

Similar to bucket removal, cutter head dredging relies on high point loads exerted by the dredging equipment to break the rock body. However, instead of propagating fractures through the rock mass, a cutter head dredge relies on the high point load to chip the rock into fragments which can then be carried as suspended sediment in the water being drawn passed the cutter head by the suction pump of the dredge. The process is continuous: as the dredge operator slowly swings the spinning cutter head across the surface of the rock, it (the rock) is broken into gravel sized pieces which are then removed by the suction pump. The process is also a single phase, where the dredge combines the rock fracture and removal technique. An image of a cutter head hydraulic dredge fitted with a rock removal cutter is shown below.

Similar to hoe ramming and ripping, operating a cutter head dredge to remove rock is time consuming and equipment intensive in comparison to blasting. However, the technique

propagates no pressure wave into the surrounding environment. Turbidity generated by this technique is highly dependent on the type of rock being removed, as well as the content of any fractures present, but is typically largely controlled at the dewatering process end and is turbidity generated is similar to, or less than, that generated during dredging. It is anticipated that this method would generate turbidity levels greater than those generated by the hoe ram. The equipment generates noise while removing rock similar to that encountered while dredging. The equipment also employs hydraulic fluid (within self-contained hoses) to actuate the cutter head, which will be heated during use. The heated hydraulic lines will radiate heat into the surrounding water, but the expected thermal input to the water would be similar to a marine vessel's engine heat exchanger, and would be negligible.

New Bedford Harbor Trustee Council

New Bedford Harbor Project Updates June 2012

Electrical component manufacturing resulted in the release of polychlorinated biphenyls (PCBs) and other hazardous materials into New Bedford Harbor over a period of 40 years. The New Bedford Harbor Trustee Council (Council), using $20.4 million of restoration settlement funds, oversees the restoration of natural resources that were impacted or lost due to the contamination. The council has implemented 34 restoration-related projects since 1998, and is in the process of planning and implementing many more. Representative projects are presented below.

Salt Marsh Restoration

To date, the Council has completed three salt marsh restoration projects totaling 17 acres and is planning several more that, when implemented, will result in up to 26 additional acres of restored salt marsh habitat.

- In Spring 2011, the Council completed the **West Island Beach Salt Marsh** restoration project in Fairhaven with $397,949 in Council funds. Working with project partners, including the Town of Fairhaven, Massachusetts Division of Ecological Restoration, and the Bristol County Mosquito Control Project, the Council replaced a failing, undersized culvert beneath Fir Street at the entrance to the West Island Beach parking lot with a larger, properly-sized culvert. This larger culvert will enable the 6.5-acre upstream marsh to receive more tidal flow and to drain faster after storm events, increasing the ability of the marsh to support fish and other marsh animals and to stop the spread of invasive plant species.

- In November 2005, the Council completed the **Winsegansett Reserve East Marsh** salt marsh restoration project with $15,700 in Council funds. This project, on Sconticut Neck in Fairhaven, consisted of cleaning and enhancing an old salt marsh drainage ditch to facilitate freshwater drainage from the marsh surface and tidal flows to the upper portions of the marsh, and restored approximately four acres of salt marsh. This project was completed in association with the Bristol County Mosquito Control Project, Buzzards Bay Coalition, Fairhaven-Acushnet Land Preservation Trust, and the Vivieros Farm.

- In April 2003, The Town of Dartmouth completed the **Padanaram salt marsh** restoration project with $46,968 in Council funds. This project replaced an undersized culvert with a larger, properly-sized culvert, connecting the 6.5-acre Padanaram salt marsh to Apponagansett Bay. The project results were almost immediate. Woody vegetation and invasive species that had encroached onto the marsh surface began to die off once tidal inundation and soil salinity were restored. In addition, fish that were unable to access the marsh surface prior to the restoration are now present in the thousands.

The Council has also funded the feasibility and design, and is further developing several other salt marsh restoration projects:

- At **Marsh Island** in Fairhaven, the Council has developed construction plans and received regulatory permits necessary to construct this 12-acre salt marsh restoration project adjacent to the Acushnet River/New Bedford Harbor.

The West Island Beach salt marsh culvert before construction (above) and after construction (below).

This project will restore the marsh by removing fill from the former marsh surface and planting, and will also construct a perimeter walking trail. The Council estimates construction will begin in late 2013.

- At the **Winsegansett Reserve West Marsh** site in Fairhaven, the Council has completed the design to restore tidal exchange to and remove fill from approximately 1.5 acres of salt marsh and other coastal habitats. Regulatory permit applications are currently being prepared.

- In 2008, the Council completed a feasibility study for the salt marsh restoration at **Round Hill Beach** in Dartmouth. In 2012, the Council set aside $1.3 million to design, permit, and construct the restoration of up to 12 acres of filled salt marsh at this site, and anticipates beginning design of the project in late 2012.

New Bedford Harbor Wetlands Restoration Plan

In January 2003, the Massachusetts Wetlands Restoration Program completed the Council-funded **New Bedford Harbor Wetlands Restoration Plan**. This Plan identified 69 potential wetland restoration sites in the New Bedford Harbor environment. Copies of the plan were distributed in the Greater New Bedford area to encourage use of these sites for potential restoration or mitigation projects. The Council has used this plan to identify and develop several salt marsh restoration projects.

Land Preservation

To date, land purchases supported by Trustee Council funds have resulted in the permanent preservation of approximately 630 acres of land in the New Bedford Harbor Environment. A variety of habitat, including wetlands, coastal ponds, beaches, and forested uplands have been preserved through purchase and/or conservation restriction. The preserved lands will be held by land trusts or other similar entities to be used and enjoyed by the public while preserving the natural resource values and diverse habitat of each property.

Additionally, the Council has awarded funds to the Buzzards Bay Coalition to purchase and preserve an additional 70 acres in Acushnet. The purchase of these sites is anticipated in 2012. Please see the table on page four for a full list of land preservation projects.

Shellfish Restoration

A variety of **shellfish restoration** projects improved the shellfisheries of New Bedford Harbor. Conducted by the Regional Shellfish Restoration Committee, comprised of the local shellfish wardens from New Bedford, Dartmouth and Fairhaven, with $1,238,736 from the Council, activities included the purchase and planting of adult and seed quahogs; the purchase and spreading of bay scallop and soft shell clam seed; relays of contaminated adult quahogs to clean areas to allow depuration to take place; the development of a Regional Shellfish Management Plan; and monitoring and enforcement activities. The shellfish monitoring work included studying the effectiveness of shellfish seeding efforts to recommend techniques that may improve the efficacy of future shellfish seeding efforts.

Eelgrass Restoration

Conducted in partnership with the University of New Hampshire Jackson Laboratory and the Coalition for Buzzards Bay, the **eelgrass restoration** project involved surveying the distribution and condition of eelgrass throughout the New Bedford Harbor estuary, identifying priority areas for potential eelgrass habitat, and, with the assistance of numerous volunteers, transplanting eelgrass from established beds to the priority reestablishment areas. These transplants will improve the ability of the Harbor to provide habitat for a variety of finfish and shellfish resources. The eelgrass was planted in 1999 and 2000 and has established and spread at least two of the transplant locations. This Council-funded, $459,487 project also included monitoring the effectiveness of the eelgrass transplantation.

Tern colony at Bird Island. The stakes in the foreground mark nest locations.

Tern Restoration

Since 1999, the Council has provided $2,019,235 to the Commonwealth of Massachusetts to monitor, manage and enhance nesting locations for Roseate Tern (a federally-listed endangered species) and Common Tern (a state-listed Species of Special Concern) in the New Bedford Harbor environment. The goal of the project is to rebuild and restore populations of Roseate and Common terns that were injured while feeding on PCB-contaminated fish in the New Bedford Harbor environment. This **tern restoration** project involves moving other species, such as gulls, off the nesting areas; daily monitoring of the seasonally nesting terns; and the enhancement of nesting habitat at the Bird, Ram, and Penikese Islands in Buzzards Bay. The project also involves filling and stabilizing portions of Bird and Ram Islands to provide greater tern nesting opportunities.

Migratory Fish Restoration

The Council, in association with the Massachusetts Division of Marine Fisheries (DMF), recently reestablished fish passage for herring and other fish species at three dams on the Acushnet River. In 2002, project partners installed a 265-foot long fishway at the uppermost dam forming the **New Bedford Reservoir**, allowing herring to access the 200-acre

reservoir to spawn. In 2007, the partners installed fish passage structures at the two remaining blockages on the Acushnet River. At the **Sawmill Dam** site, the partners partially breached the dam and constructed a stone, nature-like step-pool fish passage system. At **Hamlin Street**, the partners installed a stone, nature-like step weir fish passage system. Together, these projects allow river herring and American eel to better access the entire 8-mile length of the Acushnet River, the Reservoir, and other upstream habitats.

The completed nature-like fishway that was constructed at the site of the former Sawmill Dam in Acushnet.

DMF conducted monitoring of fish access to New Bedford Reservoir, funded by the Council, which shows that these fish passage projects have been very successful. For the two years prior to construction, an average of 326 herring were able to access the New Bedford Reservoir. Over the three years following construction, that number has steadily increased, and, in 2011, nearly 4,000 herring entered the Reservoir—a significant improvement that the Council anticipates will only get better. Monitoring indicates that these fish passage projects were also beneficial to American eels, which have also seen a significant increase in numbers upstream of the dams.

Parks and Recreation

The Council has funded the construction of portions of two recreational parks in the City of New Bedford. The Council provided $2,110,000 to New Bedford for the construction of **Riverside Park** at the former site of the Pierce Mill on Bellevue Avenue. Completed in late 2005, Riverside Park provides passive recreational opportunities and will eventually provide harbor access.

At **Fort Taber Park**, the Council provided $2,404,887 to the City to construct a community center, bathhouse, restroom facilities, and reconstruct a stone fishing pier. The Council-funded work at Fort Taber Park was completed in 2004. The park provides access to—and recreational use of—the Harbor.

Habitat Enhancements

In 2012, the Council awarded the City of New Bedford with $2,908,340 to design and construct the **Upland Riparian** project. This project will preserve a 25-foot wide corridor of land along 2.2 miles of the Acushnet River and create a walking path in this area. It will be planted with native vegetation. The Council also provided the City with an additional $100,000 in funding for habitat enhancements at **Palmer's Island**.

A Council-funded study, conducted by the Buzzards Bay Coalition in 2008, evaluated the feasibility of removing pavement and other impervious features and restoring natural habitats to the 19-acre **Acushnet Sawmill** site. In 2012, the Council awarded the Buzzards Bay Coalition a $1,197,493 grant to design, permit, and construct this habitat restoration project.

Studies

The Council completed three additional feasibility studies. For the **Artificial Reef** and **Sconticut Neck** water quality projects, the Council decided not to proceed further with the projects following the feasibility studies due to the limited benefits to the injured natural resources. Similarly, after reviewing the results of the Council-funded study examining the feasibility of installing one or more additional openings in the **New Bedford Harbor Hurricane Barrier** to increase tidal flushing and water quality in the Inner New Bedford Harbor, the Council decided that the benefits of the project were too limited to proceed any further.

For More Information

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New Bedford Harbor Trustee Council-Funded Land Preservation Projects

Date	Location	Acres	Cost	Recipient
Dec. 1998	**Sconticut Neck (North)**, Fairhaven	160	$394,000	Fairhaven-Acushnet Land Preservation Trust
Feb. 2003	**Popes Beach**, Fairhaven	2.6	$869,000	Town of Fairhaven
Nov. 2003	**Marsh Island (North)**, Fairhaven	14	$50,000	Fairhaven-Acushnet Land Preservation Trust
Dec. 2003	**Acushnet River Valley**, Acushnet	208	$968,000	Fairhaven-Acushnet Land Preservation Trust
Jan. 2004	**Popes Beach (South)**, Fairhaven	3.6	$757,000	Town of Fairhaven
Jun. 2006	**Vivieros Farm**, Fairhaven	119.6	$1,200,000	Fairhaven-Acushnet Land Preservation Trust
Feb. 2007	**Marsh Island (South)**, Fairhaven	7.7	$300,000	Fairhaven-Acushnet Land Preservation Trust
Mar. 2007	**Acushnet Sawmill**, Acushnet	18.8	$1,750,000	Buzzards Bay Coalition
Mar. 2007	**Acushnet River North**, Freetown	84.8	$775,000	Fairhaven-Acushnet Land Preservation Trust
Dec. 2008	**Winsegansett Pond**, Fairhaven	13	$175,000	Fairhaven-Acushnet Land Preservation Trust
TOTAL		**632.1**	**$7,238,000**	
TBD	**LaPalme Farm**, Acushnet	46.6	$600,000	Buzzards Bay Coalition
TBD	**Acushnet Estuary Reserve**, Acushnet	24	$346,000	Buzzards Bay Coalition