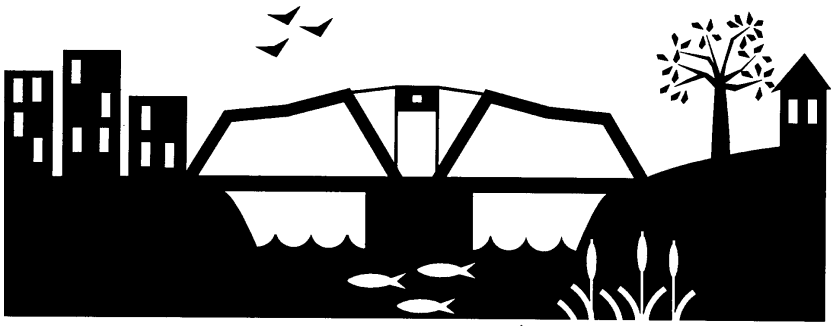
New Bedford Harbor Trustee Council



Environmental Assessment

New Bedford Harbor Restoration

Round II

Final

Commonwealth of Massachusetts

U.S. Department of Commerce

U.S. Department of the Interior

Final January 2001

UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

JAN 2 2001

TO ALL INTERESTED GOVERNMENT AGENCIES AND PUBLIC GROUPS:

Under the national Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: Environmental Assessment for New Bedford Harbor Restoration - Round II

LOCATION: New Bedford Harbor Superfund Site - New Bedford Harbor, Acushnet River and Buzzards Bay, Massachusetts

SUMMARY: The New Bedford Harbor Trustee Council (Council) (Commonwealth of Massachusetts, the National Oceanic and Atmospheric Administration, and the U.S. Fish and Wildlife Service) is responsible for restoring natural resources injured by releases of hazardous substances in the New Bedford Harbor Environment. A restoration plan were approved in September 1998 which implemented restoration projects and established the framework for implementing future restoration actions.

This environmental assessment evaluated the 35 restoration ideas (alternatives) submitted to the Council for possible implementation under its second request tor restoration ideas. A comment period and public hearing was held on the submitted restoration ideas and an additional comment period and hearing was held on the draft environmental assessment and the Council's 17 preferred alternatives. The preferred alternatives address restoration priorities: (1) marshes or wetlands, (2) recreation areas, (3) water column, (4) habitats, (5) living resources, and (6) endangered species. The final environmental assessment incorporates the comments received, responses, and changes to the draft environmental assessment.

RESPONSIBLE OFFICIAL: Penelope D. Dalton
Assistant Administrator for Fisheries
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, Maryland 20910
Phone: 301/713-2239

The environmental review process led us to conclude that this action will not have a significant impact on the environment. Therefore, an environmental impact statement was not prepared.

A copy of the finding of no significant impact along with the environmental assessment is enclosed for your information. Please submit any written comments to the responsible official named above within 30 calendar days, and to Ramona Schreiber, Office of Policy and Strategic Planning, U.S. Department of Commerce, Herbert C. Hoover Building, 14th & Constitution Avenue, N.W., Room 6117, Washington, D.C. 20230.

Sincerely,

Susan Fruchter

Susan B. Fruchter
NEPA Coordinator
Office of Policy and Strategic Planning

Enclosure

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, MD 20910

THE DIRECTOR

DEC 2 8 2000

MEMORANDUM FOR: Susan B. Fruchter
NEPA Coordinator
Office of Policy and Strategic Planning

FROM: for Penelope D. Dalton

SUBJECT: Transmittal of an Environmental Assessment for New Bedford Harbor Restoration - Round II

Based upon the subject environmental assessment, I have determined that no significant environmental impacts will result from the proposed actions of the New Bedford Harbor Trustee Council. I request your concurrence in this determination by signing below. Please return this memorandum for our files.

I concur Susan Fruchter 1/2/01
Date

I do not concur _____
Date

Attachments

THE ASSISTANT ADMINISTRATOR
FOR FISHERIES

NEW BEDFORD HARBOR TRUSTEE COUNCIL

ENVIRONMENTAL ASSESSMENT - ROUND II

RECORD OF DECISION

The New Bedford Harbor Trustee Council ("Council") in 1998 developed a plan to restore natural resources injured by releases of hazardous materials, including polychlorinated biphenyls (PCBs), to New Bedford Harbor, Massachusetts. The plan was used to implement an initial round of natural resource restoration projects (Round I). The plan also identified a process by which future restoration projects would be solicited, developed and selected for funding by the Trustee Council.

The Council, composed of the U.S. Departments of Commerce (DOC) and Interior (DOI) as well as the Commonwealth of Massachusetts, has worked with the affected communities, state and local governments, local commercial interests, academic institutions, and others to identify and develop additional restoration projects for proposed funding (Round II). As a result of this cooperative process, the Council has proposed a series of actions to restore a wide range of natural resources and uses injured by PCBs in the New Bedford Harbor area. The Council evaluated the potential impacts the various projects might have on the environment by developing an environmental assessment under the National Environmental Policy Act. This Record of Decision announces the Council's final decisions on the projects selected to be implemented and others to be further studied and perhaps funded under Round II.

Background

New Bedford Harbor is located in Southeastern Massachusetts at the mouth of the Acushnet River on Buzzards Bay. The Harbor and River are contaminated with high levels of hazardous substances and materials, including PCBs, and as a consequence are on the U.S. Environmental Protection Agency's (EPA) Superfund National Priorities List. This site is also listed by the Massachusetts Department of Environmental Protection as a priority Tier 1 disposal site.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund," 42 U.S.C. §9601 *et seq.*) designates as possible natural resource trustees federal, state, or tribal authorities who represent the public interest in natural resources. The trustees are responsible for recovering funds through litigation or settlement for damages for natural resource injuries. CERCLA requires that any recovered monies be used to "restore, replace, or acquire the equivalent of" the natural resources that have been injured or lost by a release of a hazardous substance.

For the New Bedford Harbor Superfund Site, the three natural resource trustees (DOC, DOI, Commonwealth of Massachusetts) represent the public interest in the affected

natural resources. The Secretary of Commerce has delegated DOC trustee responsibility to NOAA; within NOAA, the National Marine Fisheries Service has responsibility for natural resource restoration. The Secretary of the Interior has delegated trustee responsibility to the U.S. Fish and Wildlife Service. The Governor of Massachusetts has delegated trustee responsibility to the Secretary of Environmental Affairs.

In 1983, complaints were filed in federal district court in Boston alleging causes of action under CERCLA against Aerovox Incorporated, Belleville Industries, AVX Corporation, Cornell-Dubilier Electronics (CDE) and Federal Pacific Electric Company (FPE), for injuries to natural resources that resulted from releases of PCB that occurred during the time that the defendants owned or operated the facilities. In 1992, the individual cases were settled as follows: 1) Aerovox and Belleville - $13.15 million with $2.5 million for natural resource damages and restoration; 2) AVX, Inc - $66 million with $6.7 million for natural resource damages; and 3) FPE and CDE - $10 million for natural resource damages and restoration; and an additional $10 million was placed into a joint registry account with EPA, to be used for response or natural resource damages, depending upon selection of the final remedy by EPA. The total settlement, with interest, for natural resource damages was approximately $20.2 million and the funds reside in the Trust Accounts of the Court Registry Investment System (Trust Accounts). Funds in the Trust Accounts earn interest; the current Trust Accounts balance is approximately $22 million.

The Council issued an initial “Request for Restoration Ideas” in October 1995 (60 FR 52164, October 5, 1995)(Round I). Fifty-six ideas were received from the local communities, members of the public, academia and state and federal agencies. The ideas were the basis for the alternatives listed in the Council’s “Restoration Plan for the New Bedford Harbor Environment” (Restoration Plan) that was developed to guide the Council’s restoration efforts. An environmental impact statement was prepared in conjunction with the Restoration Plan to fulfill requirements of the National Environmental Policy Act. A record of decision was issued on September 22, 1998 for both the Restoration Plan and the environmental impact statement. The record of decision provided for implementation of 11 preferred restoration projects through funding provided by the Trust Account. The record of decision also approved the framework for future restoration activities.

A second request for proposed restoration ideas was issued in August 1999 (64 FR 44505, August 16, 1999). Thirty-five restoration ideas were submitted to the Council with total requested funding of approximately $35.0 million from the Trust Account. The Council held a meeting on October 26, 1999 to provide an opportunity for oral presentations of the submitted ideas. The Council also solicited public comments on the ideas and held a hearing on November 23, 1999 to give the public further opportunity to comment on the ideas. The project ideas were reviewed by the Council’s legal advisors. In addition the ideas were evaluated by technical advisors who

developed recommendations with respect to the technical feasibility and restoration benefits of each of the ideas.

The Council carefully considered all public comment received and the comments from its technical and legal advisors and staff. The Council discussed each idea, and following this review process, the Council identified preferred project ideas for potential funding. The Council released a draft Environmental Assessment (EA) in which all identified alternatives were evaluated and the preferred projects announced. The Council held a public hearing on June 29, 2000 and requested public review of the EA and the Council's preferred alternatives (65 FR 46146. July 27, 2000).

Over 650 comment letters were received on the preferred alternatives and other alternatives not selected. The Council reviewed the comment letters and has provided responses in the EA. The Council rendered a final decision on the preferred projects after consideration of the written comments, the public hearing comments and the analysis contained within the EA. The Council's final decisions on the projects to be implemented under Round II follow.

The Trustee Council's Approved Project Ideas

Certain projects may require a competitive solicitation in order for the Council to provide funding. If necessary, the solicitation will be a formal request following the appropriate contract or grant procedures. Construction or implementation of the projects ultimately selected could be awarded to private entities, commercial firms, educational institutions or local, state or Federal agencies. All projects will ultimately be funded through contract or grant procedures that will provide conditions to ensure that the funds are expended prudently and as proposed.

All Council-funded land purchases require a habitat value analysis, a fair market appraisal, a title exam, an environmental site assessment, property boundary surveys and a conservation restriction to be held by a grantee acceptable to the Trustee Council before the project can be implemented (collectively referred to hereinafter as the "standard pre-acquisition tasks").

Below is a description of the project ideas approved by the Council for implementation and funding.

1. Acushnet River Valley Conservation Project (Approved amount: $964,000)

The Council will provide funds for the purchase of either a fee interest in, or conservation restriction for, approximately 245 acres of land along the Acushnet River. The land is characterized by 1.5 miles of non-tidal riverfront containing hardwood and pine forests, open farm land, red maple and shrub swamps and freshwater meadows. This project acquires and protects against development the equivalent of river lands lost or injured due to contamination along the Acushnet River estuary. In addition, the

acquisition and/or conservation of this land will help to protect and restore downstream natural resources which were injured through PCB contamination. While this site is not contiguous to the area of contamination, it is expected to provide much needed protection to the injured natural resources, particularly anadromous fish injured by the contamination.

2. Buzzards BayKeeper (Approved amount: $150,000)

The BayKeeper is an on-the-water initiative. Council funding will be provided to primarily monitor whether Trustee-funded projects are being properly implemented and identify any activities that may be adversely affecting successful implementation. Accordingly, the BayKeeper will assist the Council in its efforts to restore natural resources by monitoring the Trust-funded projects and by providing information to assist in the effective implementation of such current and future projects. The BayKeeper is also expected to support education projects and wetland restoration activities associated with the harbor cleanup and restoration. Trustee funding would support these BayKeeper activities for a five year period.

3. Community Rowing Boathouse (Council approved amount: $25,000 for a study on lost recreational use, $250,000 for new boat(s) and a boathouse if the results of the study indicate a loss of access to the Harbor through recreational boating due to PCB related injury to natural resources sufficient to justify the expense of the proposed idea.)

The idea submitted to the Council involves the purchase or construction of additional rowing whaleboats and the planning and construction of a boathouse to be used for an existing whaleboat rowing program for youth and adults. The boathouse facility would include space for storage, repair, maintenance, and construction of boats.

The initial step will be a study to evaluate the full range of potential lost recreational use(s) of the New Bedford Harbor Environment associated with PCB related injuries to natural resources. The information resulting from the study would then be available to determine which recreation projects are legally fundable and, possibly, the level of funding the Trustees should consider relative to other recreational projects and restoration priorities.

Funding for the boathouse or additional boats is contingent upon obtaining the results of the study, that demonstrate a loss of recreational boating in the Harbor due to PCB related injury to natural resources sufficient to justify the expense of the proposal. If the study demonstrates a loss of recreational boating in the Harbor due to PCB related injury to natural resources, the overall goal of this project is to compensate for that lost natural resource service by providing the equivalent of such lost natural resource service, by providing people with direct on-the-water activity within the Harbor. The Trustees will consider this project, and/or alternative projects to enhance boating uses, subject to further legal review. If the project is ultimately funded, participation in the

boating programs would be offered free of charge to all Greater New Bedford Area schoolchildren.

4. Marsh Island Salt Marsh Restoration (Approved amount: $750,000 in reserve)

This project funds the restoration of a salt marsh, a natural resource which was injured by PCB contamination. The Marsh Island site appears to show the greatest potential for restoration and public access. This site could support both a salt marsh through the restoration of former tidal and/or non-tidal wetlands and re-establishment of the upland maritime plant community, and a passive recreation park. There is a bedrock outcrop at the shoreline which would make an excellent focal point for the park with the restored salt marsh and tidal gut immediately south of this outcrop.

EPA has recently stated that Marsh Island is being considered for temporary storage of clean soils/sediments during the harbor cleanup. The construction of the confined disposal facility to be located along the shore opposite Marsh Island will generate a large volume of clean sediment. EPA's cleanup in the upper harbor will involve the removal of contaminated wetlands and mudflats and it is EPA's proposal to use the clean sediments as backfill to plant and/or restore the contaminated wetlands and mudflats. The clean sediments must be stored for approximately 3-5 years, however, until the CDFs are constructed and the contaminated wetlands and mudflats are excavated. EPA believes that Marsh Island could serve well as a temporary storage area for this clean material, given its proximity to the CDF and its current land use. Until a final determination is made on EPA's use of Marsh Island, the Trustee Council will refrain from taking any further action on this project. The money allocated for this project will be added to the trust reserve and the Council will coordinate future actions with the EPA and other involved parties.

5. Artificial reef (Approved amount: up to $500,000)

A reef (or reefs) would be constructed within Upper Buzzards Bay to help restore those natural resources injured by PCB sediments in the Harbor bottom. The Council would provide funding for a preliminary identification of appropriate locations, and the materials and/or structures to be utilized at such locations. If a suitable location is found, a reef would be constructed with Trust funds. Funding would also include a monitoring component to determine if the goals of the project are being achieved, to identify any necessary modifications, and to ensure that intended benefits are being realized by the injured natural resources.

6. Educational exhibit on PCB impacts to natural resources and examples of how to change everyday behavior to have a positive impact on the Harbor Environment (Approved amount: $150,000 in reserve)

This exhibit would be located in the proposed New Bedford Aquarium and would contain essentially two components or goals. The first purpose of the exhibit would be

to explain what PCBs are, their industrial uses, their disposal into the Harbor, and then to examine the effects of PCB contamination on the six major taxonomic groups of organisms (fish, crustaceans, mollusks, plankton, annelids, birds) located in the New Bedford Harbor Environment. The exhibit would be expected to educate the public on the harmful effects of the PCB discharges and efforts being made to clean up the harbor and restore its natural resources.

The second, and perhaps more significant, purpose of the exhibit is to educate Aquarium visitors to change their routine or everyday behavior to have a positive impact on the New Bedford Harbor Environment and its natural resources that have been adversely affected by past PCB disposals and releases into the Harbor Environment.

It is important to note that project implementation is largely dependent on reaching an adequate funding level for the entire Aquarium project and securing the necessary regulatory permits for all on-site construction. The Council will not release funds for the salt marsh creation until these conditions have been met.

7. Marine fish stock enhancement (Approved amount: up to $1,950,000)

A facility would be constructed or funded to raise species that have been injured by PCB contamination for two possible purposes: First, stocking of hatchery-raised fish could be one of the means of replacing some fish species that were lost or injured by PCBs (winter flounder, scup tautog), if a methodology can be found which is protective of the wild stocks and assists in their survival. Second, hatchery-raised fish may be found to provide other ecosystem services, such as supporting the food chain in an environmentally protective way. In other words, because certain fish species were injured by PCB contamination, supplying hatchery raised fish may assist restoration efforts by reducing PCB contamination in the food chain. In order to determine if such potential restoration efforts will benefit the injured marine fish species, the Trustees need to obtain information on the feasibility and efficacy of using a hatchery facility to provide for either or both of these purposes.

The Trustees have earmarked up to $1,950,000 with the hope of accomplishing these goals: A) design and implementation of a feasibility study to evaluate the potential for a hatchery facility to aid the Trustees' in restoring, replacing or acquiring the equivalent of lost or injured fish species by satisfying either or both of the objectives described above; B) if justified by the feasibility study, design and construct an appropriate hatchery facility to facilitate accomplishment of either or both of the objectives described above.

8. New Bedford Aquarium salt marsh creation (Approved amount: up to $750,000 in reserve)

A salt marsh would be constructed on the Aquarium site to be colonized with both low and high marsh plant species and animals. The salt marsh would: 1) replace injured salt marsh habitat, a natural resource; 2) serve as a living exhibit of the aquarium and

be part of a public park; 3) remove nitrogen from the seawater effluent from the Aquarium's tanks and Harbor waters which may be used to supplement tank flows; and 4) produce marsh plants for use at the Aquarium site and throughout the Inner Harbor. Funding would be for design, construction and planting. A boardwalk and signage would be erected to allow significant access with minimal impact to the marsh while explaining the functions of a salt marsh to a large audience. Project implementation is largely dependent on reaching an adequate funding level for the entire Aquarium project and securing the necessary regulatory permits for all on-site construction. The Council will not release funds for the salt marsh creation until these conditions have been met.

9. Nonquitt Salt Marsh Restoration (Approved amount: $150,000)

This project will install a new 100 foot culvert, remove a tidal slide gate and replace a headwall to improve tidal flushing of the 60-acre Nonquitt Marsh, Dartmouth. Inadequate flushing has resulted in elevated salt levels in the Nonquitt marsh and resulting vegetative changes. Occasionally storms will block the culvert pipe with sediment and vegetation. This problem was compounded when a large storm in the late 1970's caused a complete blockage of the pipe which resulted in the marsh vegetation dying off due to long periods of flooding. The distressed vegetation has yet to recover and the peat within the marsh is decomposing and eroding. By improving tidal flushing of this marsh, normal salinity, vegetation and productivity of the marsh will be restored. Included in the project idea is the construction of a marsh observation platform to facilitate public access to the site.

10. Popes Beach Land Purchase (North) (Approved amount: $55,000)

Funds are provided for the purchase and establishment of a conservation restriction on six parcels of land totaling 2.6 acres on the northwest portion of Sconticut Neck, Fairhaven consisting of dunes, beach, sand flats and salt marsh habitats. Just offshore are recreational shellfish beds to which the public would also be provided access. The purchase and conservation restriction should contribute indirectly to the protection and restoration of that shellfish resource, a natural resource which was injured by PCB contamination. This property would add to the growing inventory of undeveloped coastal wetlands along Sconticut Neck and is contiguous to undeveloped lands in upper Priests Cove.

11. Popes Beach Land Purchase (South) (Approved amount: $145,000)

Funds are provided for the purchase and establishment of a conservation restriction on approximately 3.5 acres of land on the northwest portion of Sconticut Neck, Fairhaven. The shoreline edge is characterized by a dune-like plant community. The intertidal sandflat and nearby subtidal waters provide feeding and cover habitat for estuarine finfish species. The remaining property is characterized by shrub, sapling and common reed-dominated plant community cover.

12. Regional Shellfish Grow Out Up-Well System (Approved amount: $500,000)

The goal of this project is to restore shellfish injured by PCB contamination through the construction or funding of a shellfish grow out up-well system. The system is a tank-based system using recirculated sea water. The project will involve either 1) locating an appropriate site for the facility, and the design, construction and startup of the facility; or 2) funding an existing facility to provide shellfish seed for transplant. Either would produce shellfish of a size that, after placement in the wild, would have a high probability of surviving to spawning and harvest size. The up-well system would allow shellfish seed to be purchased at a small size and then grown under controlled conditions to a size that would survive predation.

13. Restoration and Management of Tern Populations (Approved amount: $1,232,000)

Roseate and common terns were injured while feeding on PCB contaminated fish in the New Bedford Harbor Environment. The project goal is to rebuild and restore the population of roseate terns(a federally listed endangered species) and common terns through management or enhancement of nesting locations. The management aspect of this project involves moving other species, such as gulls, off the nesting areas and the daily monitoring of the terns that seasonally nest at the three islands.

Funding for this project extends the work being conducted under restoration funding from Round I for an additional period of six years. Round I provided funding ($266,400) to implement biological management and monitoring of tern colonies at Bird Island, Marion, Massachusetts, and Ram Island, Mattapoisett, Massachusetts to restore populations of common terns and roseate terns. At a third island, Penikese Island, Gosnold, Massachusetts, the project focused on managing gulls to reclaim the island as a nesting site. Preliminary engineering work to stabilize Bird Island and toxicological analyses of tern eggs were also funded.

14. Riverside Auto Wrecking Land Acquisition (Approved amount: $675,000)

The Council will provide funds for the purchase and establishment of conservation restrictions on four lots in Acushnet totaling approximately 14.3 acres of land in the upper harbor portion of the New Bedford Harbor Superfund Site. The purchase and conservation restriction would preserve the land from redevelopment and provide protection to the wetlands or wetland fringe adjacent to the properties. Any funding provided will be limited to purchase of, and placement of conservation restrictions on, the properties and identified restoration activities, but will not be spent for the cleanup or staffing.

15. Upper Harbor Confined Disposal Facility (CDF)Natural Resource Habitat Enhancements (Approved amount: $25,000)

The Council will provide funds to study the type of plantings that could be supported by the CDFs proposed for construction north of Coggeshall Street. Plantings on these structures, including the sides of the structures, would further benefit the injured natural resources present in the Harbor. If plantings are determined to be likely to restore or replace PCB-injured natural resources in the area, the Council would consider a funding level necessary to support the plantings. The design of the CDFs would incorporate plantings conducive to use by birds and other wildlife with similar natural resource functions to those lost due to the contamination of the CDFs as a result of PCB contamination in the Harbor. Such lost or injured natural resource functions include cover, foraging and/or feeding.

16. Upper Sconticut Neck Shellfish/Sewer Installation (Approved amount: $150,000 for study, $550,000 in reserve)

Pollution has closed shellfish beds and recreational areas in the Outer New Bedford Harbor off Sconticut Neck, Fairhaven. Funding would be provided for a study to determine the sources impacting these shellfish beds and the best way to correct the source of contamination. If the results conclusively determine that the Sconticut Neck septic systems are responsible, and the idea is feasible, the Council would then release additional funds to assist in design and engineering for this project.

17. Winsegansett Field Station - New Bedford Harbor Environmental Education and Coastal Resources Restoration Center (Approved amount: $360,000)

The Council provides funding for the following aspects of the original idea: habitat restoration and environmental education projects targeting specific human activities. In particular, the Council believes that there are discrete habitat restoration projects on the property that should be identified and implemented, including: restoring salt marsh degraded by insufficient flow; restoring water quality in Winsegansett Pond by investigating and correcting pollutant inputs; and restoring living resources through eelgrass planting.

Prior to final approval for funding, all selected projects require environmental review under applicable law and the submission of detailed scopes of work for Council review and approval. In addition, implementation of some of the projects may be conditioned or delayed, and the funds therefore held in reserve, until more information becomes available or specific conditions are met. Funds held in reserve will continue to be held in the interest bearing Trust Account, administered by the Court Registry Investment System of the United States District Courts.

The New Bedford Harbor Trustee Council approves the Final Environmental Assessment for Round II for restoration of the New Bedford Environment and authorizes the implementation of the preferred alternatives contained therein.

Signed:

1/8/01

Michael Bartlett, U.S. Fish and Wildlife Service — Date
U.S. Department of the Interior

Signed:

Dale C. Young — Jan. 8, 2001

Dale Young, Executive Office of Environmental Affairs — Date
Commonwealth of Massachusetts

Signed:

William T. Hogarth — 12-28-00

for Jon Rittgers, National Oceanic and Atmospheric Administration — Date
U.S. Department of Commerce

The Assistant Administrator of the National Marine Fisheries Service, acting as the Administrative Trustee, issues this Record of Decision to provide notice of this approval.

Signed:

William T. Hogarth — 12-28-00

for Penelope D. Dalton, National Marine Fisheries Service — Date
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

NEW BEDFORD HARBOR TRUSTEE COUNCIL
ENVIRONMENTAL ASSESSMENT

ROUND II - RESTORATION IDEAS

Table of Contents:

Acronyms Used

AWQC	Ambient Water Quality Criteria
ACOE	U.S. Army Corps of Engineers
CBC	Community Boating Center
CDF	Confined Disposal Facility
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
DNRT	Dartmouth Natural Resource Trust
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
MDPH	Massachusetts Department of Public Health
MGL	Massachusetts General Laws
NBHTC	New Bedford Harbor Trustee Council
NEPA	National Environmental Policy Act
NHESP	Natural Heritage and Endangered Species Program
NPDES	National Pollutant Discharge Elimination System
PCB	Polychlorinated biphenyl
ppm	parts per million
RP	Restoration Plan
RP/EIS	Restoration Plan/Environmental Impact Statement
WWTP	Wastewater Treatment Plant

1: PURPOSE AND NEED FOR ACTION

1.1 The Proposed Action: Environmental Restoration of the New Bedford Harbor Environment

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund," 42 U.S.C. §9601 *et seq.*) provides a mechanism for addressing the Nation's hazardous waste sites, allowing states and the federal government to sue polluters to recover the costs of the clean-up and/or restoration of designated sites. CERCLA provides for the designation of "natural resource trustees" as federal, state, or tribal authorities who represent the public interest in natural resources. Natural resource trustees may seek monetary damages (*i.e.*, compensation) from polluters for injury, destruction, or loss of natural resources resulting from releases of hazardous substances. These damages, which are distinct from clean-up costs, must be used by the trustees to "restore, replace, or acquire the equivalent of" the natural resources that have been injured. The trustees must prepare a restoration plan and are required to involve the public in the development of the restoration plan (42 U.S.C. §9607(f)(1) and §9611(I); 40 C.F.R. §300.600; 43 C.F.R. §11.93).

The sediments, water column and biota of New Bedford Harbor, Massachusetts, are highly contaminated with polychlorinated biphenyls (PCBs) as a result of industrial discharges into the Harbor and nearby coastal environments in western Buzzards Bay. As a result, the U.S. Environmental Protection Agency (EPA) designated New Bedford Harbor a Superfund Site under CERCLA in 1983. In 1991 the New Bedford Harbor Trustee Council (NBHTC or Trustee Council) was formed, composed of the Commonwealth of Massachusetts, the U.S. Department of Commerce, and the U.S. Department of Interior.

In order to satisfy the requirements of the National Environmental Policy Act (NEPA, 42 U.S.C. §4321 *et seq.*), the Trustee Council combined restoration planning with the development of an Environmental Impact Statement (EIS) and prepared a Restoration Plan and EIS (RP/EIS) for the New Bedford Harbor Environment under CERCLA, 42 U.S.C. §9601 *et seq.*, and NEPA, 42 U.S.C. §4321 *et seq*. A Record of Decision was issued on September 22, 1998 (NBHTC 1998b).

The Trustee Council has undertaken and is undertaking environmental restoration in New Bedford Harbor and the surrounding environment in order to: (1) restore natural resources injured by PCB releases; (2) restore the habitats of living resources and the ecological services that those resources provide; (3) restore human uses of natural resources, such as fisheries and public access; and (4) improve aspects of the human

environment of New Bedford Harbor that have been degraded by the Harbor contamination (NBHTC, 1993).

The environmental restoration has incorporated public and professional opinion to develop, evaluate, and select specific and general restoration alternatives. The result has been the selection and implementation of the preferred alternatives identified in the RP/EIS. As proposed by the RP/EIS, the Trustee Council initiated a second solicitation of restoration ideas (Round II) which are included as alternatives in this Environmental Assessment. The RP/EIS identified appropriate times for when the Trustee Council could consider selecting additional projects for implementation. This Environmental Assessment describes the process being used by the Trustee Council in making its final recommendations regarding the restoration ideas to be implemented in Round II to address the injury to natural resources.

1.2 Need for the Proposed Action: Injury to Natural Resources

1.2.1 Site History: Contamination of New Bedford Harbor

New Bedford Harbor is an urban tidal estuary on Buzzards Bay, in southeastern Massachusetts**.** From the late 1940s until 1977, when the use of PCBs was banned in the United States, manufacturers of electrical parts in New Bedford discharged PCBs directly and indirectly, via the municipal wastewater treatment system, into the New Bedford Harbor Estuary (Estuary). PCBs are a class of chlorinated organic compounds that are suspected human carcinogens. They have been shown to be harmful to many species, capable of causing reproductive failure, birth defects, and death. PCBs tend to "biomagnify" up the food chain, accumulating in the tissues of top predators such as gamefish, birds, and humans (60 F.R. 10836).

A series of studies conducted from 1974-1982 found high levels of PCBs and toxic metals (particularly cadmium, chromium, copper and lead) to be widespread in the water, sediments, and marine life of New Bedford Harbor. Levels of PCBs in the Harbor biota were found to exceed what was then the U.S. Food and Drug Administration (FDA) guideline of 5 parts per million (ppm) (subsequently lowered to 2 ppm). As a result, the Commonwealth closed the Inner Harbor to all fishing, and the Outer Harbor to the taking of certain species in September, 1979.

In the late 1980s and early 1990s, studies further described the distribution of PCBs and toxic metals throughout the Estuary and in parts of Buzzards Bay (Pruell et al., 1990). PCB concentrations in marine sediment in the Estuary were found to range from a few parts per million to over 200,000 ppm, while concentrations in excess of 50 ppm were found in parts of Outer New Bedford Harbor. PCB concentrations in the water column were found to exceed federal ambient water quality criteria (AWQC) (0.030 ppm, based on chronic impacts to marine organisms) (60 F.R. 10836).

In 1983, New Bedford Harbor was designated a Superfund Site, eligible for Federal clean-up action, or “remediation.” In addition, Massachusetts has identified New Bedford Harbor as the Commonwealth's priority Superfund site. As a result of settlements in 1991 and 1992 with the federal government and the Commonwealth of Massachusetts, the manufacturers responsible for the contamination paid approximately $100 million for remediation and restoration of New Bedford Harbor, of which approximately $21 million plus accrued interest must be used by the Trustee Council for restoration, replacement or acquisition of natural resources.

1.2.2 Injury to Natural Resources: Overview

Discharges of PCBs to the New Bedford Harbor Environment have caused significant ecological injury. Widespread contamination of the air, water, sediments and biota of the Estuary has resulted in lethal effects for some species as well as widespread sub-lethal effects such as reduced biological diversity, alteration of biotic communities, and reproductive impairment of marine species.

Contamination of New Bedford Harbor natural resources by PCBs has resulted in the closure of fishing grounds, lost use of beaches, and loss of environmental quality.

The Superfund Site remediation of New Bedford Harbor will remove 85% to 90% of the PCB contamination from New Bedford Harbor. It will not, however, restore the New Bedford Harbor Environment to its pre-contamination condition. Lower, but still significant, levels of PCBs and metals will remain in the marine sediments of some Harbor areas. Confined disposal facilities (CDF) will occupy significant areas of shoreline along New Bedford Harbor.

Contamination from other sources such as combined sewage overflows, wastewater treatment plant discharges, industrial wastewater discharges, and boats is also present. The Superfund designation of this site was based primarily on the PCB releases from industrial discharges at two locations and not on these other sources of environmental contamination.

1.3 Purpose of the Proposed Action: Restore Injured Natural Resources and Lost Services of the Natural Resources

The purpose of the proposed action--natural resource restoration in New Bedford Harbor--is to restore, replace or acquire the equivalent of natural resources injured by PCB releases in New Bedford Harbor, as required by CERCLA (42 USC §9607(f)(1)).

Restoration actions would thereby accelerate and enhance recovery of the ecosystem, the ecological services provided by the ecosystem, and associated human uses.

In order to assess the potential environmental impacts of the restoration, the Trustee Council defines the affected environment to include the lands of the Acushnet River watershed, the waters of the Acushnet River and New Bedford Harbor, and parts of Buzzards Bay, as well as uses of this environment -- ecological as well as human -- extending beyond these boundaries. However, since the injury primarily affected marine and coastal resources, the proposed restoration focuses on the resources of the Estuary and adjacent coastal areas.

1.4 Coordination of Restoration with Remediation

Restoration of the New Bedford Harbor environment has been and will continue to be coordinated with the process of remediation, since the restoration options available at a particular time would be largely dependent on the status of the Harbor environment and clean-up. Water and sediment quality, ongoing dredging and construction activities, and the location and extent of CDFs will influence the possibilities for restoration. The Trustee Council, therefore, envisions a flexible restoration planning process, based on a combination of near-term and future restoration actions. The process will make use, over a number of years, of a series of public solicitations for restoration ideas. Since EPA's remedial action is expected to take approximately ten more years (i.e., thru 2010), the Trustee Council anticipates a restoration process of similar duration.

2: Alternatives and Their Impacts

This section analyzes environmental impacts of the proposed action: environmental restoration of New Bedford Harbor. This section identifies restoration alternatives under consideration and evaluates their environmental consequences. Restoration priorities were established through a public process of communication among the Trustee Council agencies, other public officials, members of the public, and other stakeholders. (RP/EIS Chapter 2) The alternatives that follow were derived from a public, formal solicitation of restoration ideas (Federal Register).

2.1 No-Action Alternative: No Environmental Restoration

No-action/natural recovery (with monitoring) must always be considered in environmental analysis, and should be chosen when it provides greater environmental benefits than other alternatives.

For purposes of this analysis, the no-action alternative assumes that the Harbor cleanup described in Chapters 2 and 3 of the RP/EIS will be completed in approximately ten years (i.e., thru 2010); that it will reduce the level of contaminants in the Harbor Environment; that previous Trustee Council funded projects will be implemented and that EPA initiated natural resource restoration activities resulting from cleanup activities will be undertaken during or after cleanup.

2.1.1 Current Status of the Harbor Environment

The release of PCBs, heavy metals and other contaminants into the New Bedford Harbor Environment has caused injury to natural resources and lost use of those resources. Sewage, household wastes, and commercial wastes such as debris, oil, metals and organics all contributed to a degraded environment.

The discovery that PCBs and other contaminants had been released into the Harbor since the 1940s caused New Bedford Harbor to be added to the National Priorities List by EPA in 1983. Marine sediments, beaches, the water column, and biota were contaminated with PCBs, and this has in turn affected the area's natural resources and ecosystems. PCBs have been shown to harm reproduction and can cause cancers in marine species.

The impacts from PCB contamination are not limited to natural resources alone. The services provided by the natural resources in the affected area have been impacted as well. The contamination resulted in the prohibition of fishing in large portions of the Harbor Environment. Other activities provided by the natural resources became infeasible or undesirable. The Massachusetts Department of Public Health (MDPH) posted warning signs along the Harbor prohibiting swimming, fishing, shellfishing and lobstering.

2.1.2 Predicted Scenario under Natural Recovery Only

Natural recovery for the Harbor is often slow and may not restore resources, habitats, or associated services to baseline condition. PCBs were designed to remain stable in industrial applications. They are chemically stable (will not easily degrade into other compounds), are able to withstand high temperatures, have low solubility in water, and are non-flammable. These characteristics also mean that they will remain in the environment for a long time and will bioaccumulate in the tissues of living resources. (Weaver, 1982) Other contaminant sources such as heavy metals and sewage may also adversely affect recovery times within the Harbor Environment.

The damage assessment conducted on the New Bedford Harbor Environment assumed a natural recovery period of 100 years without remediation. This is a likely scenario given the stability of PCBs and environmental processes taking place. As described in

RP/EIS Section 3.5.1.2, EPA has informally estimated that once the cleanup is completed, water quality target levels for PCBs may take another ten years to achieve (Dickerson, PC, 1996). The Harbor cleanup will reduce the concentration and volume of PCBs, but residual PCBs will continue to remain and affect natural resources for an additional 16-100 years.

2.2 The Preferred Alternative: Natural Resource Restoration

Funds to restore injured natural resources are available from settlements with the parties responsible for releasing contaminants into the New Bedford Harbor Environment. The Trustee Council has the legal responsibility to use this money to restore, replace or acquire the equivalent of the natural resources that were injured.

Natural resource restoration will accelerate the natural recovery process and, in turn, should lead to additional economic benefits through increased use and greater confidence in the health of the Harbor. The sooner injuries can be corrected through cleanup efforts and natural resource restoration, the sooner natural resources can thrive in a healthy environment. Such an environment will support larger populations of marine organisms, healthier individuals and a greater diversity of species. This will also lead to increasing the services provided by the natural resources such as, *inter alia*, fishing, shoreline use and boating.

Due to time constraints and settlement of the litigation, the damage assessment performed was incomplete and was a generalized approach for determining the impacts of the contamination on natural resources. It remains for the Trustee Council to determine the best approach for restoration. Other environmental impacts are present in the area which may mask or increase the impacts of PCB contamination. Historical information does not describe the quality to which resources should be restored. Accordingly, the preferred approach is to take a holistic view and address natural resource restoration opportunities throughout the affected environment. This will provide ecological benefits throughout the watershed while having additional positive effects on the human environment.

Projects will be selected to address the restoration priorities (RP/EIS Section 2.2.6) and by applying the selection criteria (RP/EIS Section 2.2.5). The restoration priorities have equal weight under this approach, which promotes a broad perspective for the restoration actions. Projects may be distributed throughout the affected environment or the supporting environment if that environment contains affected natural resources.

2.3 Specific proposals/alternatives

Following the process described in RP/EIS Section 2.2.7.5, the Trustee Council solicited natural resource restoration ideas from the public for near-term restoration projects.

The Council issued an initial "Request for Restoration Ideas" in October 1995 (60 FR 52164, October 5, 1995)(Round I). Fifty-six ideas were received from the local communities, members of the public, academia and state and federal agencies. The ideas were the basis for the alternatives listed in the Council's RP/EIS that was developed to guide the Council's restoration efforts. A record of decision was issued on September 22, 1998 for the RP/EIS. The record of decision provided for implementation of 11 preferred restoration projects through funding provided by the Trust Account.

A second request for proposed restoration ideas was issued in August 1999 (64 FR 44505, August 16, 1999) (Round II). Thirty-five restoration ideas were submitted to the Council with total requested funding of approximately $35.0 million from the Trust Account. The Council held a meeting on October 26, 1999 to provide an opportunity for oral presentations of the submitted ideas. The Council also solicited public comments on the ideas and held a hearing on November 23, 1999 to give the public further opportunity to comment on the ideas. The project ideas were reviewed by the Council's legal advisors. In addition the ideas were evaluated by technical advisors who developed recommendations with respect to the technical feasibility and restoration benefits of each of the ideas.

The Council carefully considered all public comment received and the comments from its technical and legal advisors and staff. The Council discussed each idea, and following this review process, the Council identified preferred project ideas for potential funding. The Council then sought comment on the preferred project ideas and the preliminary funding levels. The comments received and the responses to those comments are found in Section 6. After consideration of the comments received the Council made final determinations on which project ideas would go forward for funding and implementation.

This section identifies the Round II restoration ideas received and the preferred alternatives resulting from the Council's review process and consideration of public comment. A final determination and approved funding level is provided for each of the preferred alternatives.

2.3.1 Marshes or Wetlands

Marshes and wetlands provide important habitat for many of the injured fish and wildlife resources within the Harbor Environment. Besides having habitat value, marshes and wetlands provide important functions which protect or enhance the Harbor Environment. Wetlands also cleanse polluted waters, protect shorelines, and recharge groundwater

aquifers (Mitsch and Gosselink, 1993). During flood conditions, wetlands provide protection by holding excess water that would otherwise flood surrounding areas.

Tidal salt marshes, which provide the functions listed above as well as habitat essential to fish and shellfish affected by PCB contamination, are found within the Harbor Environment.

2.3.1.1 No-action Alternative: No Marsh or Wetland Restoration, or Creation

The no-action alternative would be to leave existing marshes or wetlands in their present state and not restore or create any new marshes and wetlands. The New Bedford Harbor Environment contains several marshes or wetlands, some of which function properly. Others are contaminated or are otherwise less than fully functional.

Marshes on the eastern side of the Harbor north of Coggeshall Street have high levels of PCB contamination. Species are exposed to PCBs each time they use the marsh, resulting in detrimental health effects. Allowing these marshes to continue in this condition will allow future generations of the natural resources to be exposed and suffer chronic PCB effects. EPA's Record of Decision for the Upper and Lower Operable Unit (EPA ROD) (EPA 1998) specifies that sediments with PCB contamination levels above 50 ppm in salt marshes will be removed. Portions of the marsh will still contain levels higher than those protective of natural resources. The 50 ppm level was decided upon to spare large portions of the marsh from being removed or destroyed. After removal for the cleanup, EPA will restore the affected marsh areas.

Other marshes within the area have undergone transition due to inadequate tidal exchange. In some cases this has allowed invasive brackish-water plants such as the common reed (*Phragmites australis)* to take over portions of the marsh. When established, this plant provides little habitat value to wildlife. In other cases, inadequate tidal flow has led to hypersaline conditions resulting in a vegetation die-off. Such conditions will no longer support many of the species commonly found in salt marshes.

Marshes and wetlands are critically important within the Harbor Environment. Since certain marshes within the Harbor will still have PCB contamination even after cleanup, it is important to restore or enhance other marshes within the Harbor Environment. Failure to restore these resources will allow the habitat value of the Harbor Environment to continue to deteriorate. For these reasons, the no action alternative is rejected.

2.3.1.2 Preferred Alternatives

The preferred alternative is active restoration of the marshes and wetlands within the Harbor Environment. The Trustee Council will seek opportunities to restore injured or poorly functioning marshes and wetlands within the Harbor Environment. Once

identified, the Trustee Council will prioritize the wetland restoration opportunities so that wetlands within the Harbor Environment that support natural resources such as fish, shellfish and avian species will be favored. Wetlands that can be enhanced to replace PCB contaminated wetlands will be favored for current restoration activities.

2.3.1.2.1 Marsh Island Salt Marsh Restoration

Project Description

Proposed Action: This idea would restore a salt marsh at Marsh Island (known locally as Tin Can Island) in Fairhaven. The proposed project would re-establish between 8 and 12 acres of salt marsh through the restoration of former tidal wetlands that were filled by the disposal of dredge materials during the 1950s, re-establish an upland maritime plant community, and create a passive recreation park for public access to the harbor. The idea would involve the excavation and removal of dredge material, site regrading, and planting of smooth cordgrass and other tidal wetland plant species. Hiking trails, a bikeway, and/or boardwalk would provide an access along the harbor shoreline, and a bedrock outcrop along the western and northwest shoreline would make an excellent focal point for the park with the restored salt marsh and tidal gut immediately south of this outcrop.

Location: Fairhaven Inner Harbor.

Timeframe: Short-term, probably not affected by cleanup.

Affected resources addressed: Salt marsh and the natural resources supported by salt marsh, including plants, mammals, birds, fish, and shellfish, that have been negatively affected by the PCB contamination of the New Bedford Harbor Environment.

Nexus to PCB Injury: Marshes on the eastern side of the Harbor north of Coggeshall Street have high levels of PCB contamination. Marine and estuarine fauna are exposed to PCBs each time they use these marshes resulting in detrimental health effects. EPA's ROD (EPA 1998) specifies dredging of salt marsh where PCB levels exceed 50 ppm. It will be a number of years before these areas will be dredged and restored, and even then some salt marsh will remain relatively contaminated (0-50 ppm). Restoration of marsh habitat that is in the vicinity of New Bedford Harbor but is not impacted by contaminants will help support fish, shellfish and other faunal species dependent on marshes that have been injured within the New Bedford Harbor Environment.

Benefits to Resource: Marshes and wetlands provide important habitat for many of the injured fish and wildlife resources within the Harbor Environment. Besides this habitat value, marshes and wetlands act to cleanse polluted waters, protect shorelines and provide flood protection by holding additional water. Restoration of marsh habitat that

has not been impacted by contaminants will help support natural resources dependent on marshes.

Benefits to Community: Public access, education and outreach opportunities would be available and encouraged. The community at large will benefit from this restoration because of the increased productivity of the marsh and the increase in ecological functions that the salt marsh serves to the New Bedford Harbor Environment, including nutrient export, nursery habitat for fish, habitat for shellfish and crustaceans, and habitat for wildlife.

Technical Feasibility

Achievability: There was salt marsh once present on-site, based on published historic maps of the harbor. Deposit of dredge materials on the site during the 1950s resulted in the loss of most of the salt marsh on the 20+-acre land area. It is technically feasible to restore the marsh habitat at this location, and re-establish the ecological functions and values of such habitat. Before any construction would commence, a feasibility study and engineering design would be completed to determine the amount of wetlands that could be restored, the methods needed to achieve the work, and a construction schedule and cost estimate for completing the work.

Reliability of Techniques: Standard marsh construction techniques would be used including removal of dredge material fill, regrading, and planting with native salt marsh species.

Impact of Remediation: While the project is not anticipated to be affected by the cleanup activities, the Trustee Council will coordinate with the EPA and ACOE to ensure that there is no conflict between the restoration and cleanup activities. The Trustee Council expects to convene a meeting of all interested parties to discuss the goals, timing and implementation of restoration at the site.

Monitoring: Monitoring would be conducted in conjunction with other wetland restoration projects through an educational institution or private contractor.

Requested Funding: $750,000-$1,250,000

Estimated Match: None.

Impacts on the Environment

Biological: The biological environment would be enhanced by creating a more diverse and functional habitat than that which is currently available at this location.

Impacts on injured resources: This project will take place within the New Bedford Harbor Environment as defined by the Trustees. The proposed activity will provide

habitat for fish, shellfish, and bird species injured by the releases of contaminants. No adverse effect on the injured resources is expected.

Impacts on other resources/habitats:

Vegetation: The project would create salt marsh habitat by replacing a portion of the upland plant community consisting of herbs, shrubs and scattered trees. The salt marsh habitat will provide a more functional habitat for the marine and estuarine species inhabiting the harbor.

Wildlife: The construction of salt marsh habitat in this area is expected to benefit wildlife species. With habitat enhancement, wildlife species are expected to begin to inhabit greater portions of the site for feeding and shelter.

Fish and shellfish: The project is designed to benefit fish and shellfish. Efforts will be made to minimize disturbance of shellfish beds during construction.

Endangered species: No listed endangered or threatened species are present in the proposed project area.

Physical: Short-term physical impacts will result from the project as the coarse-grained dredge material present on the site is removed and soil is regraded. Grading of the site would be required to create a stable environment and minimize potential erosion.

Human: There are expected to be some short-term impacts due to construction activities. Access to the site is limited and the best means of bringing in equipment and materials with the least impact will have to be evaluated. Efforts will be made to reduce the impacts on the surrounding neighborhood and cemetery. Once completed, foot trails could be developed to provide direct access to the harbor. Public education and outreach opportunities would be afforded by providing access to the restored wetland and remainder of the site.

Preliminary Determination: The Trustee Council has preliminarily approved the idea for possible implementation after consideration of the public comments received. The Council favored direct restoration at this site rather than the proposed planning effort. (See 2.3.7.2.3.) If the project is ultimately chosen after consideration of the public comment, the Council will work with the various interested parties to determine whether this project is the best use for the site and the best approach for implementing habitat restoration actions.

Preliminary Funding: $750,000

Final Decision: Since the Trustees' preliminary determination, a new proposal for the site has surfaced. EPA has recently stated that Marsh Island is being considered for temporary storage of clean soils/sediments during the harbor cleanup. The

construction of the confined disposal facility to be located along the New Bedford shore opposite Marsh Island will generate a large volume of clean sediment. EPA's cleanup in the upper harbor will involve the removal of contaminated wetlands and mudflats and it is EPA's proposal to use the clean sediments as backfill to plant and/or restore the contaminated wetlands and mudflats. The clean sediments must be stored for approximately 3-5 years, however, until the CDFs are constructed and the contaminated wetlands and mudflats are excavated. EPA believes that Marsh Island could serve well as a temporary storage area for this clean material, given its proximity to the CDF and its current land use. Until a final determination is made on EPA's use of Marsh Island, the Trustee Council will refrain from taking any further action and will coordinate future actions with the EPA and other involved parties.

Final Funding: The money allocated for this project ($750,000) will be added to the reserve for possible future action.

2.3.1.2.2. Nonquitt Salt Marsh Restoration (from Round I)

Project Description

Proposed Action: For more than 125 years, the 60+-acre Nonquitt salt marsh has been adversely affected by reduced tidal exchange with Buzzards Bay. Tidal exchange to the Nonquitt marsh will be significantly improved by the installation and maintenance of a larger flow conduit and removal of an existing undersized culvert, tidal gate, and concrete headwall. Modification of or amendments to the waterlogged, subsided peat substrate may be required to increase the potential for restoring the low marsh plant community. Also included in this proposal is the creation of public access to the marsh through expansion of the trail system at the Smith Farm owned by the Dartmouth Natural Resources Trust (DNRT), and the construction of a marsh observation platform.

Location: Town of Dartmouth, in the Nonquitt section, adjacent to Mattarest Lane.

Timeframe: Short-term, not affected by cleanup. The actual construction of the project is expected to require one to four weeks to complete. Planning, modeling, engineering design and regulatory permit authorizations are expected to require approximately 8 to 12 months.

Affected Resources Addressed: Salt marsh habitat and the natural resources supported by salt marsh including plants, mammals, birds, fish, and shellfish that have been negatively affected by the PCB contamination in the New Bedford Harbor Environment.

Rationale for Adoption

Nexus to PCB Injury: Marshes on the eastern side of the Harbor north of Coggeshall Street have high levels of PCB contamination. Marine and estuarine fauna are exposed to PCBs each time they use the marsh resulting in detrimental health effects.

EPA's ROD (EPA 1998) specifies dredging of salt marsh where PCB levels exceed 50 ppm. It will be a number of years before these areas will be dredged and restored, and even then some salt marsh will remain relatively contaminated (0-50 ppm). Restoration of marsh habitat that is in the vicinity of New Bedford Harbor but is not impacted by contaminants will help support fish, shellfish and other faunal species dependent on marshes that have been injured within the New Bedford Harbor Environment.

Benefits to Resources: Marshes and wetlands provide important habitat for many of the injured fish and wildlife resources within the Harbor Environment. Besides this habitat value, marshes and wetlands act to cleanse polluted waters, protect shorelines and provide flood protection by holding additional water. Creation of marsh habitat that has not been impacted by contaminants will help support natural resources dependent on marshes.

The Nonquitt Salt Marsh has been compromised by human activities. Specifically, the undersized culvert has reduced tidal flushing resulting in a permanently flooded and waterlogged marsh peat substrate. Approximately 60 % of the vegetation in the marsh had died by the late 1970s, and the salt marsh community has never recovered. The unvegetated peat is slowly decomposing and eroding, lowering the elevation of the marsh below that which will support salt marsh plants. Additionally, portions of the perimeter of the marsh have been invaded by common reed (*Phragmites australis*), an invasive plant species with limited ecological functions. By improving the tidal flushing of this marsh, normal salinity, vegetation, and productivity of the salt marsh can be restored. This will benefit the marsh as well as the overall New Bedford Harbor Environment.

Benefits to Community: The community at large will benefit from this restoration because of the increased productivity of the marsh and the increase in ecological functions that the salt marsh provides to the New Bedford Harbor Environment, including nutrient export, nursery habitat for fish, habitat for shellfish and crustaceans, and habitat for wildlife. Further, the marsh is adjacent to open fishing and shellfishing grounds and serves as a recreational and educational resource. The DNRT plans to expand the parking and trail system on the newly acquired Smith Farm, which abuts the marsh to the west. The trails will provide for public viewing of the marsh and the natural resources present in the marsh, and will lead to a newly constructed viewing platform for overlooking the marsh. To the east, a beach is accessible by boat only.

Technical Feasibility:

Achievability: Due to the waterlogging and subsidence of the peat substrate, some areas of the marsh may not recolonize with salt marsh vegetation. Also, it is unlikely that tidal flushing can be re-established fully to its original condition. However, an improvement in tidal flushing will clearly benefit the ecological functioning of the marsh. Culvert replacement/enlargement is a commonly used method, and the potential for project failure is low.

Reliability of Techniques: Standard culvert replacement construction and substrate improvement techniques would be used. The inadequately sized culvert and pipe would be removed and replaced with a larger flow conduit. The tidal entrance to Buzzards Bay would be designed to minimize clogging and sediment filling. The surrounding area would be regraded to ensure that tidal flow remains open and fully functioning.

Impact of Remediation: This site would not be affected by the remediation activities.

Monitoring: Post-construction monitoring would be conducted in conjunction with other wetland restoration projects through a private contractor or educational institution.

Requested Funding: $150,000

Estimated Match: None.

Impacts on the Environment

Biological: The biological environment would be enhanced by this action by creating a more diverse and functional habitat than that which is currently available at this location.

Impacts on injured resources: This project will take place within the New Bedford Harbor Environment as defined by the Trustees. The proposed activity will provide habitat for fish, shellfish, and bird species injured by the releases of contaminants. No adverse effect on the injured resources is expected.

Impacts on other resources/habitats:

Vegetation: The restoration of tidal flushing in the Nonquitt Marsh is expected to be beneficial to the native vegetation. Reduced flushing has caused a die-back of vegetation, primarily smooth cordgrass (*Spartina alterniflora*) at least since the late 1970s, and the vegetation has never recovered. Restoration of a more natural hydrologic regime is expected to promote redevelopment of vegetation in what has become a shallow water impoundment with low ecological functioning.

Wildlife: Restoration of a more natural hydrologic regime is expected to enhance the overall productivity of the marsh. Vegetative development will provide cover for wildlife and substrate for invertebrates. However, some species, particularly shorebirds, that utilize the existing mudflat in the marsh may lose some habitat but the loss is expected to be minimal and have no adverse effect. Other wildlife species that utilize the vegetation will benefit from the change.

Fish and shellfish: The project is expected to create and enhance habitat for these resources by returning the site to a more natural tidal regime, and allowing access by fish and shellfish from Buzzards Bay.

Endangered Species: No listed endangered or threatened species are present in the proposed project area.

Physical: Direct physical impacts to the environment are expected to be limited primarily to the immediate area surrounding the marsh outlet, culvert, and headwall. Minor peat substrate modifications may be implemented to help in re-establishing a salt marsh plant community on the subsided substrate. Wetland functions, water quality, and tidal flow are all expected to improve due to this project. No impacts on cultural resources (archaeological or historical) or on land use patterns are expected.

Human: There will be a temporary impact to the human environment, predominantly to the Nonquitt Community, during construction. Inconveniences, such as noise and large equipment blocking the road, should be expected. Also, a small stretch of beach immediately adjacent to the existing outlet will be unusable during construction. However, once the project is constructed, productivity of this marsh will be enhanced. Also, accessibility to the marsh for the general public will be significantly improved through the construction of trails and a viewing platform on DNRT land. The Trustee Council received requests from some members of the public during Round I to open up public access from the eastern side of the marsh. Public access is available by boat. An existing private road is accessible to Nonquitt residents only.

Preliminary Determination: The Trustee Council has preliminarily approved the idea for possible implementation after consideration of the public comments received. During Round I the Council decided to postpone the final decision regarding funding of this project pending further evaluation of comments received regarding: the costs of the project and the potential for cost sharing; whether other design and location alternatives are under consideration; the possible impacts to the marsh from fecal contamination and freshwater inputs; and the desire for public access to the marsh. The Council has evaluated those comments and the responses received from the applicant and determined that the project is cost effective; is in an appropriate location; and provides sufficient public access. In short, the project meets the criteria for funding and will provide substantial increased benefits to injured natural resources within the New Bedford Harbor Environment.

Preliminary Funding: $150,000

Final Decision: After review and consideration of the public comment, the Trustee Council has decided to accept this project. Release of funds is contingent upon receiving an acceptable scope of work for the project.

Final Funding: $150,000

2.3.1.2.3. New Bedford Aquarium - Salt Marsh Construction

Project Description

Proposed Action: To construct a salt marsh on the Aquarium site to be planted with native low and high marsh plant species. The salt marsh would: 1) serve as a living exhibit of the aquarium and be part of a public park; 2) remove nitrogen from seawater effluent from the aquarium's tanks and harbor waters which may be used to supplement tank flows; and 3) produce marsh plants or seed stock for use at the aquarium site and throughout the Inner Harbor.

Location: New Bedford at the site of the Commonwealth Electric facility on Cannon Street. The specific location and size of the salt marsh will be determined after study of the site and design considerations are addressed.

Timeframe: The salt marsh is to be a part of the Aquarium and will not be constructed until construction of the Aquarium is underway.

Affected Resources Addressed: Salt marsh habitat and the natural resources supported by salt marsh including plants, mammals, birds, fish and shellfish, that have been affected by the contamination in the New Bedford Harbor Environment.

Nexus to PCB Injury: Marshes on the eastern side of the Harbor north of Coggeshall Street have high levels of PCB contamination. Marine and estuarine fauna are exposed to PCBs each time they use the marsh resulting in detrimental health effects. Creation/restoration of marsh habitat that is in the vicinity of New Bedford Harbor but not impacted by contaminants will help support resources dependent on marshes that have been injured within the New Bedford Harbor Environment.

Benefits to Resource: Marshes and wetlands provide important habitat for many of the injured fish and wildlife resources within the Harbor Environment. Besides this habitat value, marshes and wetlands act to cleanse polluted waters, protect shorelines and provide flood protection by holding additional water. Creation of marsh habitat that has not been impacted by contaminants will help support natural resources dependent on marshes.

Benefits to Community: The salt marsh is envisioned to be a working exhibit of the aquarium and would be free for public viewing and education. The community at large will benefit from this restoration because of the increased productivity of the marsh and the increase in functions that the salt marsh serves to the New Bedford Harbor Environment, including nutrient export, nursery habitat for fish, habitat for shellfish and crustaceans, and habitat for wildlife.

Technical Feasibility

Achievability: Achievability is dependent on the actual location of the salt marsh at the site. Much of the Aquarium site was historically created using fill materials, and there is a potential that contaminated soils are present in the fill soils. Contaminated soils at the

site exceeding state and/or federal regulatory limits may have to be removed, and soil modifications such as capping with clean soil and compaction would likely be required to make the site suitable for marsh establishment.

Reliability of Techniques: Standard marsh construction techniques would be used including removal of excess and contaminated fill, regrading, installing clean soils, and planting with native salt marsh plant species.

Impact of Remediation: Remediation of PCBs in the harbor should not have any impact on this project. There is the potential that contaminants are present in the soils on site, and any contaminated materials would have to be properly disposed of. The presence of significant soil contamination could delay the implementation of the marsh construction project.

Monitoring: Monitoring would be conducted by Aquarium staff, or in conjunction with the other harbor wetland restoration projects by a private contractor or educational institution.

Requested Funding: $2,057,000

Estimated Match: None.

Impacts on the Environment

Biological: The existing site is commercially developed with virtually no habitat value. The biological environment would be greatly enhanced by creating salt marsh at this site resulting in a more diverse and functional habitat than that which is currently available at this location.

Impacts on injured resources: No marine or estuarine resources are present on the existing site. The creation of a salt marsh will directly benefit fish, shellfish and bird species which were injured by the introduction of PCBs in the Harbor Environment. No adverse effect on injured resources is expected.

Impacts on other resources/habitats:

Vegetation: No impacts on vegetation will occur since there is minimal vegetation present on-site.

Wildlife: Relatively low numbers of small mammals and birds may be present on the site and would be displaced by the construction activity. The displacement would be temporary in duration and result in habitat providing greater benefits to these natural resources than what is currently available.

Fish and shellfish: Fish and shellfish inhabit the nearby waters. The construction activities should have minimal impact on these biota. Proper soil erosion and sediment

control measures will be installed and maintained throughout the site construction work to minimize the potential for sedimentation of nearby harbor waters.

Endangered species: No listed endangered or threatened species are present in the proposed project area.

Physical: The site is a degraded industrial site. Significant physical changes will need to occur to create viable salt marsh at this location. Potentially contaminated fill will have to be removed and clean fill brought in to support the salt marsh plantings. The physical alterations will result in benefits to marine and estuarine natural resources when the project is completed.

Human: The site is isolated from residential areas, and minimal disturbances are expected from salt marsh construction activities.

Preliminary Determination: The Trustee Council has preliminarily approved the idea for possible implementation after consideration of the public comments received. Funding would be provided for the design, construction and planting. A boardwalk with accompanying signage would be installed to allow free public access with minimal impact to the marsh while providing an educational opportunity for the public by explaining the ecological functioning of salt marshes.

Preliminary Funding: $750,000

Final Decision: After review and consideration of the public comment received on this project the Trustee Council has decided to pursue this project for future implementation. Release of restoration funds for this project is contingent upon the Aquarium obtaining full funding for construction of the Aquarium and all necessary permits for all on-site construction. The Council's decision to fund this project will be subject to review every three years to consider the extent of progress made on the Aquarium. Once the previous conditions are met, an appropriate scope of work and design plans are required before restoration funds can be released.

Final Funding: up to $750,000

2.3.1.3 Non-preferred Alternatives

2.3.1.3.1 Bridge Street, Fairhaven Wetland Restoration Project

Proposed Action: Restoration of a wetland system on approximately 11 acres. Wetlands were filled or altered prior to construction of a drive-in theater which has since been abandoned, leading to the dumping of trash and debris. Portions of the defunct drive-in contain low-value wetlands created as a result of the drive-in construction.

Location: Bridge Street, Fairhaven at the site of the former Fairhaven Drive-in theater.

Resource Injury: Marshes on the eastern side of the Harbor north of Coggeshall Street have high levels of PCB contamination. Species are exposed to PCBs each time they use the marsh resulting in detrimental health effects. EPA's ROD (EPA 1998) specifies dredging of salt marsh where PCB levels exceed 50 ppm. It will be a number of years before these areas will be dredged and restored, and even then some salt marsh will remain relatively contaminated (0-50 ppm). Restoration of marsh habitat that is in the vicinity of New Bedford Harbor but is not impacted by contaminants will help support fish, shellfish and other faunal species dependent on marshes that have been injured within the New Bedford Harbor Environment.

Resource Benefits: The restoration would provide wildlife habitat in an urban setting and could be designed to treat storm water runoff resulting in a reduction of metals, hydrocarbons and nutrients entering New Bedford Harbor.

Environmental Impacts: Implementation of the proposed project may be expected to provide beneficial environmental impacts through the creation/restoration of a fully functioning wetland.

Requested Funding: $700,000

Estimated Match: none

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the PCB related injury to natural resources. The restored marsh would be a non-tidal marsh that is functionally different from the tidal marshes contaminated within the harbor and supports different species from those injured by the PCB contamination.

2.3.2 Recreation Areas

Section 3.5.3 of the RP/EIS describes the losses to the public through the contamination of the New Bedford Harbor Environment. The damage assessment conducted found lost recreational opportunities for recreational angling and beach use.

2.3.2.1 No-action Alternative: No Recreation Area Enhancement or Development

Under the no action alternative, there would be no implementation of actions to enhance or develop recreational opportunities. This would mean that the public would continue to use existing parks, beaches, and boating facilities.

There is little designated open land that is accessible to the public within the Harbor Environment; given the largely commercial nature of this area, little more is expected to become available. Much of the Harbor is fenced off to prevent public access to contaminated areas or commercial operations. This means that harbor visitors have limited opportunities to enjoy harbor vistas, or conduct harbor related activities such as

fishing, swimming or boating. These activities must be conducted in the Outer Harbor where contaminant levels are lower.

Since the cleanup will take ten years or more to complete, and portions of the shoreline will be taken up by confined disposal facilities, the no action alternative would continue to restrict public access to New Bedford Harbor. Some recreational opportunities might develop through harbor master planning activities and the recent designation of the New Bedford Historic District as a National Park.

The no-action alternative should be rejected. Recreational activities and access were directly harmed by the release of PCBs into the Harbor Environment. By selecting the no-action alternative, loss of access would continue to occur with a loss of benefits to the public.

.

2.3.2.2 Preferred Alternatives

One of the impacts of PCB contamination of the Harbor has been the loss of certain recreational opportunities. A study of recreational losses prepared for the Trustees as part of the damage assessment for New Bedford Harbor documented that although PCB contamination was not sufficient to close beaches in the Outer Harbor, the contamination did impact the use of those beaches. The number of people using the beaches declined. A study of reduced amenity services considered the reduced value of recreational services provided by the Harbor in its contaminated state. In addition to these studies, the Trustees know that since 1979, the MDPH has prohibited recreational fishing (except for bait) and swimming in large portions of the Harbor.

Additional types of recreational uses of the Harbor Environment that may have been diminished or lost were not studied and/or documented at the time of the damage assessment. In order to determine whether it is appropriate, in Round II and subsequent rounds, for the Trustee Council to provide additional or enhanced access to recreational services of the Harbor Environment, the initial step will be a study to evaluate the full range of potential lost recreational uses of the Harbor Environment associated with PCB-related injuries to natural resources.

2.3.2.2.1 Community Rowing Boathouse

Project Description

Proposed Action: This idea involves an existing whaleboat rowing program for youth and adults. The existing program teaches young people how to row, and facilitates use of the Harbor for boating. This project would provide for the purchase of additional boats, and planning and construction of a boathouse in the Inner Harbor area. The boathouse facility would include space for storage, repair, maintenance, and construction of boats. It would also provide educational programs on the area's maritime heritage and the Harbor's environmental issues.

Location: New Bedford Harbor.

Time Frame: First, a study to evaluate the full range of potential lost recreational uses of the Harbor Environment associated with PCB-related injuries to natural resources must be completed. If the study concludes that, *inter alia,* PCB contamination of the harbor caused a loss of recreational boating opportunities, and that the loss was sufficient to justify the cost of this project, then the next steps will be to find an appropriate location; plan, design and construct the boathouse; and then construct/purchase and house additional boats. The best estimate to complete these activities is approximately two years.

Affected Resources Addressed: No natural resources would be restored. Instead, this project addresses any lost recreational uses affected by the injury to natural resources.

Rationale for Adoption

Nexus to PCB Injury: Some recreational services provided by injured natural resources in the Harbor may have been lost as a result of PCB contamination. For example, signs are posted around the Harbor that prohibit swimming and fishing, and fences are erected to limit access. A study will be conducted to determine whether there was a sufficient loss of recreational boating access due to PCB contamination in the Harbor to justify the cost of this project.

Benefits to Resource: If the results of the study support the project, the primary benefit would be increased boating. Direct benefits are expected to include increased recreational access to and use of Harbor waters for a larger portion of the community. Habitat protection through greater understanding and appreciation of the Harbor Environment is expected to be an indirect benefit.

Benefits to Community: If the results of the study support the project, the primary benefit would be boating through the construction of new boats. If the project were funded, participation in the boating programs would be offered free of charge to all Greater New Bedford area schoolchildren.

Technical Feasibility

Achievability: First, a study must determine whether there is a sufficient nexus (see below) for the next steps to proceed. Assuming that the study demonstrates such a nexus, the implementation of the project should achieve the goal of increased use of the boats and the boating program.

Reliability of Techniques: Standard design and construction techniques would be used to accomplish this program.

Impact of Remediation: Cleanup activities are not expected to have any impact on this project. Although the actual location of the boathouse is still to be determined, it will not be located where dredging will occur. The Trustees do not expect that it will be constructed where a confined disposal facility is located.

Monitoring: Monitoring would be implemented to determine whether there is increased use of the various whaleboat rowing boating programs available to the various target groups. Additional monitoring may be conducted depending on project development.

Requested Funding: $250,000

Estimated Match: Possible but to be determined.

Impacts on the Environment

The actual location of the boathouse is yet to be determined. Until such time as the location is determined, it is difficult to evaluate the actual impacts to the environment, since these are primarily site-specific. The Trustee Council will encourage the applicant to locate in a site where there is minimal impact to the existing natural resources present and the surrounding neighborhoods. Potential locations with existing buildings will also be examined before the decision to build is made.

Preliminary Determination: The Council requires the completion of a study that examines injuries to recreational uses of, and loss of access to, the Harbor due to PCB contamination, and documents injuries sufficient to justify the expense of this project.

If the study demonstrates a sufficient level of injury from PCB contamination to recreational boating use of the Harbor, then this project will promote and provide some compensation for those lost natural resource services. The provision of additional boats and construction of a new boathouse would allow an expansion of an existing, harbor-oriented boating program with an emphasis on youth rowing.

Preliminary Funding: $275,000 ($25,000 for a study, $250,000 in reserve)

Final Decision: After review and consideration of the public comments received on this project, the Trustee Council has decided to pursue the study described above. Any further funding for this idea is contingent upon obtaining results of a study that demonstrates injury to recreational boating due to PCB contamination sufficient to justify the expense of the proposal. Accordingly, if the study demonstrates a sufficient injury to recreational boating due to PCB contamination, then this project could compensate for lost natural resource services. The provision of additional boats and a boathouse would address this goal by allowing an expansion of an existing harbor oriented boating program with an emphasis on youth rowing. If the project were to be funded, then the Council will require that participation in the boating programs be offered free of charge to all Greater New Bedford area school children.

Final Funding: $275,000 ($25,000 for a study, $250,000 in reserve)

2.3.2.3 Non-preferred alternatives

The following alternatives are non-preferred:

2.3.2.3.1 Fairhaven Recreation Center Pool

Proposed Action: The Town of Fairhaven proposes to construct an indoor swimming pool/locker room as part of the proposed Fairhaven Recreation Center and Senior Center which will be used for swimming lessons and recreational use.

Location: Junction of routes 6, 240 and Sconticut Neck Road, Fairhaven.

Resource Injury: Contamination in the harbor has caused restrictions on the use of the harbor and coastal waters and a loss of swimming locations. The pool project would replace lost access to swimmable clean waters. Public and semi-public areas are unable to provide for the needs of town residents due to the PCB contamination.

Resource Benefits: There are no benefits to natural resources, though there will be public benefits through increased recreational opportunities. The facility would also provide services to those of low or moderate income who could not afford other alternatives.

Environmental Impacts: Any environmental impacts would be short-term and associated with construction of the center. Best management practices would be expected to be used to minimize associated environmental impacts, and human impacts resulting from noise and dust.

Requested Funding: $1,300,000

Estimated Match: None.

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the PCB related injury to natural resources. While swimming may have been affected, the construction of a facility which provides access to an artificial site for swimming does not provide replacement for lost swimming in the natural environment of the harbor.

2.3.2.3.2 Pease Park Access Improvements

Proposed Action: This idea would implement improvements to an existing public landing to aid in access to the harbor. It would entail dredging the approach to the landing, widening the existing boat ramp, installing launch piers on either side of the ramps, shoring up the sides of the ramps and providing a ten slip floating dock for transient boats.

Location: Pease Park, Fairhaven.

Resource Injury: Public access to the harbor is greatly limited, in part due to contamination.

Resource Benefits: There are no apparent natural resource benefits though enhanced public access would be provided. Improvement to the boat ramp might minimize the need to create new points of access and thereby reduce the possibility of resuspending contaminated sediments during construction of new access points.

Environmental Impacts: Minimal adverse impacts would be expected to result from implementation of the proposed project. The site is already an active boat ramp with associated disturbance of the bottom sediments. It is not believed that there is excessive contamination in the area but efforts should be undertaken to minimize resuspension of the bottom sediments.

Requested Funding: $600,000

Estimated Match: None.

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the PCB injury to natural resources. In addition the project may result in direct changes to the harbor Environment that might not be beneficial to the injured natural resources. Moreover, it is uncertain whether the proposed boat ramp improvements will increase recreational boat usage in the Harbor or simply make it easier for existing boat ramp users to launch their boats.

2.3.2.3.3 Landing and Recreational Facilities on Palmer's Island

Proposed Action: Create facilities that will enable harbor tour boats and water taxis to pickup and discharge passengers and to accommodate small boat use of the island. The island could be cleared and replanted, and paths, picnic tables and other amenities would be provided.

Location: Palmer’s Island, New Bedford.

Resource Injury: Recreational opportunities were lost as a result of PCB contamination.

Resource Benefits: Benefits could include increased recreational access for a larger portion of the community.

Environmental Impacts: There are concerns about locating a pier on Palmer's Island and any potential location should be examined carefully. Since the waters surrounding Palmer's Island contain high numbers of shellfish, a pier and boating activities could cause detrimental impacts to this resource.

Requested Funding: $250,000

Estimated Match: None.

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and PCB injury to natural resources. There is no evidence to suggest that access to the island has been or is currently being impacted by the presence of PCB contamination in the Harbor. In addition, the Council determined that there are shellfish in the vicinity of the island that could be harmed by the potential detrimental effects of increased boat traffic and docking activity at the location, including dock construction.

2.3.2.3.4 Youth Sailing Center

Proposed Action: The idea would relocate the existing Community Boating Center (CBC) to a new facility allowing an expansion of programs. It would involve the purchase of several lots of land off Padanaram Avenue, the construction of a facility with a meeting room, office and showers, a storage building, the repair of an existing pier, and parking facilities. The CBCs needs to relocate outside of the Harbor because swimming is an important component of the sailing program. The contamination of the Harbor prevents the CBC from conducting its program safely in the Harbor.

Location: Padanaram Avenue, New Bedford.

Resource Injury: The PCB contamination has eliminated certain human uses of the harbor and degraded the value of access to the harbor environment.

Resource Benefits: While there would not be any direct natural resource benefits, the Youth Sailing Center would restore some of the lost human recreational uses.

Environmental Impacts: There would be two components to this project – shoreside construction and in-water work associated with the repair of a pier. The shoreside construction should result in minimal impacts provided that efforts are made to reduce erosion and dust during construction. In-water work would be done in a manner to minimize resuspension of bottom sediments, and to control release of debris or contaminants.

Requested Funding: $1,200,000

Estimated Match: Possible.

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the PCB injury to natural resources. Further, it does not appear that there was a negative impact on the CBC program. The CBC has a facility already and is conducting its program within the Harbor Environment. To locate a CBC out of the harbor would not greatly restore, replace or acquire the equivalent of injured resources within the New Bedford Harbor Environment. There is also some question whether there was lost recreational boating use due to the PCB contamination in the Harbor. The Council has recommended commissioning a study to answer this question. (See 2.3.2.2.1)

2.3.3 Water Column

The water column includes all fresh, salt and estuarine waters in the New Bedford Harbor Environment. PCBs are present in the water column where they can be a source of contamination to fish and wildlife species that use, live or swim in the water column. Demersal fish are subject to contaminant exposure through the water column as well as bottom sediments. Representative species include winter flounder, bluefish, blueback herring and Atlantic silverside. Phytoplankton and zooplankton including copepod and diatom species, are exposed through the water column. Bivalve mollusks including Atlantic ribbed mussel, blue mussel, Atlantic bay scallop, and the Eastern oyster are exposed through the water column rather than the sediment. (EPA, 1990)

In addition to PCBs, other types of contamination may be present in the water column including human sewage, heavy metals, industrial discharge, salt and grit from roads, agricultural products, and petroleum products. All contribute to the degradation of the water column. Operation of the New Bedford Wastewater Treatment Plant is expected to improve the water quality in the Inner Harbor. But the problem still remains combined sewage overflows still discharge untreated wastewater to the Harbor during periods of high stormwater flow.

2.3.3.1 No-action Alternative: No Water Column Restoration

Pursuant to the no-action alternative, the Trustee Council would refrain from taking action to restore the water column, relying instead on the wastewater treatment plant improvements and Harbor remediation, which includes some water treatment for removal of PCBs. As discussed in Chapter 3 of the RP/EIS, the remediation will remove the bulk of, but not completely eliminate, the PCBs from the Harbor sediments. Exchange of contaminants between the sediments and water column is expected to continue, but to be greatly reduced following clean-up.

Under the no-action alternative, water-column concentrations of PCBs would be expected to decline over time. There is doubt as to when acceptable levels ("ambient water quality criteria," or AWQC) would be reached. As discussed in Chapter 3 of the RP/EIS, the process could take two decades or more. Other factors stand to impede the recovery of the Harbor's water column from PCB contamination, particularly in the Inner Harbor and Upper Estuary. Most notable is the presence of the Hurricane Barrier, which greatly restricts tidal flushing in these areas.

Meanwhile, the water column of New Bedford Harbor remains the principal pathway by which living resources are exposed to the contamination from the Harbor sediments. As discussed in Chapter 3 of the RP/EIS, the fish, shellfish, birds, and invertebrates of the Harbor have been, and will continue to be, severely affected by PCB contamination of the water column of New Bedford Harbor.

2.3.3.2 Preferred Alternative

The preferred approach is to initiate actions to enhance or restore the overall quality of the water column. This would require cooperative efforts with other agencies such as ACOE, EPA and local agencies. A water column free of, or containing fewer contaminants, will be less likely to pass contamination on to the natural resources that inhabit it.

2.3.3.2.1. Upper Sconticut Neck Sewer/Shellfish

Project Description

Proposed Action: The Town of Fairhaven proposes to install a public sewer system allowing 450 residences now on individual septic systems to tie into the municipal sewer system. The funding requested would allow the Town to design, engineer and construct the system which is proposed to be done in two phases.

Location: Northern portion of Sconticut Neck, Fairhaven.

Timeframe: Short-term, unaffected by cleanup.

Affected Resources addressed: The water column and the shellfish resources that reside in or use the Harbor Environment.

Rationale for Adoption

Nexus to PCB Injury: The proponent states that, and the Trustees will conduct a study to determine whether, shellfish and other marine fish and their supporting habitats in the northern portion of Sconticut Neck have been injured and degraded by both PCB releases and contamination from residential septic systems and storm water runoff. It

is believed that because of the continued environmental stresses imposed by poor water quality (caused in large part by release of fecal coliform), remediation of PCB contamination alone will not be sufficient to ensure the restoration of injured marine species in this environment. Therefore by removing a significant source of contamination, this project would facilitate restoration of including harvestable shellfish, and their supporting habitat, and water quality in the immediate environment.

Benefits to Resource: Elimination of fecal contamination and reduction in the nutrient load in this portion of the harbor should benefit marine and estuarine natural resources in this area. It is believed that by eliminating individual failing septic systems, the Town will be successful at eliminating the major source of contamination of the local shellfish beds and allow harvest of these resources.

Benefits to Community: Increased water quality would allow greater shellfish harvest capability.

Technical Feasibility

Achievability: Conversion from individual septic systems to a municipal sewer system is a standard approach that is expected to reduce the release of contaminants into the groundwater and harbor water column. What is less certain is how much shellfish and other marine fish health will improve from the conversion. Water quality impacts to marine fish and shellfish may result from a variety of sources, including contaminated storm water runoff, that would not be addressed by this project. More information on sources of contamination is needed before a final decision can be made on this project.

Reliability of Techniques: Construction of the extension of the municipal wastewater system will be done with proven and reliable methods.

Impact of Remediation: There should be no impact from cleanup activities. The areas to be remediated are located away from the Sconticut Neck area.

Monitoring: The water quality of the waters off of Sconticut Neck will be the predominant measure of success. Periodic and regular sampling will be required to measure success.

Requested Funding: $7.6 million

Estimated Match: $3.8 million from betterment fees (phase 1 - $2.6 million, phase 2 - $1.2 million)

Impacts on the Environment

There would be minimal or no environmental impacts resulting from the study and/or engineering design that the Trustee Council has proposed to fund. The actual construction of the sewer system could have significant impacts, including beneficial

results. A decision to proceed with this project, including construction, would be subject to further environmental review.

Preliminary Determination: Pending consideration of public comments received, the Trustee Council determined that it would fund a study, using an initial $150,000, to determine the actual sources of the contamination of the water column and shellfish beds and, once determined, the most appropriate way to correct the problem. A second amount would be placed in reserve pending the results of the study. The second amount could, if appropriate, then be used for engineering design.

Preliminary Funding: $150,000 for study, $550,000 in reserve (based upon results of study)

Final Decision: After review and consideration of the comments received on this project, the Council is providing funding for a study to definitively determine the sources and magnitude of contamination which may be affecting shellfish beds off Sconticut Neck and the water column in the immediate environment. The study should determine whether sewering the subject portion of Sconticut Neck will result in the reopening of the shellfish beds. If sewering Sconticut Neck would not bring about this improvement, then there is insufficient justification, or nexus, for funding this project. Until such a study is completed, a final decision would be premature.

Final Funding: $150,000 for study, $550,000 in reserve (based upon results of study)

2.3.3.3 Non-preferred Alternatives

2.3.3.3.1 Save the Acushnet River Resources (STARR)

Proposed Action: The idea would install a pump out sanitation system, and docks to accommodate the system, at a New Bedford marina. The idea would include accommodations for an additional 30 slips in a self contaminated oil and fuel spill environment. The availability of a pump out facility at this location would encourage greater compliance with state discharge regulations.

Location: Gear Locker Marina, Popes Island, New Bedford.

Resource Injury: Natural resources continue to be injured by the release of fecal and oil contaminants in the harbor.

Resource Benefits: If implemented, the idea would maximize the effects of other restoration projects by reducing the contaminant load of human waste, fuel and oil.

Environmental Impacts: Implementation of the project may be expected to provide beneficial impacts through the removal of wastes and the containment of water column

contaminants despite the potential increases in the number of vessels using the facility. Any in-water work should be done in a fashion to minimize resuspension of sediments which may contain contaminants.

Requested Funding: $210,000

Estimated Match: $40,000

Rationale for Non-preference: It is not evident to the Trustee Council that the project will provide any benefits to resources that are not available already through other means. There are pump-out facilities available at Popes Island and the Coast Guard has contracted with a local company to provide first-response oil spill containment services.

2.3.3.3.2 Eliminating Toxic Chlorine Discharge from Fairhaven Wastewater Treatment Plant (WWTP)

Proposed Action: The project would upgrade the wastewater treatment plant by eliminating the use of chlorine and replacing it with ultraviolet treatment. Ultraviolet remediation beds and associated facilities would be installed at the WWTP. Planning and construction time would take approximately 18-24 months.

Location: Fairhaven WWTP.

Resource Injury: The Fairhaven WWTP is reported to be the largest point source of wastewater pollution in the Inner Harbor. Chlorine is employed as the primary mechanism for disinfection. As a result, the plant contributes a steady input of chlorine to the Harbor Environment which can be toxic to marine life.

Resource Benefits: The upgrade would eliminate a significant source of toxic chlorine discharge which would lead to improvements in water quality and the quality and abundance of living marine resources.

Environmental Impacts: Implementation of the proposed project would be expected to provide beneficial environmental effects by reducing the chlorine levels in the water column.

Requested Funding: $1,200,000

Estimated Match: unknown

Rationale for Non-preference: The Fairhaven WWTP discharge is subject to permitting under the Clean Water Act's National Pollutant Discharge Elimination System (NPDES). The Trustee Council policy does not permit funding of projects that are "otherwise required". (See 64 FR 44507, August 16, 1999) It is anticipated that EPA

will be issuing a revised NPDES permit which contains more stringent chlorine discharge restrictions.

2.3.3.3.3 The Restoration of Fish and Shellfish on Both Sides of Sconticut

Proposed Action: Sewer two-thirds of Sconticut Neck to prevent the release of contaminants during rain events.

Location: Sconticut Neck, Fairhaven.

Resource Injury: Contamination from residential septic systems and stormwater runoff has led to the closure of shellfish beds off Sconticut Neck. Despite efforts to correct the problem, the contamination still occurs.

Resource Benefits: It is believed that by eliminating the individual septic systems, the Town will be successful at eliminating the major source of contamination of the local shellfish beds allowing harvest. Elimination of fecal contamination will reduce the nutrient load in this portion of the harbor which should lead to increased water quality benefitting the natural resources in this area.

Environmental Impacts: This project is expected to provide beneficial environmental effects to the natural resources, especially the shellfish resource.

Requested Funding: $8-10 million

Estimated Match: no

Rationale for Non-preference: This is substantially the same idea as the preferred alternative under 2.3.3.2.1, in which the Trustee Council recommended providing partial funding.

2.3.4 Habitats

Habitat is the complex of physico-chemical features, hydrologic conditions, and living organisms within an ecosystem that provide food, nesting, reproduction, resting areas and shelter for fish and wildlife. Habitat restoration is a basic component of natural resource restoration in the New Bedford Harbor Environment, since, as described in Chapter 3 of the RP/EIS, habitat is essential to the living resources of the Harbor.

As demonstrated by the following preferred alternatives, restoration, enhancement, or replacement of habitat in the New Bedford Harbor Environment has the potential to substantially improve the abundance and health of a wide variety of living natural resources.

2.3.4.1 No-action Alternative: No Habitat Restoration or Enhancement

Under the no-action alternative, the Trustee Council would not implement habitat restoration actions in the New Bedford Harbor Environment. Under this alternative, animals and plants would continue to live in habitats degraded by PCB contamination and other factors. In many cases, this would preclude the success of efforts to restore living resources injured by the PCB contamination, because habitat restoration is often the most cost-effective way--indeed in many cases, the only practical way--to restore populations of plants and animals.

As discussed in Chapter 3 of the RP/EIS, PCB contamination in the New Bedford Harbor Environment has depressed populations of plants and animals and reduced the diversity of estuarine species. However, in a highly urbanized environment such as New Bedford Harbor, most living resources--plants, fish, shellfish, birds, and terrestrial animals--are subject to multiple stressors from the cumulative impacts of contamination, habitat loss, and other factors. Habitat loss is often a critical factor preventing the recovery of populations that have been depressed or otherwise injured by contamination or other forms of environmental degradation in a developed estuary such as New Bedford Harbor. The no-action alternative would prevent some resource populations in New Bedford Harbor from recovering from the effects of PCB releases, and would greatly extend the period of recovery for others.

2.3.4.2 Preferred Alternatives

Preferred alternatives are those that provide direct restoration or enhancement of affected habitat. In many of the affected habitats of the New Bedford Harbor Environment, however, restoration must wait until cleanup is complete. Therefore, the focus of near-term habitat restoration will be on those areas that can be enhanced to provide greater habitat value and environmental returns as well as providing protection from future stressors to the natural resources. One of the types of actions contemplated is land acquisition. Section 4.3.4.2 of the RP/EIS provides the rationale for land acquisition and the procedures the Trustee Council will follow to determine the appropriateness of providing funds for the acquisition.

2.3.4.2.1 Popes Beach Land Purchase (Northern Portion)

Project Description

Proposed Action: The idea would acquire and impose a conservation restriction on six parcels of land on the western shore of Sconticut Neck for a combined acreage of 2.6 acres and 470 feet of coastal frontage. This property consists of dunes, beach, sand

flats and salt marsh habitats. Just offshore are recreational shellfish beds. The property abuts town conservation land.

Location: Northwestern side of Sconticut Neck, Fairhaven at the foot of Hacker Street and Highland Avenue.

Timeframe: The land purchase could proceed after pre-acquisition activities have concluded.

Affected resources addressed: Salt marsh, uplands, dunes, beach, sandflats and the natural resources supported by these habitat types including plants, mammals, birds, fish and shellfish.

Rationale for Adoption

Nexus to PCB Injury: The project would acquire and protect resources equivalent to those that were damaged by the PCB contamination in New Bedford Harbor.

Benefits to Resource: The benefits of providing funds for the purchase of this property would be the protection of the habitat from future development and the preservation of public recreational access. The purchase would contribute indirectly to the protection of the shellfish resource. This property would add to the growing inventory of undeveloped coastal wetlands along Sconticut Neck and is contiguous to undeveloped wetlands in upper Priests Cove.

Benefits to Community: The public would be able to access the property for recreational activities including fishing. The property is near the Phoenix Bicycle Trail which will assist in increasing access to the site.

Technical Feasibility

Achievability: The property is a combination of six parcels owned by four different parties. The Trustee Council would work with the Town of Fairhaven to ensure that the acquisition occurs and the natural resource benefits are achieved.

Reliability of Techniques: Land acquisition with the imposition of a conservation restriction is a proven method for preserving and protecting natural resources and enhancing recreational opportunities within an appropriate parcel of land. The conservation restriction must be approved and held by the Commonwealth of Massachusetts.

Impact of Remediation: This site is outside of the area expected to be impacted by remediation activities.

Monitoring: Monitoring would occur through periodic site visits to the property to determine use and any adverse impacts to the property or abutting properties.

Requested Funding: $55,000

Estimated Match: None.

Impacts on the Environment

Biological: Benefits to biological resources should continue to occur through permanent protection and preservation of this site from future development.

Impacts on injured resources: There are no expected negative impacts to injured natural resources (fish, shellfish, birds, vegetation) through the acquisition of this property. Rather, there will be continued protection of habitat suitable for sustaining these species.

Impacts on other resources/habitats:

Vegetation: The purchase of this property will preserve the vegetation located on this site and will protect it from future development.

Wildlife: The purchase of this property will provide protection to the wildlife (birds, small mammals, insects) located on this site.

Fish and shellfish: The purchase of this property will provide permanent protection to the fish and shellfish located offshore by preventing the harmful effects associated with residential development.

Endangered species: No listed endangered or threatened species are present in the proposed project area.

Physical: No physical impacts are expected to occur other than through increased use of the property. The Trustee Council will work with the applicant to ensure that sensitive areas are protected and appropriately marked.

Human: Beneficial impacts will occur through increased access to the natural resources on the property.

Preliminary Determination: The Council preliminarily approved the idea for possible implementation after consideration of the public comments received. The Council would provide funds for the Town of Fairhaven to acquire the properties and ensure that an appropriate conservation restriction is placed on the property.

Preliminary Funding: $55,000

Final Decision: After review and consideration of the public comment received on this project the Council has decided to implement this project provided that the standard

pre-acquisition tasks (habitat value analysis, fair market appraisal, title exam, environmental site assessment, property boundary surveys (if necessary) and a conservation restriction to be held by a grantee acceptable to the Council are completed, and the results are favorable.

Final Funding: $55,000

2.3.4.2.2 Popes Beach Land Purchase (Southern Portion)

Project Description

Proposed Action: Acquire and impose conservation restrictions on two parcels on the western shore of Sconticut Neck for a combined acreage of 3.5 acres and 400-feet of shoreline frontage. Acquisition would provide recreational access and habitat preservation.

Location: Northwestern side of Sconticut Neck, Fairhaven.

Timeframe: The land purchase could proceed after pre-acquisition activities have concluded.

Affected resources addressed: Salt marsh, uplands, dunes, beach, sandflats and the natural resources supported by these habitat types including plants, mammals, birds, fish and shellfish.

Rationale for Adoption

Nexus to PCB Injury: The project would acquire and protect resources equivalent to those that were damaged by the PCB contamination in New Bedford Harbor.

Benefits to Resource: The shoreline edge is characterized by a dune-like plant community. The intertidal sandflat and nearby subtidal waters provide feeding and cover habitat for estuarine finfish species. The remaining property is characterized by shrub, sapling and common reed-dominated plant community cover. The benefits of providing funds for the purchase of this property would be the protection of the habitat from future development and the enhancement of public recreational access.

Benefits to Community: The site would provide excellent public access.

Technical Feasibility

Achievability: The property is composed of two parcels. The Trustee Council would work with the Town of Fairhaven to ensure that the acquisition occurs and the natural resource benefits are achieved.

Reliability of Techniques: Land purchase and imposition of a conservation restriction is a simple and proven method for preserving and protecting natural resources and enhancing recreational opportunities within an appropriate parcel of land. The conservation restriction must be approved and held by the Commonwealth of Massachusetts.

Impact of Remediation: This site is outside of the area expected to be impacted by remediation activities.

Monitoring: Monitoring would occur through periodic site visits to the property to determine public use and any adverse impacts to the property or abutting properties.

Requested Funding: $145,000

Estimated Match: None.

Impacts on the Environment

Biological: Benefits to biological resources should continue to occur through permanent protection and preservation of this site from future development.

Impacts on injured resources: There are no expected negative impacts to injured natural resources (fish, shellfish, birds, vegetation) through the acquisition of this property. Rather there will be continued protection of habitat suitable for sustaining these species.

Impacts on other resources/habitats:

Vegetation: The purchase of this property will preserve the vegetation located on this site and will protect it from future development.

Wildlife: The purchase of this property will provide protection to the wildlife (birds, small mammals, insects) located on this site.

Fish and shellfish: The purchase of this property will provide permanent protection to the fish and shellfish located offshore by preventing the harmful effects associated with residential development from occurring.

Endangered species: No listed endangered or threatened species are present in the proposed project area.

Physical: No physical impacts are expected to occur other than through increased use of the property. The Trustee Council will work with the applicant to ensure that sensitive areas are protected and appropriately marked.

Human: Beneficial impacts will occur through increased access to the property's natural resources.

Preliminary Determination: The Council preliminarily approved the idea for possible implementation after consideration of the public comments recieved. The Council would provide funds for the Town of Fairhaven to acquire the properties and ensure that an appropriate conservation restriction is placed on the property.

Preliminary Funding: $145,000

Final Decision: After review and consideration of the public comment received on this project the Council has decided to implement this project provided that the standard pre-acquisition tasks (habitat value analysis, fair market appraisal, title exam, environmental site assessment, property boundary surveys (if necessary) and a conservation restriction to be held by a grantee acceptable to the Council) are completed and the results are favorable.

Final Funding: $145,000

2.3.4.2.3 Artificial Reef

Project Description

Proposed Action: The idea would involve construction of a reef three to four times the size of an existing artificial reef off Salter's Point, Dartmouth, MA, constructed in 1998. The reef would provide habitat for fish, shellfish and marine invertebrates while providing increased fishing opportunities since sportfish tend to congregate around such structures.

Location: Buzzards Bay/New Bedford Outer Harbor.

Timeframe: Short-term. The Trustees recommend that a study be done initially to determine the appropriate location(s) for the reef(s).

Affected resources addressed: Fish and shellfish resources impacted by the PCB contamination in the harbor.

Nexus to PCB Injury: Bottom habitat has been negatively impacted by the release of PCBs which settled into the bottom sediments. Living resources using or coming in contact with the bottom risk contamination from the PCBs. An artificial reef in an uncontaminated area provides a cleaner, safer habitat for the impacted marine species.

Benefits to Resource: Properly constructed and appropriately located artificial reefs can: 1) enhance or replace injured fish habitat; 2) facilitate access and utilization by recreational and commercial fishermen to quality fishing grounds; 3) provide benefits to

anglers as well as the economies of shore communities; and 4) increase total biomass within a given area.

Benefits to Community: Fishermen and divers could visit and use the reef.

Technical Feasibility

Achievability: Success is dependent on location. The Council proposes to fund an initial study of the possible locations around the Outer Harbor where the construction of a reef will provide the desired benefits.

Reliability of Techniques: A variety of structures have been used to create artificial reefs. They can utilize sunken vessels, rocks or boulders, or other man-made structures comprised of concrete or other materials. The success of these structures is largely dependent upon location, source of food, water circulation, water clarity and light.

Impact of Remediation: The reef will not be located in an area where cleanup activities will be occurring.

Monitoring: A baseline survey of the proposed site(s) should be accomplished followed by monitoring through periodic dives on the site(s) to census the marine species present and comparing them to the baseline results.

Requested Funding: $1,366,000

Estimated Match: none specified

Impacts on the Environment

Biological: Artificial reefs are expected to provide positive biological benefits by providing a vertical structure that can be used by a variety of marine organisms. The reef can provide shelter, habitat and can concentrate food. Care should be taken to avoid locating the reef on an already productive bottom habitat.

Impacts on injured resources: An artificial reef is expected to provide a beneficial impact to injured natural resources by providing shelter, habitat and a concentrated food source.

Impacts on other resources/habitats:

Vegetation: Care should be taken to avoid placing the reef structure in an area containing subaquatic vegetation. Provided this is done, there should be no further impact to marine vegetation.

Wildlife: No wildlife other than diving birds would be expected to be in the vicinity of the artificial reef. Diving birds would benefit because of a concentrated food supply at these locations.

Fish and shellfish: Direct positive benefits for fish and shellfish will result from the placement of an artificial reef in the Outer harbor. The reef will provide habitat, shelter and would concentrate food for these species.

Endangered species: Artificial reefs may serve as an attractant to endangered sea turtles but are not expected to cause any negative impacts. The reef may provide a food source for these turtles by concentrating marine species.

Physical: Minimal short-term negative impacts are expected during the construction of the reef. Care should be taken to control placement of the reef in the designated location.

Human: There are expected human benefits to be derived from fishing in the vicinity of the reef and from recreational diving. The reef would be placed in a location that will not interfere with commercial fishing or vessel navigation.

Preliminary Determination: The Council preliminarily approved the idea for possible implementation after consideration of the public comments received. The Council would provide funding for a determination of appropriate locations, material and structure. If such a location is found, a reef would be constructed with restoration funds. The reef would also provide an opportunity for research and data collection. Funding would also include a monitoring component to determine if the goals are being met and anticipated benefits are being realized by the injured natural resources.

Preliminary Funding: $500,000

Final Decision: After review and consideration of the public comment received on this project the Council has decided to pursue this project for implementation. Prior to any construction, the Council will require an analysis of site, design and material alternatives. Once appropriate sites are determined, the Council will require an appropriate scope of work before release of restoration funds.

Final Funding: $500,000

2.3.4.2.4 Riverside Auto Wrecking Land Acquisition

Project Description

Proposed Action: This idea would purchase and impose conservation restrictions on four lots in Acushnet totaling approximately 14.3 acres of land in the upper harbor portion of the New Bedford Harbor Superfund Site. The initial idea was to acquire a

one-acre parcel of land owned by Riverside Auto Wrecking. This idea was revised to include three other abutting parcels in the vicinity.

Location: Acushnet shoreline.

Timeframe: Short-term, unaffected by cleanup.

Affected resources addressed: Wetlands, estuarine fish and invertebrates, birds, and recreational opportunities.

Rationale for Adoption

Nexus to PCB Injury: The wetland fringe is one of the areas determined to be contaminated by PCBs. It will be remediated by removing the contaminated portion followed by replanting. The applicant hopes to use the parcels for scientific study, environmental education and habitat restoration.

Benefits to Resource: The purchase would preserve the land from redevelopment and provide protection to the wetlands and wetland fringe adjacent to the properties.

Benefits to Community: The public would be able to use and enjoy the properties and the harbor vistas they provide. The site would also be used for educational programs.

Technical Feasibility

Achievability: The property is comprised of four parcels with three owners. The Trustee Council would work with the applicant to ensure that the acquisition occurs and the natural resource benefits are achieved.

Reliability of Techniques: Land purchase with the imposition of a conservation restriction is a simple and proven method for preserving and protecting natural resources and enhancing recreational opportunities within an appropriate parcel of land. The conservation restriction must be approved and held by a grantee acceptable to the Council.

Impact of Remediation: This site overlooks the area expected to be impacted by remediation activities. Some of the adjacent wetland areas may be subject to the cleanup and the Council and applicant will work closely with the EPA to determine if there will be any impacts. The land acquisition should not be affected if wetland cleanup occurs.

Monitoring: Monitoring would occur through periodic site visits to the property to determine public use and any adverse impacts to the property or abutting properties.

Requested Funding: $675,000

Estimated Match: None.

Impacts on the Environment

Biological: Benefits to biological resources are expected to continue to occur through the permanent protection and preservation of this site from future development.

Impacts on injured resources: There are no expected negative impacts to injured natural resources (fish, shellfish, birds, vegetation) through the acquisition of this property. Rather there will be continued protection of habitat suitable for sustaining these species.

Impacts on other resources/habitats:

Vegetation: The purchase of this property will preserve the vegetation located on this site.

Wildlife: The purchase of this property will provide protection of the wildlife and associated habitat at this location.

Fish and shellfish: The purchase of this property will preserve the vegetation located on this site.

Endangered species: No listed endangered or threatened species are present in the proposed project area.

Physical: Positive physical impacts are expected to occur as a result of the purchase of this property. The salvage automobiles and parts on the Riverside Auto Wrecking parcel are expected to be removed (with no use of Trust Account funds) and would be a condition of the purchase. After acquisition, minimal physical impacts are expected to occur and would be associated with construction of a walkway and buildings for interpretive and educational programs. The Trustee Council will work with the applicant to ensure that sensitive areas are protected and appropriately marked.

Human: Beneficial impacts will occur through increased access to the property's natural resources. The applicant is in discussion with the Wampanoag Tribe to possibly locate a museum on the site to display artifacts found in the area.

Preliminary Determination: The Council preliminarily approved the idea for possible implementation after consideration of the public comments received. The Trustee Council believes that the purchase of these parcels would enhance the function of the adjacent wetlands and the aesthetics of the upper harbor. The Council is not able to provide funding for the cleanup of the junkyard which must be accomplished using other sources of funding prior to the acquisition. The Council would not provide funding for staffing of the project since the pre-acquisition tasks would be done through contracts issued by the Council's staff.

Preliminary Funding: $675,000

Final Decision: After review and consideration of the public comment received on this project the Council has decided to accept this project for implementation provided that the standard pre-acquisition tasks (habitat value analysis, fair market appraisal, title exam, environmental site assessment, property boundary surveys (if necessary) and a conservation restriction to be held by a grantee acceptable to the Council) are completed and the results are favorable.

Final Funding: $675,000

2.3.4.2.5 Acushnet River Valley Land Conservation Project

Project Description

Proposed Action: This idea involves the purchase of a fee interest and/or conservation restriction for approximately 245 acres of land along the Acushnet River. The land is characterized by 1.5 miles of non-tidal riverfront containing hardwood and pine forests, open farm land, red maple and shrub swamps and freshwater meadows.

Location: Acushnet.

Timeframe: Short-term, unaffected by cleanup.

Affected resources addressed: Anadromous fish, birds and wetlands that were impacted by the PCB contamination.

Nexus to PCB Injury: River lands were lost or injured due to PCB contamination along the Acushnet River. While the site is not contiguous to the area of contamination, it provides much needed protection to equivalent natural resources, particularly anadromous fish injured by the contamination.

Benefits to Resource: Protection of water quality downstream and the protection of passive recreation lands and/or fish and wildlife habitats. While the site is not contiguous to the area of contamination, it provides much needed protection to equivalent natural resources, particularly anadromous fish injured by the contamination.

Benefits to Community: Most of the protected acreage in this proposal will ultimately be accessible by the public.

Technical Feasibility

Achievability: The acquisition would be accomplished through a variety of means including outright purchase and the use of a conservation restriction. Acquisition of a

fee interest and imposition of a conservation restriction will result in permanent protection of the properties and the adjoining river from future development.

Reliability of Techniques: Land purchase with the imposition of a conservation restriction is a reliable technique for providing permanent protection from future development. The conservation restriction must be approved and held by the Commonwealth of Massachusetts.

Impact of Remediation: This area is located within the defined New Bedford Harbor Environment but is outside the area of expected cleanup.

Monitoring: Monitoring would be accomplished through periodic site visits to determine public use and impacts from that use.

Requested Funding: $964,000

Estimated Match: None.

Impacts on the Environment

Biological: Benefits to biological resources should continue to occur through the permanent protection and preservation of this site from future development.

Impacts on injured resources: There are no expected negative impacts to injured natural resources (fish, shellfish, birds, vegetation) through the acquisition of this property. Rather there will be continued protection of habitat suitable for sustaining these species.

Impacts on other resources/habitats:

Vegetation: The purchase of this property will preserve the vegetation located on these properties.

Wildlife: The purchase of this property will provide protection of the wildlife and associated habitat at this location.

Fish and shellfish: The purchase of this property will preserve the vegetation located on this site.

Endangered species: One state-designated species of Special Concern may be present at this location. The Massachusetts Natural Heritage and Endangered Species Program has identified parts of the Upper Acushnet River to contain Ligumia nasuta (Eastern Pondmussel) which is afforded protection under the Massachusetts Endangered Species Act (MGL 131A) and its implementing regulations (321 CMR 10.00). The mussel occurs in sheltered areas of lakes, slackwater areas or rivers, and in canals while favoring sand, silty-sand, and to a lesser extent gravelly substrates in

slow-moving or still water. While this species may be present, the land purchase is not expected to cause any adverse impact to this species. Instead, it should provide additional protection from future harm through development.

Physical: No physical impacts are expected to occur other than through increased use of the property. The Trustee Council will work with the applicant to ensure that sensitive areas are protected and appropriately marked.

Human: Beneficial impacts will occur through increased access to the property.

Preliminary Determination: The Trustee Council preliminarily approved the idea for possible implementation after consideration of the public comments received. This project acquires and protects against development, the equivalent of river lands lost or injured due to contamination along the Acushnet River. In addition, the acquisition and protection of this land will help to restore downstream natural resources which were injured through PCB contamination. The proposed tracts of land appear to have high habitat value and would greatly contribute to protection of the Acushnet River watershed.

Preliminary Funding: $964,000

Final Decision: After review and consideration of the public comment received on this project the Council has decided to accept this project for implementation provided that the standard pre-acquisition tasks (habitat value analysis, fair market appraisal, title exam, environmental site assessment, property boundary surveys (if necessary) and a conservation restriction to be held by a grantee acceptable to the Council) are completed and the results are favorable.

Final Funding: $964,000

2.3.4.2.6 Upper Harbor Confined Disposal Facility (CDF) Enhancements for Recreation, Habitat and Access

Project Description

Proposed Action: Three shoreline CDFs (A, B and C) are to be built north of Coggeshall Street for storage of contaminated sediments. This idea proposes to replaced some of the impacted shoreline habitat by planting appropriate native species on the CDF. It would also construct bike paths, a boat ramp and possibly a pedestrian footbridge. While implementation of the project would be at least five years away, the planning for these elements should occur now.

Location: Upper New Bedford Harbor.

Timeframe: Long-term. Enhancement of the CDF would have to occur after the cleanup, and after settling and capping of the sediments has occurred.

Affected resources addressed: Riparian habitat for shoreline birds and other wildlife, and recreational use of the Acushnet River and its shoreline.

Rationale for Adoption

Nexus to PCB Injury: Two of the three CDFs will be located in the vicinity of the Superfund Site "Hot Spot", which is the area of greatest contamination and the area of greatest injury to marine fish, shellfish, birds, marshes and the water column from PCB contamination. In addition, PCB contamination has caused restricted access to the harbor and its resources. Design of the CDFs to incorporate appropriate native species on the side walls and top of the CDFs will replace habitat injured by PCB contamination as well as providing clean habitat to help restore those species injured by PCB contamination.

Benefits to Resource: Increased habitat value will occur through native plantings on the top of the CDF and potentially on the sides.

Benefits to Community: Interested residents could be involved by providing comments on the design and use of the structures. The project would enhance the public's ability for access to and use of the Acushnet River and shoreline resources.

Technical Feasibility

Achievability: The CDFs will be built by the ACOE and EPA. An initial study is necessary to determine appropriate plantings for use on such a structure. The plantings should not interfere with the integrity of the structure while still providing habitat value to the wildlife resources impacted by PCBs in the Upper Harbor portion of the site.

Reliability of Techniques: The study and plantings will utilize established techniques.

Impact of Remediation: Other than a study, this project can only be implemented after the contaminated sediments have been placed in the CDF, they have been allowed to settle and an appropriate cap has been placed on top. This project is strictly dependent on the remediation and is designed to enhance the shoreside natural resources.

Monitoring: Monitoring of the plantings will be accomplished through periodic site visits to determine survival of planting and their utilization by wildlife species.

Requested Funding: $2,400,000

Estimated Match: None.

Impacts on the Environment

The discussion of impacts contained in this EA focuses strictly on the Trustee Council's preliminary decision to fund only the habitat plantings aspect of the restoration idea. This EA does not evaluate the impacts of the actual construction of the CDFs, which is beyond the scope of the Trustee Council's actions. Those impacts were considered by the EPA in the EPA ROD.

Biological: The plantings will increase the value of the CDFs by providing native vegetation for use by local wildlife for shelter, cover or food.

Impacts on injured resources: There should be only beneficial impacts to the natural resources, as compared to CDFs with minimal ground cover, which would provide little or no habitat value. The plantings will increase habitat value by providing a more natural environment, which birds and small mammals may utilize.

Impacts on other resources/habitats:

Vegetation: Only native plantings will be used, as determined by a study of appropriate plantings for such a structure (i.e., cannot be deep-rooted because of impacts to the integrity of structure). The study will focus on the plants survivability and the extent of habitat value to benefit the impacted resources. There is no expected negative impact to existing vegetation.

Wildlife: It is expected that small mammals, birds and insects will benefit from the plantings by utilizing them for food, cover and shelter.

Fish and shellfish: There are no expected negative impacts to fish and shellfish resources other than that which will occur in construction of the CDFs.

Endangered species: No listed endangered or threatened species are present in the proposed project area.

Physical: There would be no negative physical impacts beyond the actual construction of the CDFs. The plantings would be done on a man-made structure.

Human: Only positive benefits to humans are expected. The plantings would be designed to "naturalize" the CDF thus providing greater aesthetics. The plantings are expected to attract various wildlife species thus increasing the aesthetic value.

Preliminary Determination: The Trustee Council preliminarily approved the idea for possible implementation after consideration of the public comments received. The Council has decided to pursue only the habitat planting aspects of the proposal because it may be within EPA's discretion to fund the access components of the proposal. The Council will first determine, through a study, the type of plantings that could be supported by these structures and whether they would further benefit the

natural resources present in the harbor. Once this information is available, the Council would consider a funding level necessary to support the planting.

Preliminary Funding: $25,000

Final Decision: The Council decided to study whether there are plant species that will provide benefits to natural resources while at the same time not impacting the integrity of the CDFs. If such plantings can be found, the Council will release funds in the future for plantings. Information obtained now will allow planning for the plantings in the design.

Final Funding: $25,000

2.3.4.2.3 Winsegansett Field Station

Project Description

Proposed Action: Establish an environmental education and coastal habitat restoration center on the Fairhaven-Acushnet Land Preservation Trust property acquired in Round I. The proposal includes a long-term lease on a house and the establishment of a permanent endowment fund to sustain education programs in perpetuity. The idea also proposes to undertake coastal habitat restoration projects on the property and to incorporate these projects in its education program.

Location: Sconticut Neck, Fairhaven.

Time Frame: Short-term, unaffected by cleanup.

Affected Resources Addressed: Salt marsh, uplands, dunes, beach, salt pond, freshwater wetlands and the natural resources supported by these habitat types, including plants, mammals, birds, fish, and shellfish, that have been affected by the contamination of the New Bedford Harbor Environment.

Nexus to PCB Injury: Salt marsh habitats, sediment quality and water column health was injured or lost through PCB contamination. This proposal will assist in the restoration of these injured resources.

Benefits to Resource: Onsite coastal resource and habitat restoration and enhancement activities resulting in an overall increase in habitat protection and enhancement.

Benefits to Community: Education programs and restoration activities will be undertaken with community involvement in restoration of natural resources being the primary objective. The property is available for passive public recreation through the use of trails which will have self-guided displays.

Technical Feasibility

Achievability: With sufficient funds the proposed activity is achievable. The types of projects envisioned for the site can be easily accomplished and the educational aspects can be made available for future use. These projects are not dependent on the long-term lease or endowment aspects of the proposal.

Reliability of Techniques: Standard habitat restoration techniques are expected to be used and taught on the property.

Impact of remediation: The site is outside the area of cleanup activities.

Monitoring: Periodic monitoring of the habitat restoration projects and incorporation of that monitoring into the educational programs offered on the site is an important component of the project.

Requested Funding: $1,556,700

Estimated Match: None.

Impacts on the Environment

Biological: The only biological impacts should be beneficial impacts as discrete habitat restoration projects are planned and implemented resulting in increased habitat value to the site.

Impacts on Injured resources: This project would take place within the New Bedford Harbor Environment and would preserve habitat for fish, shellfish, and bird species injured by the releases of contaminants. No adverse effect on the injured resources is expected.

Impacts on other resources/habitats:

Vegetation: Continued maintenance of this property as a natural environment would provide benefits to the native vegetation. Sensitive vegetation could be protected through the addition of low, unobtrusive fences and warning signage.

Wildlife: Expected human recreational use will have minimal impacts on wildlife species present.

Fish and shellfish: The project would preserve and enhance fish and shellfish habitat present on and adjacent to the site. No further negative impacts should result from this action.

Endangered Species: The NHESP has determined that endangered species may be present in the project action area. The site has received a "significant habitat" designation by the Commonwealth. By maintaining or enhancing the land, threatened or rare wildlife species are expected to continue to use the area. As the area is monitored, further actions can be implemented to protect species of concern.

Physical: Any physical impacts would be minimal and expected to be beneficial in nature as the habitat restoration projects are implemented. Each project would have to be evaluated to determine the impact to the environment.

Human: Beneficial impacts will occur through increased access to the property and the improved quality of visits which utilize the education programs of the field station.

Preliminary Determination: The Trustee Council preliminarily approved the idea for possible implementation after consideration of the public comments received. The Council preliminarily supports the following aspects of the idea: a) habitat restoration and b) environmental education projects targeting specific human activities. In particular, the Council believes at this time that there are discrete habitat restoration projects on the property that should be identified and implemented, including: restoring salt marsh degraded by insufficient flow (salt marshes were injured by PCBs); restoring water quality in Winsegansett Pond by investigating and correcting pollutant inputs (salt pond habitat for natural resources injured by PCBs); and restoring living resources through plantings (eg., eelgrass plantings assist in the restoration of natural resources injured by PCBs). These restoration activities would provide replacement for similar lost or injured natural resources in the Harbor Environment.

The Council also believes that there are opportunities for education about restoration of PCB injured natural resources in the New Bedford Harbor Environment through educational activities at this site, including education designed to encourage additional restoration efforts. For example, there are eelgrass beds, salt marsh and a salt pond located on the site. As those areas are restored or enhanced, it may be appropriate to provide specific training programs to educate schoolchildren, the public, and municipal officials regarding the functions of these resources, and the appropriate methodologies to restore and monitor similar resources in the New Bedford Harbor Environment.

The Council also evaluated the need for a full-time staff person to be funded from the New Bedford Harbor Trust Accounts. The Council chose instead only to recommend sufficient funds to allow contracting for the specific services needed. The Council also recommends some funding for the trail and public access improvements and protective/interpretative signage.

Preliminary Funding: $360,000

Final Decision: The Trustee Council has decided to accept this project. Release of funds is contingent upon receiving an acceptable scope of work for the project.

Final Funding: $360,000

2.3.4.3 Non-preferred alternatives

2.3.4.3.1 Park Motors Land Acquisition

Proposed Action: Acquire four parcels of developed land totaling 1.3 acres to provide a location for the Fairhaven Harbor Master and Tourism offices, as well as storage for town boats, and parking for visitors and the adjacent boat ramp. The property is now the location of an automobile dealership and may become available in the future.

Location: Between Main and Middle Streets, Fairhaven.

Resource Injury: The proponent states that shoreline properties that could have provided boat access and parking adjacent to the water's edge are unavailable due to the PCB contamination.

Resource Benefits: There are no apparent natural resource benefits though acquisition of the parcel could increase public access to the harbor.

Environmental Impacts: Minimal environmental impacts would occur from the purchase of the property and conversion to offices, parking and storage. The property is currently the location of an auto dealership and conversion to these uses would not provide any additional impacts beyond what has already occurred.

Requested Funding: $1,000,000

Estimated Match: None.

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the injury to natural resources. There is no apparent habitat value for the site which would warrant purchasing and preserving this site. It is unclear whether access to recreational boating was lost or diminished as a result of PCB contamination. (See section 2.3.2.2.1)

2.3.4.3.2 Clarks Cove Regional Land Acquisition

Proposed Action: Acquire land to provide opportunities for recreation, shellfish propagation and habitat restoration. The land would be purchased for the use of Ideas 2.3.5.2.3. (Regional Shellfish Grow Out System) and 2.3.2.3.4. (Youth Sailing Center).

Location: Western shore of Clarks Cove.

Resource Injury: PCBs discharged into the New Bedford Harbor Environment have resulted in elevated levels of PCBs in a variety of fish and shellfish species with varying effects. Sewage and PCB contamination of shellfish have resulted in fishing closures. It is unclear whether recreational boating was injured.

Resource Benefits: If used for the purposes intended, the purchase could assist in rebuilding the regional shellfishery.

Environmental Impacts: Actual impacts would have to be determined once a specific site has been chosen and the actual use of the site determined. Land acquisition is not expected to cause any negative environmental impacts. Actions taken after acquisition may cause impacts.

Requested Funding: Unknown

Estimated Match: Unknown

Rationale for Non-preference: The property in question does not appear to have any substantial habitat value, unlike other proposed land acquisitions. The link to other projects may be insufficient to justify the acquisition of the land if those projects are ultimately not chosen. It would be more appropriate to evaluate 2.3.5.2.3 and 2.3.2.3.4. and then determine whether there is need for a land acquisition component for successful implementation of those projects.

2.3.5 Living resources

Living resources are fish and wildlife resources that have been impacted by the PCB contamination. Sections 3.3.2 through 3.3.8 of the RP/EIS describe the living resources of the New Bedford Harbor Environment, while Section 3.5.3.1 of the RP/EIS describes the living resources that were injured.

2.3.5.1 No-action Alternative: No Living Resources Restoration or Enhancement

Under the no-action alternative, the NBHTC would not undertake specific actions to restore or enhance injured fish, shellfish, wildlife or other living resources within the New Bedford Harbor Environment. As noted above and in Chapter 3, this would result in an extended time period of natural recovery, since it is expected to be many years following the clean-up before PCB concentrations reach acceptable levels in the waters, wetlands, sediments and biota of the New Bedford Harbor Estuary. During this period the living resources of the Harbor would continue to be affected by the contamination. PCBs continue to disperse, and in some cases bioaccumulate or biomagnify, as they migrate throughout the food web. Cumulative or intergenerational impacts may result. Moreover, the recovery of species and populations from PCBs in the Harbor may be depressed or retarded by additional adverse impacts, such as other contaminants and

habitat loss, particularly in the urbanized, highly degraded Inner Harbor and Upper Estuary.

2.3.5.2. Preferred Alternatives

The living resources that use or reside in the Inner Harbor and Upper Estuary have been directly exposed to high levels of PCBs and thus are the resources most severely affected by PCB contamination in New Bedford Harbor. As discussed in Chapter 3 of the RP/EIS, these species are consumed by other species--potentially including humans--within and outside the Harbor Environment. Contaminants are thereby transported throughout the ecosystem and beyond. The preferred alternative, therefore, focuses on improving the condition of the living resources that live, feed, breed in, or otherwise use the more severely affected areas of the Harbor Environment, in an effort to improve the health of these resources and thereby enhance and accelerate ecosystem recovery.

Potential approaches to living resource restoration in the New Bedford Harbor Environment include habitat restoration or enhancement; enhancement of spawning success through direct (e.g., stocking or transplanting) or indirect (e.g., spawning habitat restoration) means; or direct augmentation or transplantation of stocks to improve populations, resource survival, or opportunities for human use.

The preferred alternative--living resource restoration in New Bedford Harbor--would provide ecological benefits throughout the Harbor Environment in the form of increased species diversity and abundance. Broad economic benefits could also result, through increased commercial and recreational harvest of fish and shellfish. Near-term actions would focus on developing sustainable populations of harvestable resources in the Outer Harbor. As clean-up of the Inner Harbor and Upper Estuary proceeds, subsequent actions could place greater emphasis on direct restoration of living resources in these areas.

2.3.5.2.1. Fish Stock Enhancement

Project Description

Proposed Action: The proposal would construct a fish hatchery, to serve as a working exhibit of the/an aquarium and provide training, research and education capabilities that could promote aquaculture within the region. The funding would support construction and operation of the hatchery facility for over five years, with some funding for an exhibit and educational materials, as described below. It would also provide a facility that promotes a collaborative approach between federal, state, academic and private interests that would further research capabilities on aquaculture.

Location: New Bedford.

Timeframe: The first step is completion of the feasibility study. Depending on the results of the study, the next steps would be the actual design of the facility, securing all necessary permits and then construction.

Affected resources addressed: Several finfish species in the Harbor Environment were found to have average PCB concentrations above the current two ppm FDA limit for edible seafood. These included American eel, cunner, summer flounder, winter flounder, windowpane flounder, scup, bluefish, tautog and striped bass. (Weaver, 1982; Kolek and Ceurvels, 1981)

Rationale for Adoption

Nexus to PCB Injury: Living resources that use or reside in the Harbor Environment have been directly exposed to high levels of PCBs. Contaminants are transported throughout the Environment through the consumption of contaminated natural resources by other living resources. Fish stock enhancement would: 1) replace lost fish; 2) support the found chain in an environmentally protective way; and/or 3) provide educational benefits relating to the restoration of natural resources through stock enhancement.

Benefits to Resource: The facility would raise species that have been injured by PCB contamination for three possible purposes. First, when remediation of the Harbor has been completed, stocking of hatchery-raised fish could be one of the means of supplementing stocks of some fish species that were injured by PCBs (e.g., winter flounder, scup, and tautog) if a release methodology is found that is protective of the wild stocks and assists in their survival. Second, hatchery-raised fish may provide other ecosystem services, such as supporting the food chain in an environmentally protective way. Finally, the public could be educated regarding the technology and benefits of stock enhancement.

Benefits to Community: The fish hatchery is envisioned to be a working exhibit and would be open for public viewing at no charge.

Technical Feasibility

Achievability: Raising fish in an aquaculture facility is an achievable goal. Whether release to the wild of such fish will significantly benefit injured natural resources by providing a healthy stock, or be providing an uncontaminated, healthy food source, is less certain.

Reliability of Techniques: The facility would used standard techniques already in use at the Center for Marine Science and Technology.

Impact of Remediation: The facility would be located shoreside and would not be affected by the cleanup activity.

Monitoring: Monitoring of the operation and the fish stock being released is an essential component of such a facility. Changing conditions such as water temperature, salinity and pH, can lead to stress of the fish which in turn can lead to mortality or disease. A facility needs constant monitoring during operation. An additional component would be the monitoring of the release of fish into the marine environment to determine whether the program is providing the expected benefits to the injured marine resources.

Requested Funding: $2.5 million

Estimated Match: none specified

Impacts on the Environment

Biological: The study will determine whether disease free, native fish can be released into the environment with minimal adverse biological impacts.

Impacts on injured resources: The goal of the project is to benefit the injured natural resources by increasing the stock size and by providing clean food in the form of small fish. It is expected that this combination will provide a healthier population of fish within the Harbor Environment.

Impacts on other resources/habitats:

Vegetation: The study will determine whether there are adverse impacts to vegetation dependant on where the actual facility is constructed.

Wildlife: The study will determine whether there are adverse impacts to wildlife from the construction and operation of a fish hatchery, depending on where the actual facility is constructed.

Fish and shellfish: Provided that disease free, native fish are released into the environment, there should be minimal adverse impacts to fish and shellfish.

Endangered species: No listed endangered or threatened species are present in the proposed project area.

Physical: Physical impacts would result through the construction of the facility and the alteration of the land on which the facility is placed. It is unknown at this time where the actual facility (or facilities) would be located and an evaluation of impacts would have to be conducted in association with the construction.

Human: Minimal, short-term adverse impacts associated with the construction of the fish hatchery are to be expected. The impacts may be in the form of dust, noise and traffic disruptions depending on the size and location of the facility. These impacts would be short-term and will be explored more fully depending on the results of the

study The resulting facility should benefit the human environment by providing employment and harvest opportunities after the fish are released in the wild.

Preliminary Determination: The Trustee Council preliminarily approved this idea for possible implementation after consideration of public comments. The Trustee Council earmarked up to $1,950,000 to accomplish two goals. The first goal is to design and implement a feasibility study that will evaluate the potential for a hatchery facility to help the Trustees to restore, replace or acquire the equivalent of injured fish species by providing fish to supplement wild fish stocks, and/or providing hatchery fish for other ecosystem services, such as supporting the food chain. The study should evaluate potential locations for a hatchery, consider whether a hatchery can feasibly be co-located with another facility, and whether or not the study itself, plus design and construction, could be completed and would provide information and services to the Trustees in a timely manner. Assuming that the study shows that a fish hatchery is feasible for these purposes, the second goal is to design and construct an appropriate hatchery facility to facilitate accomplishment of the three objectives described above under the heading "Benefits to Resource". The Trustees believe that this funding amount is appropriate for a project to provide this level of information and services for the Trustees' future use in restoring injured fish resources in the Harbor.

The Trustees will need to evaluate the outcome of the feasibility study against the Council's current needs for restoration. Assuming that the study supports a hatchery, then the Trustees will need to further commence the procurement process and environmental assessment for the design, construction and operation of the facility.

Preliminary Funding: $1.95 million

Final Decision: After review and consideration of the comments received on this project, the Council has decided to first fund a feasibility study to evaluate the potential for such a facility to meet the Council's objectives of restoring, replacing or acquiring the equivalent of injured fish species. If justified by the findings of the study, then the Council may fund the design and construction costs of all of, or an appropriate portion of, such a facility. The Council is required to follow applicable federal or state procurement laws for this and other projects. The Council expects that there will be a competitive solicitation of specific proposals to address fish stock enhancement before restoration funds are released.

Final Funding: $1.95 million

2.3.5.2.2. Regional Shellfish Grow Out Up Well System

Project Description

Proposed Action: This idea would construct a shellfish grow out up-well system, which is a tank-based system using recirculated sea water. The project would involve locating

an appropriate site for the facility, as well as the design, construction and startup of the facility. Once constructed, the facility would be used to raise shellfish to a size that, after placement in the wild, would have a high probability of surviving to spawning and harvest size. The system would allow shellfish seed to be purchased at a small size and then grown under controlled conditions to a size that would survive predation. Smaller seed is less expensive than larger seed, so this idea would allow more seed to be purchased. More areas will be seeded and there will be quicker returns for the effort.

Location: New Bedford Harbor Environment.

Time Frame: If funded, the project could begin immediately by first locating and securing property and then constructing the upweller facility.

Affected Resources Addressed: Quahogs, bay scallops and softshell clams were all identified as species of concern for PCB contamination (ACOE, 1988b). All have shown some level of PCB contamination though the actual amounts vary by species. Fishing for all three species has been prohibited in the Inner Harbor and some other areas because of closures due to PCB and sewage contamination.

Rationale for Adoption

Nexus to PCB Injury: PCBs discharged into the New Bedford Harbor Environment have resulted in elevated levels of PCBs in a variety of fish and shellfish species. PCBs have been shown to cause reproductive impacts in fish and shellfish. Softshell clams show some evidence of increased disease potential in the presence of PCB contamination (NBHTC, 1993a). Fishing closures due to sewage and PCB contamination have directly impacted the shellfish harvesters of the area. This project will acquire the equivalent of the injured species and return the clean, healthy product to the New Bedford Harbor Environment.

Benefits to Resource: The reintroduction of shellfish species to larger areas of the Harbor will increase the biodiversity of the Harbor. Increased numbers of shellfish will benefit predator species in the food chain. Filter feeding by the shellfish species should result in positive water quality impacts.

Benefits to Community: The reestablishment of a sustained shellfish fishery will allow greater recreational opportunities and commercial employment for the four communities. Successful implementation will allow the continued harvest of a previously unharvestable resource.

Technical Feasibility

Achievability: This idea would continue the efforts of the shellfish restoration program initiated with funding from Round I. It is expected that more years of restoration activities will be needed to provide the variety of age classes necessary to sustain the

fishery. Achievability can be negatively affected by environmental conditions, species predation and human interference through illegal fishing. These impacts to the restoration program can be mitigated through monitoring and adjustment. Success can be measured through greater recreational fishing opportunities, avian feeding, a greater variety of species comprising the catch, catch rate increases, and increased license sales.

Reliability of Techniques: Several towns are using upwellers to hasten the growth of shellfish, with favorable results. This is a proven method that will allow growth of the shellfish beyond a size where the shellfish would be subject to heavy predation.

Impact of Remediation: Since the upweller depends on a clean source of supply water, it is expected to be located outside the area of cleanup activities.

Monitoring: Municipal shellfish officers monitor and enforce the shellfish restoration program, including enforcement of closed areas and water quality. The program includes surveys before, during and after relays, transplants or seeding to assess success.

Requested Funding: $500,000

Estimated Match: $30,000 to $60,000 annually

Impacts on the Environment

Biological: Benefits to the biological environment will occur through increased biodiversity, biomass, and an increased food supply for other fish and wildlife species. Some water quality improvements should occur through the natural filtering action of the shellfish.

Impacts on injured resources: Only beneficial impacts are expected. The goal of the project is to grow shellfish to a size large enough to survive predation. This will increase the viability of the shellfish.

Impacts on other resources/habitats:

Vegetation: No adverse impacts to vegetation are expected dependent on the actual location chosen.

Fish and shellfish: Fish and shellfish would be expected to benefit from the release of healthy shellfish in the harbor.

Endangered species: No listed endangered or threatened species are present in the proposed project area.

Physical: Minimal adverse impacts related to construction of the upweller system and related facilities are expected.

Human: There would be minimal adverse impacts to the human environment from odors, noise and transportation of the seed to and from the upweller. The operation would not be conducted in a residential area so odors and noise from pumps would not be expected to irritate abutting properties.

Preliminary Determination: The Trustee Council has preliminarily approved the idea for possible implementation after consideration of the public comments received. This was one of two ideas which proposed to restore the shellfishery by either producing seed or by increasing the growth of seed to a viable size. The Trustee Council believes these projects may benefit the shellfish fishery by providing clean, viable shellfish seed that will be larger and thus more protected from predation. Since these ideas are similar, it is the Trustee Council's intention to develop a request for proposals and hold an open solicitation for the work to be performed. Although not included in the original proposal, based on the technical advisors' recommendation, the Trustees will require this project to include a component to scientifically document the extent of success of this stocking effort.

Preliminary Funding: $500,000

Final Decision: After review and consideration of the public comments received on this project the Council has decided to pursue implementation of the project. The grant will be awarded after open competition pursuant to federal financial assistance requirements.

Final Funding: $500,000

2.3.5.2.3 Shellfish Hatchery/Nursery & Shellfish Seed Restocking Plan

Project Description

Proposed Action: The idea would expand an existing nursery and create a new shellfish hatchery to provide quahog and bay scallop seed. A percentage of the seed production would be contributed to the municipal restocking programs for a period of ten years. The technical expertise gained during implementation of the project will be shared with area towns.

Location: Padanaram Avenue, New Bedford.

Time Frame: If the idea were funded, implementation could begin soon after.

Affected Resources Addressed: Quahogs, bay scallops and softshell clams were all identified as species of concern for PCB contamination (ACOE, 1988b). All have

shown some level of PCB contamination though the actual amounts vary by species. Fishing for all three species has been prohibited in the Inner Harbor and some other areas because of closures for PCB and sewage contamination.

Rationale for Adoption

Nexus to PCB Injury: PCBs discharged into the New Bedford Harbor Environment have resulted in elevated levels of PCBs in a variety of fish and shellfish species. PCBs have been shown to cause reproductive impacts in fish and shellfish. Fishing closures due to sewage and PCB contamination have directly impacted the shellfish harvesters of the area. This project will acquire the equivalent of the injured species and return the clean, healthy product to the New Bedford Harbor Environment.

Benefits to Resource: The reintroduction of shellfish species to larger areas of the Harbor will increase the biodiversity of the Harbor. Increased numbers of shellfish will benefit predator species in the food chain. Filter feeding by the shellfish species should result in positive water quality impacts.

Benefits to Community: The reestablishment of a sustained shellfish fishery will allow greater recreational opportunities and commercial employment for the four communities. A sustained fishery will provide alternative employment to harvesters impacted by offshore fishing restrictions. Successful implementation will allow the continued harvest of a previously unharvestable resource.

Technical Feasibility

Achievability: This idea would continue the efforts of the shellfish restoration program initiated with funding from Round I. It is expected that more years of restoration activities will be needed to provide the variety of age classes necessary to sustain the fishery. Achievability can be negatively affected by environmental conditions, species predation and human interference through illegal fishing. These impacts to the restoration program can be mitigated through monitoring and adjustment. Success can be measured through greater recreational fishing opportunities, avian feeding, a greater variety of species comprising the catch, catch rate increases, and increased license sales.

Reliability of Techniques: This method of producing seed has been proven reliable by several commercial shellfish nurseries in the general area.

Impact of Remediation: The existing facility is located outside the area of cleanup activities.

Monitoring: Municipal shellfish officers monitor and enforce the shellfish restoration program, including enforcement of closed areas and water quality. The program includes surveys before, during and after relays, transplants or seeding to assess success.

Requested Funding: $500,000

Estimated Match: $150,000

Impacts on the Environment

Biological: Benefits to the biological environment will occur through increased biodiversity, biomass, and an increased food supply for other fish and wildlife species. Some water quality improvements should occur through the natural filtering action of the shellfish.

Impacts on injured resources: Only beneficial impacts are expected. The goal of the project is to grow shellfish to a size large enough to survive predation. This will increase the viability of the shellfish.

Impacts on other resources/habitats:

Vegetation: No adverse impacts to vegetation are expected dependent on the design of the expansion and actual location chosen.

Fish and shellfish: Fish and shellfish would be expected to benefit from the release of healthy shellfish in the harbor.

Endangered species: No listed endangered or threatened species are present in the proposed project area.

Physical: Minimal adverse impacts related to expansion of the facility are expected.

Human: There would be minimal adverse impacts to the human environment odors, noise and transportation of the seed to and from the facility. The operation would not be conducted in a residential area so odors and noise from pumps would not be expected to irritate abutting properties.

Preliminary Determination: The Trustee Council has preliminarily approved the idea for possible implementation after consideration of the public comments received. This was one of two ideas which proposed to restore the shellfishery by either producing seed or by increasing the growth of seed to a viable size. The Trustee Council believes these projects may benefit the shellfish fishery by providing a clean, viable shellfish seed that will be larger and thus more protected from predation. Since these projects are similar, it is the Trustee Council's intention to develop a request for proposals and hold an open solicitation for the work to be performed.

Preliminary Funding: $500,000

Final Decision: After review and consideration of the comments received on this project the Council has decided to pursue implementation of the project. The grant will be awarded after open competition pursuant to federal financial assistance requirements.

Final Funding: $500,000

2.3.5.3 Non-preferred Alternatives

2.3.5.3.1. Striped Bass Project

Proposed Action: Striped bass would be cultured in an upland facility and then made available for direct harvest and consumption, research and handicap-accessible education, breeding and hybridization, and stocking of a proposed mariculture farm in Buzzards Bay. Striped bass produced by this project could also be released into the wild for stock enhancement or for research and educational programs.

Location: Fairhaven and Buzzards Bay.

Resource Injury: Striped bass were one of the marine species injured by the release of PCBs into the New Bedford Harbor Environment.

Resource Benefits: The applicant envisions the project to establish the foundation for a sustainable Striped bass aquaculture and mariculture industry.

Environmental Impacts: Some potential adverse impacts (see below) are possible but careful design could reduce or eliminate these impacts. Care must be taken with the effluent released from the facility which must meet NPDES standards. If mariculture were to be attempted, proper siting must be done to reduce potential takes (e.g. harm, wound, kill, trap, capture) to endangered species such as sea turtles, and protected resources such as marine mammals. The pens must be secure and not drift and they must be monitored closely to make sure they are functioning properly. There must be adequate water circulation through the site to provide flushing of waste products.

Rationale for Non-preference: The Trustee Council did not determine that there is a need for enhancement of the striped bass fish stock. Some years ago the stock experienced low levels of abundance, but active fishery management has brought the stock back so that the Atlantic States Marine Fisheries Commission now considers it to be fully restored. The Council determined that there does not appear to be a sufficient nexus between the proposed project and restoration of injured natural resources. Moreover, the project's primary purpose appears to be the raising of fish to be sold to restaurants for consumption. However, as set forth in Section 2.3.5.2.1, the Council is considering whether a fish hatchery could be appropriate for other purposes.

2.3.6 Endangered Species

Endangered species are those recognized as requiring special attention because of their rarity. In the broadest sense, and as used in this EA, endangered species (also known as "listed species") include those designated as "endangered" by the federal government or the Commonwealth, as well as species that are recognized as rare or vulnerable but not in imminent danger of extinction. These lesser designations include "threatened" status at the federal and Commonwealth level and "of special concern" at the Commonwealth level only. This EA gives special consideration to listed species in order to avoid adverse impacts on them and, of equal importance, to increase the likelihood of survival and success of listed species in the New Bedford Harbor Environment.

In the New Bedford Harbor Environment, the listed species most affected by PCB contamination are common and roseate terns, which reside in Buzzards Bay from May through September, nesting on certain islands. Common terns are listed by the Commonwealth as "species of special concern" while roseates are listed by both the Commonwealth and the federal government as "endangered." Terns feed in the Harbor Estuary and, as described in Chapter 3 of the RP/EIS, ingested PCBs, with subsequent documented lethal and reproductive effects. Section 3.3.8 of the RP/EIS describes other listed species known to inhabit the Harbor Environment, but since PCB impacts have not been documented for any of these, the preferred alternative for near-term endangered species restoration in New Bedford Harbor pertains to common and roseate terns.

2.3.6.1 No-action Alternative: No Endangered Species Restoration

Pursuant to the no-action alternative, the Trustee Council would not restore endangered species in the New Bedford Harbor Environment. This approach would rely on environmental improvements resulting from remediation efforts to reduce the threat posed by the contamination to common and roseate terns. As PCB levels decline in the Harbor, so should impacts on the terns that feed there.

At best, this scenario could lead to some recovery of tern populations in Buzzards Bay. However, since the reduced tern populations are stressed by habitat loss and degradation, such recovery would take many years. Moreover, in the context of continuing loss of quality nesting habitat, it is possible that tern populations in Buzzards Bay would never recover from the effects of PCB contamination in New Bedford Harbor, and that roseate terns, in particular, would continue to decline.

2.3.6.2 Preferred Alternative

The preferred alternative is to continue to restore and enhance nesting habitat for the endangered species most severely affected by PCB contamination in New Bedford Harbor--common and roseate terns. To insure success, the process would continue before tern populations decline further, and for a number of years, as the Harbor is

cleaned up and an uncontaminated food supply once again becomes available. Monitoring would be undertaken to measure the success of the restoration and to ensure that PCBs remaining in the Harbor Environment do not undermine the effectiveness of the proposed action.

The preferred alternative is expected to substantially enhance the ability of tern populations to recover from the effects of PCB contamination in New Bedford Harbor. In addition to this ecological benefit, recovery of tern populations holds the potential for economic and aesthetic benefits as well, through bird watching and other passive uses of the Harbor Environment.

Of the restoration options identified as preferred alternatives by the NBHTC, this is the only one that would require significant action outside of the designated boundaries of the Harbor Environment, although the benefits are expected in the Harbor Environment since the birds are likely to travel to this area to feed. Terns are a mobile resource of the Harbor. The terns were injured by PCBs in the Harbor Environment, and are threatened by habitat loss as well. The Council has determined that the most effective way to restore this injured Harbor resource is through restoration of nesting habitat which, of necessity, would take place outside of the designated Harbor Environment, on the islands of Buzzards Bay.

2.3.5.2.1. Restoration and Management of Tern Populations

Project Description

Proposed Action: The idea proposes to continue for an additional six years the tern restoration and stabilization efforts funded by the Trustee Council at three island nesting locations in Buzzards Bay. The project would strive to stabilize nesting populations at Bird Island, Marion and Ram Island, Mattapoisett, restore habitat at Bird Island, and continue management efforts to manage and restore terns at Penikese Island, Gosnold.

Location: Bird Island, Marion, MA; Ram Island, Mattapoisett, MA; and Penikese Island, Gosnold, MA. All three sites are in Buzzards Bay. Bird Island is owned by the Town of Marion; the latter two sites are owned by the Massachusetts Division of Fisheries & Wildlife (MDFW).

Timeframe: 6 years; 2001-2006; field seasons mainly April through August of each year, except for habitat restoration work, which would be accomplished outside this window.

Affected Resources Addressed: Common and roseate terns.

Rationale for Adoption

Nexus to PCB Injury: Scientific evidence developed for the trial in this case indicated that terns were poisoned by PCB's as a result of feeding on fish within the New Bedford Harbor Environment. The Trustees argued in 1991 that terns were natural resources of New Bedford Harbor Environment and had been damaged by PCB's from New Bedford Harbor. Settlement of the case and funding for restoration was based in part on this evidence. This project will help restore the tern population.

Benefits to Resource: Populations of both common and roseate terns would be restored, increased and stabilized.

Benefits to Community: The community at large would benefit by tern restoration both aesthetically and economically. Restoration of terns as a functional part of the New Bedford Harbor Environment will contribute to the public's enjoyment of the Harbor Environment by increasing species richness and abundance. Recreational and commercial fishermen would benefit directly since terns are an important aid in locating schools of fish.

Technical Feasibility

Achievability: The overall goal of this project is attainable. Portions of this project have been underway since 1990. Partial success has already been achieved, in particular successful partial restoration of the Ram Island colony and successful nesting of terns at both Bird and Ram Islands. This proposal is for the continuation and extension of an already successful technique.

The speed with which the goal is ultimately achieved is likely to be dependent on the extent to which specific, enumerated underlying objectives are met and future actions completed. This will entail continued monitoring and management of sites already restored, restoration of a third colony site at Penikese Island and the restoration of badly eroded habitat using dredged spoil at both Bird and Ram Islands.

Reliability of Techniques: This project would employ proven techniques with which the managing agencies have had experience, and does not involve untried or speculative ideas. Management programs to protect terneries and to enhance tern productivity have been in place in Massachusetts at different sites since the 1920's. Restoration of former terneries using proven gull control methodologies has been accomplished successfully at several sites in New England, including Ram Island, Mattapoisett. Toxicological testing of tern eggs and young to monitor post-remediation background levels of PCB's in the tern population would employ standard chemical testing methodologies. Dredging and deposition of spoil to rebuild eroded habitat would use well-known methods long employed in maintenance of navigational channels.

Impact of Remediation: Some of the most serious adverse effects on terns have likely begun to be mitigated with the cleanup of the Hot Spot. Some lower-level adverse effects on terns may likely continue until remediation is completed. However,

remediation activities themselves would not be expected to have any material adverse effect on the activities envisioned in this project.

Monitoring: Monitoring of overall project progress would be accomplished by continuous oversight provided by the MDFW and the USFWS. Ultimate success in restoration of terns in the Buzzards Bay area and in the New Bedford Harbor Environment proper would be measured by biological monitoring systems, some of which are already in place, to track tern abundance, distribution and productivity in the entire area.

This project could also be expected to benefit from technical assistance provided by the Roseate Tern (Northeastern Population) Recovery Team.

Progress reports (MDFW 1999 and MDFW 2000) reporting favorable results have been provided for the first two years of Trustee-funded work on the tern islands. For the time period from 1999 to 2000 Common Terns nesting pairs increased 6% from 3,824 pairs to 4,036 pairs, while Roseate terns increased 19% from 1,778 pairs to 2,118 pairs. Of the three islands Ram Island showed the greatest increases in nesting pairs. Gull harassment efforts on Penikese Island in 1999 where very successful with gulls making only minimal attempts to nest in the control area in 2000.

Requested Funding: $1,232,000

Estimated Match: $558,000

Cost Effectiveness: This project, as proposed, represents the minimum effort necessary to accomplish the goal of restoring and stabilizing terns in the NBH environment and the greater Buzzards Bay area within a reasonable time frame.

Impacts on the Environment

Biological: Beneficial biological effects are anticipated for the tern species discussed above.

Impacts on injured resources: No effect on the injured resources would be anticipated except for terns, which should be beneficially affected.

Impacts on other resources/habitats:

This activity will require a Section 404 permit under the Clean Water Act. Applications for these permits require extensive documentation of the impacts of the action.

Vegetation: The physical rebuilding and stabilization of tern nesting areas at Bird and Ram Islands would involve the deposition and stabilization of clean dredge material and would be likely to have an impact on vegetation at these two sites. The exact extent of this impact cannot be determined at this time. The Commonwealth is in the process of

hiring a consultant to prepare the design and securing the necessary permits for implementing this phase of the project.

Wildlife: Active management and monitoring of existing terneries may involve the occasional taking of predators. The initial restoration of the ternery on the "Tubbs Island" portion of Penikese Island involved discouraging gull nesting on Tubbs Island. Techniques used to date for discouraging gull use have included auditory and visual harassment, the use of herding dogs, destruction of gull nests, trapping, and shooting of marauding predators. Following initial ternery restoration, predator control on Penikese Island would be on an occasional basis.

All of the above project activities are also likely to have positive effects on many wildlife species associated with the tern colonies, including willets, American oystercatchers, spotted sandpipers, killdeer, common eider and other bird species.

Fish & shellfish: No adverse impacts on fish would be expected to result from this project. The physical rebuilding and stabilization of Ram and Bird Islands involving dredging, deposition and stabilization of spoil could potentially have some negative impact on shellfish beds but would likely be small in area and would be offset by a substantial biological benefit to tern populations.

Physical: Physical impacts surrounding the dredging and placement of spoil can be expected. These impacts cannot be evaluated at this time since the project has not been designed and details are unavailable.

Both Bird and Penikese Islands have historic resources present. No negative impacts on cultural resources (archaeological or historical) or on land use patterns at the three ternery sites are foreseen. Bird Island Light, no longer in service, is an historical resource of interest, but would not be effected by the project activities. Penikese Island contains assets of considerable historic interest. Louis Agassiz established the John Anderson School of Natural History on the island and after that closed the island was the site of a leper colony. The remaining historic aspects would not be affected.

Human. No negative effects are expected.

Preliminary Determination: The Council has preliminarily approved the idea for possible implementation after consideration of public comments received. The project will directly benefit an endangered species injured by PCB contamination.

Preliminary Funding: $1,232,000

Final Decision: After review and consideration of public comments, the Trustee Council has decided to accept this project. Release of funds is contingent upon receiving an acceptable scope of work for the project.

Final Funding: $1,232,000

2.3.7 Studies, Plans or Educational Activities

The Trustee Council received several ideas to conduct studies, plans or educational activities (studies). Studies may be undertaken by the Trustee Council to further advance the restoration planning process. Studies do not directly correct a specific natural resource injury and cannot be considered to be restoration *per se.* Rather, these studies would provide information to assist the Trustee Council in further identifying beneficial restoration opportunities. Any studies ultimately selected will be implemented at appropriate times throughout the restoration process.

The Trustees believe that appropriate educational exhibits and activities can result in changes in human that will benefit the Harbor.

2.3.7.1 Preferred Studies, Plans or Educational Activities

2.3.7.1.1 New Bedford Aquarium - (Exhibit)

Proposed Action: The exhibit would have two components or goals. The first purpose of the exhibit would be to explain what PCBs are, what they were used for in industry and their relationship to the harbor; and then examine the effects of PCB contamination on the six major taxonomic groups of organisms (fish, crustaceans, mollusks, plankton, annelids and birds) located in the New Bedford Harbor Environment. The second, and perhaps more significant, purpose of the exhibit is to educate people on changing their routine or everyday behavior to have a positive impact on the New Bedford Harbor Environment.

Location: New Bedford.

Nexus to PCB Injury: The educational exhibit is anticipated to produce changes in daily human behavior that will benefit the resources injured by PCB contamination.

Benefits of the activity: The exhibit would be expected to educate the public on the harmful effects of hazardous discharges, including those discharges resulting from daily human actions, and efforts being made to clean up the Harbor and restore its natural resources. With this education should come a greater understanding of the complexity of the Harbor, and a commitment that further pollution should be prevented along with the expectation that daily behavior will change to the greater benefit of the Harbor Environment.

Time Frame: The exhibit is to be a part of the Aquarium and would not be built until construction of the Aquarium begins.

Requested Funding: $150,000

Estimated Match: None.

Preliminary Determination: The Council has preliminarily approved the idea for possible implementation after consideration of the public comments received.

Preliminary Funding: $150,000

Final Decision: After review and consideration of the public comment received on this project the Council has decided to pursue this project for implementation. The release of restoration funds for the exhibit is contingent upon the Aquarium's obtaining full funding for construction of the Aquarium and all necessary permits for all on-site construction. The Council's decision to fund this project will be subject to review every three years to consider the extent of progress made on the Aquarium. Once the previous conditions are met, an appropriate scope of work and design plans are required before restoration funds can be released.

Final Funding: $150,000

2.3.7.1.2. Buzzards BayKeeper - On-the-Water for New Bedford Harbor Restoration

Proposed Action: Establish a BayKeeper in New Bedford who would be responsible for investigating, documenting and reporting pollution or habitat degradation activities within the Bay's 30 major harbors and coves. The BayKeeper may also support education projects and wetland restoration activities associated with the Harbor cleanup and restoration.

Location: New Bedford and Buzzards Bay.

Nexus to PCB Injury: The BayKeeper's monitoring proposal is expected to provide information to the Trustees that will assist the Trustees in developing and maintaining effective restoration projects for those natural resources that were injured by PCB contamination.

Benefits of the activity: The BayKeeper would be an on-the-water initiative to primarily monitor whether Trustee funded projects are being properly implemented and to identify any activities that may adversely affect successful project implementation.

Time Frame: Short-term, unaffected by cleanup.

Requested Funding: $150,000

Estimated Match: $346,000

Preliminary Determination: The Council has preliminarily approved the idea for possible implementation after consideration of public comments received. The Council believes that the BayKeeper can provide additional monitoring and assistance to both existing and future Council funded projects such as eelgrass, salt marsh and tern restoration projects as well as providing overall monitoring of factors that may affect restoration projects and the health of the Harbor Environment. The BayKeeper will assist the Council's efforts to restore natural resources by monitoring the Council-funded projects and by providing information to assist in the effective implementation and management of such current and future projects.

Preliminary Funding: $150,000

Final Decision: After review and consideration of public comments received on this project the Council has decided to pursue this project for implementation.

Final Funding: $150,000

2.3.7.2 Non-preferred Studies, Plans or Educational Activities

2.3.7.2.1 Bioremediation of PCBs by Microorganisms in Wetland Sediments

Proposed Action: The idea would evaluate the PCB-degrading potential of microorganisms present in New Bedford Harbor wetland sediments by altering conditions. The study would identify conditions that can be altered to optimize the use of native microorganisms to bioremediate wetland sediments with PCB concentrations less than 50 ppm. The conditions to be investigated include PCB concentration, type of sediment, type of microorganisms present, temperature, salinity, and primer compounds. Identification and assessment of the parameters controlling the naturally occurring bioremediation would provide the basis for developing a method to optimize bioremediation.

Requested Funding: $447,000 for three years

Estimated Match: None.

Rationale for Non-preference: The Council preliminarily determined that if successful, the study may provide a beneficial result to the harbor resources. However the likelihood of success is unknown. Since this study is primarily related to remediation rather than restoration the Council suggests that there may be other more appropriate sources for funding.

2.3.7.2.2 Planning for Nitrogen Removal from Fairhaven WWTP

Proposed Action: Conduct a facilities planning and design study to explore options for providing nitrogen removal from wastewater effluent. The project will include an in-depth loading analysis to establish an appropriate nitrogen level that is protective of estuarine water quality as well as engineering design to achieve such nitrogen levels.

Requested Funding: $100,000

Estimated Match: None.

Rationale for Non-preference: The Fairhaven WWTP discharge is subject to permitting under the Clean Water Act's National Pollutant Discharge Elimination System (NPDES). Trustee Council policy does not permit funding of projects that are "otherwise required". (See 64 FR 44507, August 16, 1999)

2.3.7.2.3 Harbor Open Space Public Access Study Phase II/Implementation

Proposed Action: This idea would expand upon the scope and area of the Harbor Open Space Study funded in Round I. That study resulted in a comprehensive design and implementation plan to address open space, recreation, and public access. The study would focus on eight sites in New Bedford and Fairhaven including Palmer's Island and Marsh Island. In addition, the idea would also conduct a detailed study and design for Palmer's Island.

Requested Funding: $400,000

Estimated Match: $50,000

Rationale for Non-preference: The original idea contained many aspects including the study of Marsh Island for passive recreation and environmental use. The technical advisors favored the restoration of the salt marsh on Marsh Island. Of the eight sites proposed for study, the Marsh Island site appears to show the greatest potential for restoration and public access. After evaluating the expected outcomes from the study and the natural resource restoration benefits from direct restoration, the Council decided to pursue the direct restoration of the Marsh Island salt marsh rather than the study.

2.3.7.2.4 Watershed Restoration Plan for the Acushnet River

Proposed Action: The idea would evaluate the Acushnet River ecosystem as a whole to develop schemes for discrete restoration projects. The study would inventory the existing physical and biological conditions present and consider cultural and economic factors as well as the subjective wishes of the community. Specifically the study would: 1) collect and review background information; 2) perform a geomorphic assessment; 3)

perform a hydrologic assessment; and 4) perform an aquatic habitat assessment. The resulting products would be the Watershed Restoration Plan and presentation drawings.

Requested Funding: $180,000

Estimated Match: None.

Rationale for Non-preference: While planning or study to support decisionmaking on specific projects or types of projects is still considered appropriate and is the approach taken for several of the projects in Round II, several of the tasks proposed were not necessary or had already been performed, while other tasks could be performed by Council technical staff.

2.3.7.2.5 Pierce Mill Shoreline and Salt marsh Restoration

Proposed Action: This idea would prepare a site design for the proposed Riverside Park. The design is envisioned to include restoration of the shoreline by creating: natural slopes with hydric soils and salt marsh vegetation; natural landforms; open areas with native vegetation; paths with scenic overlooks and interpretive signage; and play areas for children to explore, climb and interact with a natural ecosystem.

Requested Funding: $250,000

Estimated Match: None.

Rationale for Non-preference: While the Council believes that such a site design is a good idea, the Council also believes that the owner of the site (City of New Bedford) is the entity responsible for determining the various planning and design studies necessary for the site.

2.3.7.2.6 New Bedford State Pier Buzzards Bay Education Center

Proposed Action: Development of an educational facility for the Schooner Ernestina Commission and other educational uses appropriate to the site. A goal of the facility is to restore access to the Inner Harbor within the central waterfront area. The idea would create a task force for a) the planning process, which would examine facility concepts and implementation strategies; and b) a design process to produce a facility design, operating and management plan, cost estimates, financing plan and construction schedule. Once developed, meetings would be conducted with business owners, fishing and maritime industrial groups, waterfront users, representative organizations and the general public to share the results of the planning/design and receive their comments.

Requested Funding: $225,000 ($75,000 Planning/$150,000 Design)

Estimated Match: Possible

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the PCB injury to natural resources. It is unclear how the project would change behavior to benefit the Harbor resources and whether there has been a loss of recreational boating in the Harbor due to PCB contamination. (See 2.3.2.2.1) Further, it is unclear how this project would increase access to the Harbor. The Ernestina already is available and appears to have a full schedule.

2.3.8 Proposals Falling Outside the Scope of Restoration

Proposals in this group are insufficiently related to natural resource restoration. These proposals either failed to address a natural resource injury or proposed an action that is more appropriately implemented by another entity such as EPA or a state agency.

The Trustee Council encourages the proponents of these ideas to pursue funding through other means.

2.3.8.1 Renovate Roof - United Social Club

Location: Front Street, New Bedford.

Proposed Action: The proponent requested funds to replace a roof that has been damaged on a building in close proximity to the river. It is believed that the damage has been caused by salt water and by holes created by sea gulls' dropping shells on the roof.

Resource Injury: The application does not appear to reference an injury to natural resources. The proponent references the damage to the roof caused by the close proximity of the Harbor and the sea gulls that reside there.

Resource Benefits: The Council could not determine any sufficient benefits to natural resources through repair of the roof. The only benefits would be to the members and users of the social club.

Environmental Impacts: There would be minimal, if any, short term negative impacts resulting from stripping the existing roof and applying a new roof.

Requested Funding: $40,000

Estimated Match: None.

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the injury to natural resources.

2.3.8.2 New Bedford Aquarium - (Natural Restoration - Eelgrass Beds)

Proposed Action: The Aquarium/CMAST team would instrument eelgrass areas with video and sensors to televise the plant and animal life within the eelgrass habitats into the Aquarium as an exhibit. The information gathered would be the basis for an education unit on eelgrass. It is unclear from the proposal whether expansion of the existing beds is intended to be a part of this project.

Location: New Bedford Outer Harbor.

Resource Injury: While eelgrass beds are not known to have been directly impacted by the PCB contamination, resources that use this habitat were injured.

Resource Benefits: The applicant believes that eelgrass education will result in a greater effort to restore eelgrass through watershed management and associated planting efforts.

Environmental Impacts: Minimal negative impacts to the eelgrass beds are expected provided that the video monitoring equipment is installed in a manner that is protective of the eelgrass beds and is secure, so as to prevent uprooting or scouring.

Requested Funding: $1,267,000

Estimated Match: None specified

Rationale for Non-preference: It is not apparent that this project will enhance existing eelgrass habitat. Separate efforts are underway through use of harbor restoration funds to plant and expand the areas in which eelgrass is found within the Harbor Environment. It is unclear that recording activity will benefit the eelgrass. The Council believes that there are other, less costly alternatives available to monitor the success of planting efforts and the viability of the beds. In addition, it is not clear that televising the eelgrass beds is an effective education tool.

2.3.8.4 New Bedford Aquarium - (Natural Restoration - Fish Runs)

Proposed Action: This idea would provide access to and visualization of the alewife/herring fishways in the upper Acushnet River and a fish census at the Hurricane Barrier. A portion of the project would be enhancement of public access to the sites, providing information onsite, and an education unit with students working on a fish

census and studies of fish migration. The sensors at the Hurricane Barrier would be expected to gauge fish community improvements as restoration proceeds.

Location: Acushnet/New Bedford.

Resource Injury: Several marine fish species were found to have PCB levels above the FDA limit for edible seafood. These species included American eel, summer, winter and windowpane flounder, scup, bluefish, tautog, striped bass and river herring.

Resource Benefits: The applicant believes that the display of, and education regarding, proper designs of fishways through the public access/visualization project will encourage restoration of fishways throughout Southeastern Massachusetts which in turn will benefit anadromous species.

Environmental Impacts: Minimal negative environmental impacts are expected provided that the instrumentation is installed and secured in a manner that is protective of the river bottom and the species that reside there.

Requested Funding: $810,000

Estimated Match: None specified

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the injury to natural resources. It is not apparent that this project will enhance the injured marine fish resources. Separate efforts are underway to restore anadromous fish through the construction of fishways on the upper Acushnet River. Similarly, it is not clear that greater public access to fisheries in the Harbor Environment will result in the creation of more fish runs in the Harbor Environment.

2.3.8.5 New Bedford Aquarium - (Natural Restoration - Terns)

Proposed Action: During the period of bird activity (May through July) live data and video from Bird Island would be provided to support a tern exhibit at the Aquarium.

Location: Buzzards Bay/New Bedford.

Resource Injury: Terns have been poisoned by PCB through feeding on PCB contaminated fish within the Harbor Environment.

Resource Benefits: The proponent expects that the project will help support the restoration of tern populations by meeting public demand for viewing the terns while

reducing visits to the site. Another expected benefit is through education to produce a knowledgeable citizenry

Environmental Impacts: Minimal negative impacts to the terneries are expected provided that the video monitoring equipment is installed and secured in a manner that is protective of the terns and their nests.

Requested Funding: $1,000,000

Estimated Match: none specified

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the injury to natural resources. This idea provides no apparent direct benefit to the injured tern populations. Other more appropriate means are available to accomplish these same results at a much reduced cost. For example, a video could be produced showing the nesting activity, which could generate more information than a live video feed. Further, the terns are at the nesting island for only a two to three month period. The proposal does not specify what would be shown during the period (seven to eight months) that the terns are not on site.

2.3.8.6 New Bedford Aquarium - (Natural Laboratory/Demonstration)

Proposed Action: The idea focuses on using the harbor as a natural laboratory supporting exhibits, education and restoration. Sensor and visualization hardware would be deployed and would include habitat quality sensors, current monitors, weather station, CODAR Towers, moorings and supporting computers. The sensors would monitor environmental change and restoration progress.

Location: New Bedford.

Resource Injury: This proposal does not address a specific PCB injury, but rather, provides a means for monitoring the success of restoration efforts on the ecosystem.

Resource Benefits: The proponent believes the idea will provide access to natural Harbor systems and produce an informed citizenry. The monitoring will support adaptive management and provide equal access to the public.

Environmental Impacts: Minimal negative environmental impacts are expected provided that the instrumentation is installed and secured in a manner so that it does not break loose or drag across the bottom.

Requested Funding: $4.0 million

Estimated Match: None specified

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the injury to natural resources. Given the variety of monitoring activities occurring in the harbor, the Trustee Council did not see the need for the additional monitoring afforded by this proposal. Each restoration project has a monitoring component and the overall success of the restoration depends on a variety of factors out of the control of the Trustee Council. The Trustee Council believes there are less expensive alternatives proposed or in place which accomplish similar results.

2.3.8.7 Shipboard Fire Oil Spills

Proposed Action: Purchase specialized equipment and training to be used in extinguishing vessel fires in and around New Bedford Harbor. The equipment would consist of high and low expansion foam generators, nozzles, foam concentrate and specialized equipment. Training would teach officers the tactics necessary to successfully battle shipboard fires.

Location: New Bedford Harbor.

Resource Injury: Water quality in the Harbor has been diminished by PCBs in the water column.

Resource Benefits: A fast response to extinguish a shipboard fire will improve the water quality of the Harbor by reducing the amount of petroleum products released into the Harbor and providing protection to the natural resources.

Environmental Impacts: The proposed idea would be expected to provide benefits to the natural resources by reducing the amount of contaminants released into the water column during a fire.

Requested Funding: $50,000

Estimated Match: None.

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and PCB injury to natural resources. Rather, the goal of the project is to reduce environmental stress on the natural resources injured by the PCBs. While this could provide benefits to natural resources, a contingency plan developed by the United States Coast Guard under the Oil Pollution Act is already in place to respond to an oil release caused by a fire.

2.3.8.8 Bird's Eye/Eye Spy Project

Proposed Action: Purchase Internet accessible digital photographic equipment and related computer hardware/software to allow round the clock monitoring of various areas within the Harbor Environment. The purpose of the monitoring equipment would be to provide scenic enjoyment, document habitat quality improvements and provide pollution prevention monitoring.

Location: New Bedford/Fairhaven.

Resource Injury: Unknown.

Resource Benefits: Unknown.

Environmental Impacts: There should be minimal negative environmental impacts from this project provided that the monitoring equipment is installed in an environmentally protective manner and the equipment is monitored and maintained. If implemented, the applicant should consider the use of existing structures and power supplies for mounting the equipment.

Requested Funding: $92,400

Estimated Match: no

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the injury to natural resources. Given the variety of monitoring activities occurring in the Harbor, the Trustee Council did not see the need for the additional monitoring afforded by this proposal. Each restoration project has a monitoring component and the overall success of the restoration depends on a variety of factors beyond the control of the Trustee Council. The Trustee Council believes there are less expensive alternatives proposed or in place which accomplish similar results.

2.3.8.9 Coffin Avenue Causeway to Fairhaven

Proposed Action: Construct a pedestrian/vehicle causeway crossing the Acushnet River from Coffin Avenue to Fairhaven to facilitate access between communities.

Location: New Bedford.

Resource Injury: Unknown.

Resource Benefits: Unknown.

Environmental Impacts: Significant negative environmental impacts may occur from construction of a bridge at this location. Directly east of Coffin Avenue are substantial wetland areas where bridge footings would have to be located. Construction of such footings, the bridge and access ramps would permanently destroy those wetland areas leading to a permanent loss of natural resource habitat. A bridge at this location could also lead to further tidal restrictions in the Harbor. Shading from the bridge could impact marine resources and vegetation.

Requested Funding: Unknown

Estimated Match: None specified.

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the PCB injury to natural resources. There are no apparent benefits to those natural resources.

2.3.8.10 Removal or Destruction of the Wreck "Rehoboth"

Proposed Action: Remove a sunken vessel which poses a hazard to navigating the Outer Harbor. The removal will also allow the shellfish beds in the vicinity of the wreck to be available for harvest. The removal would reopen recreational and commercial uses.

Location: New Bedford (Outer Harbor).

Resource Injury: The proponent states that removal of the vessel will address the loss of the shellfish resource caused by contamination by PCBs.

Resource Benefits: Removal of this vessel may allow the reopening of shellfish beds at the site while leaving the vessel in place may provide the benefits asociated with artificial reefs.

Environmental Impacts: Provided that all fuels and lubricants have been removed from the vessel, there should be minimal negative environmental impact if the vessel is moved in a manner that is protective of the environment. The removal would increase boater safety in the area.

Requested Funding: $150,000

Estimated Match: None specified.

Rationale for Non-preference: The Council determined that there does not appear to be a sufficient nexus between the proposed project and the injury to natural resources. Because the vessel serves on the one hand as an artificial reef, the benefits of removing the vessel are of questionable value to the natural resources. Accordingly,

the costs of removing the vessel would likely exceed the value of any benefit gained for natural resources.

3: Listing of Agencies and Persons Consulted

Federal Agencies

U.S. Department of Commerce
- National Oceanic and Atmospheric Administration
  - National Marine Fisheries Service

U.S. Department of the Interior
- U.S. Fish and Wildlife Service

U.S. Department of Justice

U.S. Environmental Protection Agency

Commonwealth of Massachusetts

Executive Office of Environmental Affairs
- Coastal Zone Management
- Department of Environmental Protection
- Department of Fisheries, Wildlife and Environmental Law Enforcement
  - Division of Fisheries & Wildlife
    - Natural Heritage and Endangered Species Program
  - Division of Marine Fisheries

Local and Regional Government Organizations

City of New Bedford

Town of Acushnet

Town of Dartmouth

Town of Fairhaven

New Bedford Harbor Trustee Council

Trustees:

Michael Bartlett	Field Supervisor, U.S. Fish and Wildlife Service, U.S. Department of the Interior
Bob Durand	Secretary, Massachusetts Executive Office of Environmental Affairs
Sally Yozell	Deputy Assistant Secretary for Oceans and Atmosphere, National Oceanic and Atmospheric Administration, U.S. Department of Commerce

Delegates:

Dale Young	Natural Resource Damage Coordinator, Massachusetts Executive Office of Environmental Affairs
Jon Rittgers	Deputy Northeast Regional Administrator, National Marine Fisheries Service

Support Staff

Marcia Gittes	Legal Counsel, Department of the Interior
Tom LaRosa	Legal Counsel, Massachusetts Executive Office of Environmental Affairs
Marguerite Matera	Legal Counsel, National Oceanic and Atmospheric Administration
John Terrill	Coordinator, National Marine Fisheries Service

Technical Advisory Committee

Bradford Blodget	Massachusetts Division of Fish and Wildlife
Ken Carr	U.S. Fish and Wildlife Service
John Catena	National Marine Fisheries Service, Restoration Center
Paul Craffey	Massachusetts Department of Environmental Protection
Paul Diodati	Massachusetts Division of Marine Fisheries
Karl Honkonen	Massachusetts Executive Office of Environmental Affairs
John Terrill (Chair)	National Marine Fisheries Service
Jim Turek	National Marine Fisheries Service, Restoration Center

Technical Advisors

Jennifer Arnold	National Marine Fisheries Service, Restoration Center
Jed Brown	National Marine Fisheries Service, Restoration Center
James Burgess	National Marine Fisheries Service, Restoration Center
David Janik	Massachusetts Coastal Zone Management
Vincent Malkoski	Massachusetts Division of Marine Fisheries
David Whittaker	Massachusetts Division of Marine Fisheries

Public Consulted

Trustee Council Meetings	September 4, 1998 New Bedford, MA November 20, 1998 New Bedford, MA May 7, 1999 New Bedford, MA October 26, 1999 Fairhaven, MA
Public Hearing	November 23, 1999 Fairhaven, MA June 29, 2000 Acushnet, MA
Public Comments	See Section 6

4: References

Army Corps of Engineers (ACOE). 1988. Wetland Study Report for the New Bedford Superfund Site. U.S. Army Corps of Engineers, New England Division. Prepared by IEP, Inc., Final Report.

Dickerson, D., EPA New Bedford Harbor Site Manager. Personal communication, 16 Feb 1996.

EPA. 1998. Declaration for the Record of Decision New Bedford Harbor Superfund Site, Upper and Lower Harbor Operable Unit, New Bedford Massachusetts. Unpublished report dated September 25. Boston, MA

-----. 1990. Baseline Ecological Risk Assessment, New Bedford Harbor. EPA. 1996.

MDFW. 1999. Buzzards Bay Tern Restoration Project: 1999 Field Season Report. Unpublished report dated December 1, 1999. Westborough, MA

-----. 2000. Buzzards Bay Tern Restoration Project: 2000 Field Season Report. Unpublished report dated November 15, 2000. Westborough, MA

Mitsch, W.J. and J.G. Gosselink. 1993. Wetlands. New York: Van Nostrum Reinhold.

NBHTC. 1998. New Bedford Harbor Trustee Council: Final Restoration Plan/ Environmental Impact Statement for the New Bedford Harbor Environment. April 28. Gloucester, MA.

-----. 1998b. New Bedford Harbor Trustee Council: Final Restoration Plan/ Environmental Impact Statement for the New Bedford Harbor Environment - Record of Decision. September 22. Gloucester, MA.

-----. 1993. New Bedford Harbor Trustee Council: Our plan for moving forward. Unpublished report dated October 1. Gloucester, MA.

Pruell, R.J. et al. 1990. Geochemical Study of Sediment Contamination in New Bedford Harbor, Massachusetts. 29 Mar. Env. Res. 77-101.

Schwartz J.O. 1988. Distribution and concentration of polychlorinated biphenyls in lobster, winter flounder and quahogs from Buzzards Bay, Massachusetts. Unpublished draft report. Salem, MA: DMF. September 1988.

Weaver, G. 1982. PCB pollution in the New Bedford, Massachusetts area: A status report. Boston: Massachusetts Office of Coastal Zone Management.

5: Relationship to Other Laws

As discussed in the RP/EIS, the two major federal laws guiding the restoration of New Bedford Harbor are CERCLA and NEPA. CERCLA provides the basic framework for natural resource damage assessment and restoration, while NEPA sets forth a specific process of impact analysis and public review. However, the Trustees must also comply with other applicable laws, regulations, and policies at the federal, state and local levels. The relevant laws and their applicability with respect to Round II are discussed below.

Clean Water Act (CWA) (Federal Water Pollution Control Act), 33 USC §1251 et seq.

CWA is the principal law governing pollution control and water quality of the nation's waterways. Section 404 of the law authorizes a permit program for the disposal of dredged or fill material in the nation's waters, administered by the ACOE.

In general, restoration projects which move significant amounts of material into or out of waters or wetlands--for example, hydrologic restoration of salt marshes or the placement of artificial reefs--require Section 404 permits. It is probable that some of the New Bedford Harbor Round II restoration projects will require such permits. In such cases the Trustee Council might be the permit applicant; alternatively, the project proponent--for example, a municipality or local natural resources trust--might apply for the permit. In granting dredge and fill permits the ACOE might require undertake mitigation measures such as habitat restoration to compensate for losses resulting from the project.

Under Section 401 of the CWA, restoration projects that entail discharge or fill to wetlands or waters within federal jurisdiction must obtain certification of compliance with state water quality standards. The Massachusetts Department of Environmental Protection implements the Section 401 Water Quality Certification Program through 314 CMR 9.00. In general, restoration projects with minor wetlands impacts (i.e., a project covered by an ACOE Programmatic General Permit) are not required to obtain Section 401 Certification, while projects with potentially large or significant cumulative impacts to critical areas require certification.

Coastal Zone Management Act (CZMA), 16 USC §1451 et seq.

CZMA establishes a policy to preserve, protect, develop and, where possible, restore and enhance the nation's coastal resources. The federal government provides matching grants to states for the realization of these goals through the development and implementation of state coastal zone management programs. Section 1456 of the

Act requires direct federal actions in the coastal zone to be consistent, to the maximum extent practicable, with approved state programs. It stipulates that no federal licenses or permits may be granted without giving the state the opportunity to concur that the project is consistent with the state's coastal policies.

In order to comply with CZMA, the Trustee Council sought and received the concurrence of the Commonwealth that the RP/EIS is consistent with the 27 program policies of the Massachusetts Coastal Program. Moreover, specific restoration projects which may be selected in the current and future restoration rounds must be consistent with the state program. The Trustees anticipate that continued close cooperation between the Massachusetts Coastal Zone Management Program (MCZM) and the Trustee Council will ensure consistency of future actions.

MCZM determined that the RP/EIS was consistent with the MCZM's enforceable program policies. The Round II restoration projects selected for funding are consistent with the RP/EIS. The determination that the individual Round II restoration projects are consistent with the state program will be sought at the time of permit application rather than seeking concurrence on the Round II Environmental Assessment and then again on the individual projects.

Endangered Species Act (ESA), 16 USC §1531 et seq.

ESA establishes a policy that all federal departments and agencies seek to conserve endangered and threatened species and their habitats, and encourages such agencies to utilize their authorities to further these purposes. Under the Act, the Departments of Commerce and Interior publish lists of endangered and threatened species. Section 7 of the Act requires that federal agencies and departments consult with the Departments of Commerce and/or Interior to minimize the effects of federal actions on endangered and threatened species. In the case of New Bedford Harbor, the identification of endangered species as a restoration priority (RP/EIS Section 2.6) means that specific restoration actions can help conserve and recover endangered and threatened species and so further the goals of ESA.

The Trustee Council determined that the preferred restoration activities for Round II would not have any adverse effects upon threatened or endangered species. For most of the projects, no threatened or endangered species are expected to be present at the site of the activity. Two of the projects (**Restoration and Management of Tern Populations** and **Artificial Reef**) are expected to provide direct and indirect benefits to federally endangered roseate terns and sea turtles respectively. Two additional projects (**Acushnet River Valley Conservation Project** and **Winsegansett Field Station**) will be conducted in the area where species identified by the Massachusetts Natural Heritage and Endangered Species Program may be present, but the restoration activities should not have an adverse impact on these species. As the individual project plans become finalized, the Council will review and evaluate whether there are any impacts to endangered or threatened species to determine whether or not a Section 7 consultation is required pursuant to the ESA.

National Environmental Policy Act, 42 USC §4321 et seq.

NEPA is the basic national charter for protection of the environment. Its purpose is to "encourage productive and enjoyable harmony between man and the environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; and to enrich the understanding of the ecological systems and natural resources important to the Nation." The law requires the government to consider the consequences of major federal actions on human and natural aspects of the environment in order to minimize, where possible, adverse impacts. Equally important, NEPA establishes a process of environmental review and public notification for federal planning and decisionmaking.

The Trustee Council integrated the Restoration lan with NEPA's EIS process in order to comply with NEPA. The Restoration Plan complied with NEPA by serving as a "programmatic EIS" that assesses impacts of the restoration as a whole, as well as impacts of specific restoration projects. The Council prepared an Environmental Assessment (EA) for Round II in order to ensure public input to the decision-making process and assists the public to understand why specific projects were or were not chosen. (Several of the projects could have received categorical exclusions but the Council chose to prepare an EA instead.) The Council specifically sought public comments and provided opportunities for members of the public to participate in the Council's public review process, which included public hearings. This EA incorporates the public comments received on the draft EA and responds to those comments. After reviewing the preferred Round II restoration projects chosen for implementation the Council has determined that there will be no significant impact to the human environment and that a Finding of No Significant Impact is appropriate.

Essential Fish Habitat

The Magnuson-Stevens Act (16 U.S.C. 1801 et seq.) as amended and reauthorized by the Sustainable Fisheries Act (Public Law 104-297) established a program to promote the protection of essential fish habitat (EFH) in the review of projects conducted under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. After EFH has been described and identified in fishery management plans by the regional fishery management councils, federal agencies are obligated to consult with the Secretary of Commerce with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH.

From the 1940s through the 1970s electronics manufacturers released polychlorinated biphenyls (PCB) and other hazardous materials contaminating portions of the Acushnet River and Upper Buzzards Bay. The PCB contaminant levels occurring in the bottom sediments of the Acushnet River were among the highest found in a marine estuary leading to New Bedford Harbor's being designated on the Environmental Protection Agency's (EPA) Superfund National Priorities List. The site is also listed by the Massachusetts Department of Environmental Protection as a priority Tier 1 disposal

site. To date, the most contaminated sediments (greater than 4000 ppm PCB) have been dredged and disposed of off-site. A large volume of contaminated material still remains within the New Bedford Harbor Superfund Site (over 600,000 cy) which is the subject of the next phase of cleanup.

The New Bedford Harbor natural resource restoration activities occur within a defined area referred to as the New Bedford Harbor Environment[1] based upon the Superfund Site determination. The Trustee Council prepared a RP/EIS in preparation for the implementation of a first round of projects and is now preparing to implement a second round of projects to restore the injured natural resources. The projects were determined after a solicitation of restoration ideas from the public, academia, and municipal, state and federal government agencies. All projects are conceptual at this point, subject to procurement competition and/or development of specific scopes of work. As project plans are finalized, an EFH assessment will be performed on the individual projects.

For the New Bedford Harbor/Upper Buzzards Bay area, EFH has been designated for one or more life stages for the following species: Atlantic cod (*Gadus morhua*), haddock (*Melanogrammus aeglefinus*) red hake, (*Urophysis chuss*), winter flounder (*Pleuronectes americanus*), American plaice (*Hippoglossoides platessoides*), Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), long finned squid (*loligo paelei*), Atlantic mackeral (*Scomber scombrus*), summer flounder (*Paralicthys dentatus*), scup (*Stenotomus chrysops*), black sea bass (*Centropristus striata*), surf clam (Spisula solidissima), king mackeral (*Scomberomorus cavalla*), Spanish mackeral (*Scomberomorus maculatus*) and cobia (*Rachycentron canadum*). These species are managed by the New England, Mid-Atlantic, South Atlantic and Gulf of Mexico Fishery Management Councils under the following fishery management plans (FMP): Northeast Multispecies; Atlantic Bluefish; Atlantic Mackeral, Squid, and Butterfish; Summer Flounder, Scup and Black Sea Bass; Atlantic Surf Clam and Ocean Quahog; In addition, EFH has been designated for sandbar shark (*Charcharinus plumbeus*) and bluefin tuna (*Thunnus thynnus*) which are managed by the National Marine Fisheries Service under the FMP for Atlantic Tuna, Swordfish and Sharks.

(a) Land Acquisition Projects

Several of the restoration projects (**Acushnet River Valley Conservation Project, Popes Beach Land Purchase (North and South), Riverside Auto Wrecking Land**

[1]The New Bedford Harbor Environment means New Bedford Harbor, Massachusetts, and the adjacent waters and shore areas containing natural resources which have been or may be injured, destroyed or lost as a result of releases of hazardous substances from the Facilities. This includes the New Bedford Harbor Superfund Site, located in portions of New Bedford, Acushnet and Fairhaven, Massachusetts, including New Bedford Harbor, the Acushnet River Estuary extending north to the Wood Street Bridge, and any adjacent marine waters and sediments and shoreline areas which are the subject of the United States Environmental Protection Agency's current Remedial Investigation and Feasibility Study, including at least Areas 1, 2 and 3 as defined in 105 CMR 260.005.

Acquisition) selected for implementation involve funding for the outright purchase or conservation easements of upland properties. The ultimate goal of the land acquisition is to provide greater protection to the Acushnet River and Upper Buzzards Bay by permanently preventing development of these sites. Appropriate pre-acquisition tasks (habitat value analysis, fair market appraisal, title exam, environmental site assessment, property boundary surveys and conservation restriction to be held by a grantee acceptable to the Council) must be completed prior to the Council's funding of the acquisition. Since the Council is only funding the acquisition and will not be funding any upgrades to or development on these properties, no adverse impacts to EFH are expected. Should future habitat restoration opportunities arise at these locations, a separate assessment of impacts would occur.

(b) Salt Marsh Restoration Projects

The Council's salt marsh restoration projects (**Marsh Island, New Bedford Aquarium Salt marsh and Nonquitt Salt Marsh**) will take place in the Acushnet River or Upper Buzzards Bay. The **Marsh Island** project may be postponed for several years while the property is used by the EPA for the storage of clean sediments in conjunction with Superfund activities. An assessment of impacts cannot be done at this time. The Council will conduct a specific EFH assessment in the future once the timing and EPA's project plans become clearer.

The **New Bedford Aquarium** proposes to create a **salt marsh** in an existing upland, industrial site along the Acushnet River. The salt marsh is proposed to be located around, and potentially in the proposed Aquarium facility. The salt marsh would contribute to removing nutrients from the Aquarium effluent, provide salt marsh functions and educate the public. The project is conceptual at this point and is dependent upon the New Bedford Aquarium securing necessary funds and permits for construction of the whole facility. An EFH assessment will be conducted in conjunction with applying for the appropriate environmental permits.

The **Nonquit Salt Marsh** project would restore a tidally restricted marsh which discharges into Upper Buzzards Bay. The restriction occurred when a road with an inadequately sized culvert was constructed in the 1800s across the mouth of the marsh. Approximately 60% of the vegetation had died by the late 1970s and the salt marsh community has never recovered. The unvegetated peat is slowly decomposing and eroding, lowering the marsh elevation and threatening the continued survival of the salt marsh.

The project would install a new culvert, remove a tide gate to improve tidal flushing of the 60+-acre Nonquitt Marsh, South Dartmouth. Before any of this work is initiated, an ecological and hydrological alternatives analysis will be performed on the marsh. The alternatives will likely look at the existing and historic channels, removal of sediments in the channel, modification of the waterlogged and subsided marsh substrate, the need for plantings, and the appropriate culvert size to increase tidal exchange and restore the normal salinity, vegetation and productivity of the salt marsh. While no adverse effects

to EFH are expected from the construction activities associated with this project, an EFH assessment will be conducted as project plans are finalized.

(c) Shellfish Restoration

The Council will be soliciting specific proposals for a facility to produce or be a source of appropriately sized **shellfish seed** for transplanting in the Harbor. This project would assist the efforts of the Regional Shellfish Restoration Board which is using a combination of transplants of adult stock and juvenile seed to restore the hard clam fishery in the harbor. Portions of the Harbor are closed to the taking of shellfish due to presence of PCBs and other contaminants. This project would allow other areas to be restocked thus increasing the stock size and the harvestable fishery. A regional shellfish management plan is being developed to insure that a sustainable fishery is maintained in this area. If the Council determines that it will fund a facility it would be subject to all permit requirements. Shellfish seeding and stocking are standard methods and no adverse impacts to EFH are expected from the activity.

(d) Artificial Reef

The Council has selected construction of an **Artificial Reef** (or reefs) as one of the preferred projects for implementation. The reef(s) would serve to increase recruitment of one or more finfish species to enhance fish populations. Prior to any construction, the Council will require an analysis of proposed site, design and material alternatives. One of the important criteria for the siting of the reef will be that minimal or no impact to EFH occurs while still providing the habitat necessary to attract finfish and increase stock recruitment. Various designs and materials may be used to determine the efficacy of methods used, and the reef is intended to also be a location for research monitoring.

(e) Buzzards Baykeeper

Funding for the **Buzzards BayKeeper** would be for supplemental monitoring of Council funded restoration projects. The BayKeeper would be managed in association with the Coalition for Buzzards Bay. In addition to monitoring, the Baykeeper would protect the Harbor by identifying and reporting violations such as improper disposal, spills or impacts to wetlands, eelgrass or marine habitat. Since the primary focus of this project is monitoring, beneficial impacts are expected to EFH.

(f) PCB Exhibit

An **educational exhibit on PCB impacts to natural resources** and examples of how to change everyday behavior to have a positive impact on the Harbor Environment would be located inside the New Bedford Aquarium. The exhibit is just a concept at this time and would only be built if the Aquarium is constructed. Since the project would be located indoors there would be no adverse affect with potential minor indirect benefits to EFH resulting from its implementation.

(g) Tern Restoration

The **Restoration and Management of Tern Populations** project is a continuation of a project from Round I. The project involves the Massachusetts Division of Fisheries and Wildlife (MDFW) placing contract tern managers on each of three islands in Buzzards Bay where common and roseate terns nest from May through July of each year. Both species have been injured as a result of eating fish contaminated with PCBs. In addition, roseate terns are an endangered species for which a recovery plan has been developed. The managers monitor the tern colonies keeping track of the nests and eggs laid and frightening away predators to increase the chicks chances for survival. The work is being done in conjunction with and ongoing research study and there are other researchers present on the islands.

A described below, one aspect of the project may have an impact on EFH. Bird Island, Marion, is the site of one of the largest tern colonies (over 2000 nesting pairs each year) in the United States. Storms have broken through a rock/rubble wall surrounding the island flooding portions of the island causing erosion which threatens nesting areas. Terns are particular about their nesting habitat and considerable efforts are being made to reintroduce the birds to historic nesting areas. To lose a significant portion of this island would potentially set the restoration efforts back.

To correct this problem, MDFW has proposed filling a portion of the island to stabilize the tern habitat. The proposed filling is undergoing pre-application review by the ACOE and other regulatory and review agencies. These discussions and a wetland delineation of the island have determined that the proposed area to be filled includes salt marsh vegetation. The discussions now focus on potential salt marsh mitigation projects. MDFW has issued a contract to evaluate the best alternatives to restore the tern habitat while minimizing the project's potential adverse impacts to marine habitat. The contractor will be also be responsible for determining and preparing the necessary permits for the final alternatives from which a recommended alternative will be selected. An EFH assessment will be included as part of the permitting process.

(h) Winsegansett Field Station

The Council is providing partial funding to the **Winsegansett Field Station** project for the following aspects of the original idea: a) habitat restoration and b) environmental education projects targeting specific human activities. In particular, the Council believes that there are discrete habitat restoration projects on the property that should be identified and implemented, including: restoring salt marsh degraded by insufficient flow; restoring water quality in Winsegansett Pond by investigating and correcting pollutant inputs; and restoring living resources through eelgrass planting. The Council will work with the applicant to determine the most appropriate projects at this location. (The Council previously funded the purchase of approximately 160 acres of land abutting and surrounding this property. The Coalition for Buzzards Bay has secured use of this 5 acre parcel for the establishment of the Center.) The projects may require

permitting and an EFH assessment would be done in conjunction with the permit application.

(i) Studies

The following four projects will first require the satisfactory results of individual studies before funding for the project occurs.

(1) Marine Fish Stock Enhancement - This project would potentially grow and release winter flounder, summer flounder, scup and tautog into the Acushnet River and New Bedford Harbor. In addition, the Council proposes to have forage species grown and released to serve as an enhanced forage base to the natural resources located within the Harbor Environment. Before these activities take place the Council will commission a study to evaluate the potential for such a facility to meet the Council's objectives to restore, replace or acquire the equivalent of the injured fish species. If justified by the findings of the study, the Council may fund the design and construction costs of an appropriate portion of the facility. An evaluation of potential impacts to EFH from the release of marine stock will be performed as part of the study.

(2) Upper Harbor Confined Disposal Facility (CDF) Natural Resource Habitat Enhancements - This project would enhance CDFs located along and in the Acushnet River by habitat plantings. The Council intends to contract a study to determine the type of plantings that could be supported by these structures and whether they would further benefit the natural resources present in the harbor. The study will have no adverse impacts to EFH, and any plantings would be expected to have no adverse effects on EFH.

(3) Upper Sconticut Neck Shellfish/Sewer Installation - The Council is providing a portion of the funding for this project for a study to determine definitive sources and magnitude of contamination which may be affecting shellfish harvesting. (The original proposal requested the Council provide funds for sewering to eliminate fecal contamination which has closed shellfish beds off of Sconticut Neck, Fairhaven.) The study should determine whether sewering Sconticut Neck will allow the reopening of the shellfish beds. If sewering Sconticut Neck would not ensure the reopening of the shellfish beds, there is insufficient justification or nexus for funding this project. If satisfactory results are received then the Council may provide further funding for the engineering design of the sewer project. The Council will not provide funding for the direct construction of the sewer system. The portion of the project which the Council might fund would not have any adverse impact to EFH, and may ultimately benefit EFH.

(4) Community Rowing Boathouse -The Council has determined that before funding can be released for this project a study needs to be conducted to evaluate whether there has been sufficient injury to recreational boating and access to the Harbor due to PCB to justify the expense. Accordingly, if the study demonstrates such an injury to recreational boating and access to the Harbor due to PCB contamination, the overall goal of this project is to compensate for the lost access and natural resource service by

providing the equivalent of such lost access and natural resource service, namely providing people with a means of direct access to the Harbor through an on-the-water activity within the Harbor.

While the results of the study could lead to funding for construction of a boathouse or additional boats the project is still a concept and the location of the proposed boathouse has not been determined. Conducting the study should have no adverse impacts to EFH. Should the boathouse be built, the impacts to EFH will be reassessed.

6: Comments/Responses

6.1 Comments

(Note: Only a single example of each of the form letters received is included in this section. The number of letters received is noted on the representative copy. Copies of all the comments received are available for review at the Trustee Council's offices.)

6.2 Response to Comments

6.2.1 General/Technical Comments

Comment 1: Ninety-three comment letters supported the use of funds for land acquisition. Some of the letters stated that it was the best use of the monies to prevent added strain to the harbor environment.

Response: The Council notes the support for land acquisition as an appropriate means of restoring the affected environment. Land acquisition was identified as a preferred alternative in the RP/EIS (Section 4.3.4.2) and the Council will follow the guidance contained in that section. The Council has chosen four land acquisition projects for Round II (Popes Beach North and South, Riverside Auto Wrecking, and Acushnet River Valley Land Conservation).

Comment 2: One commenter stated that the 17 preferred restoration projects have nothing to do with natural resource restoration, the resources were never damaged by PCBs and the projects should not be funded from the AVX Natural Resources Damage Account. The commenter stated that Fairhaven has suffered the most due to the tide and currents depositing harbor discharges in an area off Fairhaven, and as a result, the sea bottom will not support bay scallops.

Response: The Council disagrees with the opinion that the 17 projects are not valid restoration projects for the New Bedford Harbor Site. The 17 projects each address a specific type of injury to natural resources due to contamination within the New bedford Harbor Environment or the uses or services provided by those natural resources. Where there is a question about the nexus of the project to an injury, the Council has chosen to study the issue to obtain conclusive results, before committing funding to the project.

The commenter is reminded that the Council's mandate is to restore, replace or acquire the equivalent of the natural resources that were injured by PCB contamination. The focus is on injured natural resources and not the political subdivisions within the affected area. The PCB contamination has affected all of the communities abutting the harbor and no determination has been, nor should it be, made regarding which community may have experienced the greatest impact. The Council's selection of projects from Round I and Round II not only addresses natural resource injury throughout the Site but also provides benefits to the local citizens residing within the Site. The Council does not believe it should change its focus from restoring natural resources to fund projects by community.

The Council notes the commenter's concern about the sea bottom no longer being able to support bay scallops. The Council has provided funding for and implemented eelgrass restoration in this general area which will increase the amount of suitable bottom habitat for bay scallops.

Comment 3: One commenter stated that attempts to manipulate nature through artificial reefs, fish propagation and coastal wetland restoration have produced disappointing results. Examples cited include declining salmon stocks and faulty wetland restoration projects.

Response: The science of salt marsh restoration has developed over the last 25+ years, and while more technological advances are needed, the scientific community has gained substantial experience and knowledge, and has developed sound practices and techniques for restoring salt marshes. There are many examples of successful salt marsh restoration projects throughout the U.S. East Coast, and in particular, southern New England. Examples of successful projects include Barn Island Marshes in Connecticut, Galilee and Sachuest Marshes in Rhode Island, and Rumney and Argilla Road Marshes in Massachusetts. The extent of restoration success depends on the past history of the restoration site, the potential for restoring an appropriate frequent tidal exchange with higher salinity waters, and the probability of eliminating or reducing excessive draining, through ditching, and excessive nutrient inputs. For most projects, well-developed monitoring programs have been implemented prior to and following a salt marsh restoration to help in explaining the extent of project success in re-establishing a natural tidal regime and healthy marsh with high ecological functioning, and reducing the spread of low habitat value invasive plants.

Fewer projects involving the deployment or construction of artificial reefs have occurred, particularly in New England. Uncertainty remains as to whether these habitat enhancement structures serve in increasing fish population size through recruitment, or function as an attractant of fish and shellfish. Research is now being conducted to help address this issue. Examples include the research being conducted by the University of Rhode Island on the Dutch Island reef in Rhode Island and by the University of Massachusetts' Center for Marine Science and Technology (CMAST) on the reef in the Outer New Bedford Harbor, Massachusetts. Preliminary results of these studies and others indicate that reef structures do increase local fish and shellfish population size, thus potentially enhancing fish stocks.

Fish propagation techniques have been developed primarily for aquaculture and fish farming for commercial marketing, and not restoration of natural fish and shellfish stocks. Shellfish (e.g., quahogs, soft-shelled clams) stock enhancement has been successful by raising young shellfish in closed tanks or nets to minimize predation, and then releasing the shellfish to coastal waters with requisite habitat and high water quality. An example of this effort is underway by the Town of Fairhaven, Massachusetts, and other similar projects are occurring in New England. Conversely, there has been limited stocking of finfish on the East Coast to enhance natural marine fish populations. Closed-tank facilities have been established at CMAST and other limited locations in Massachusetts where large numbers of flounder have been successfully raised, and have been released to the coastal waters on a limited basis. Much research is still needed on the potential success of fish stock enhancement, and it is expected that valuable experience will be gained through technically sound projects implemented for the New Bedford Harbor site.

The projects preliminarily selected (artificial reef, fish propagation) are contingent upon results of feasibility studies. In other words, such projects will not be funded unless and until a feasibility study demonstrates the viability of such projects.

Comment 4: Two comment letters stated that they could not support any of the projects until the area is clear of all pollutants. It is a waste of tax money and time to do otherwise.

Response: Early in the history of the Council, the communities publicly expressed their desire for restoration to begin immediately rather than wait for the cleanup to be completed. With this desire in mind, the Council sought guidance on what types of projects could be implemented before the cleanup was completed. The Council continues to follow four primary criteria: 1) projects must be consistent with the restoration plan being developed; 2) projects must not be undone or negatively impacted by EPA's remediation work, either now or in the future; 3) sufficient funds must be retained to accomplish meaningful and necessary restoration work after EPA's cleanup is finished; and 4) projects must not be "otherwise required" per statute, regulation, ordinance, consent decree, judgement, court order, permit condition or contract or if otherwise required by Federal, state or local law.

The Council has followed these criteria when selecting projects for Round II. The types of projects to be done in the Inner Harbor would not be in the dredge footprint or inside areas affected by dredging, nor would they be in areas where confined disposal facilities will be built. The projects would be conducted in areas where there is minimal contamination. Moreover, no adverse effects are expected from their implementation. (See additional comments for the individual projects.)

The Trustee Council is not using "tax money" to implement projects. The restoration funds resulted from a settlement with the companies that released the PCBs and other contaminants into the harbor. These funds are maintained by the U.S. District Court and invested in the Court Registry Investment System. The Trustee Council must petition the Court in order to receive and use the funds.

Comment 5: One comment letter stated that the Outer Harbor would cleanse itself through tidal flushing provided that contaminants are eliminated. The letter further stated that the hurricane barrier prevents tidal flushing in the Inner Harbor. As a consequence Inner Harbor funding should be limited to land acquisition. Other restoration activities would be a waste of money (stock enhancement, artificial reefs, PCB exhibit and salt marsh creation).

Response: The Council also believes that the hurricane barrier prevents adequate tidal flushing of the Inner Harbor and has formally requested the Army Corps of Engineers to evaluate the merits of installing one or more openings to increase tidal exchange.

The Council does not believe that it has to wait for the cleanup of contaminated sediments or modifications to the hurricane barrier to occur before implementing

restoration activities. The Council has selected discrete projects that will restore injured natural resources but will also be unaffected by the cleanup. The types of projects proposed will increase the habitat functions and values within the harbor and start providing benefits to natural resources. The projects are not necessarily dependent on water quality and should actually enhance water quality (e.g., salt marshes filter contaminants). The Council will coordinate its activities with the EPA to ensure that Council funded projects are not impacted by future actions.

Comment 6: Seventy-three comment letters supported funding for water quality monitoring and water quality improvement, which they believe should be the primary focus.

Response: The Council acknowledges the support for these types of activities and notes that it has preliminarily approved funding for the Buzzards Baykeeper to assist in monitoring efforts and recognizes that high water quality is a requisite for restoring injured resources affected by the PCB contamination.

6.2.2 Preferred Alternatives

6.2.2.1 Marshes or Wetlands

6.2.2.1.1 Marsh Island Salt Marsh Restoration

Comment 7: One commenter suggested that this proposal should be funded with the amount in reserve ($7 million) and that this proposal would be best suited for implementation after the completion of the EPA funded cleanup.

Response: The $7 million reserve fund is for previously identified projects (upper harbor wetlands restoration, winter flounder stock enhancement, Riverside Park, increasing tidal flushing of the Inner Harbor by modifying the hurricane barrier). Additional approved projects, that must wait until after the cleanup (or portions of the cleanup) is completed, would be added to this list. There is $2 million earmarked for future wetland restoration. It is possible that the Marsh Island project could be funded or partially funded with these monies if the project has to occur after the cleanup.

EPA has recently stated that Marsh Island is being considered for temporary storage of clean soils/sediments during the harbor cleanup. The construction of the confined disposal facility to be located along the shore opposite Marsh Island will generate a large volume of clean sediment. EPA's cleanup in the upper harbor will involve the removal of contaminated wetlands and mudflats and it is EPA's proposal to use the clean sediments as backfill to plant and/or restore the contaminated wetlands and mudflats. The clean sediments must be stored for approximately 3-5 years, however, until the CDFs are constructed and the contaminated wetlands and mudflats are

excavated. EPA believes that Marsh Island could serve well as a temporary storage area for this clean material, given its proximity to the CDF and its current land use. Until a final decision is made on EPA's potential use of Marsh Island, the Trustee Council will refrain from taking any further action. The money allocated for this project will be added to the reserve and the Council will coordinate future actions with the EPA and other involved parties.

Comment 8: One commenter believes that the proposal may have drawbacks because it is under private ownership and has major access problems.

Response: The Trustee Council understands these concerns and intends to work with all parties to come to a successful conclusion. The Council will explore various options for the site in the hope of securing public access and the greatest benefits to natural resources. The Council agrees that current access to the site is limited but the Council sees the greatest benefit in the restoration of the salt marsh and coastal upland that were historically present on the site, rather than in access.

Comment 9: One commenter suggested that a portion of the $750,000 for the Marsh Island Salt Marsh Restoration proposal be used to fund the Palmer's Island access project and the Harbor Open Space Public Access Study.

Response: This is the amount estimated to fund the Marsh Island project to completion. To redistribute this amount would reduce the amount available to implement the project and may result in the project not being completed or failing to accomplish the goals of benefitting natural resources and the public.

6.2.2.1.2 Nonquitt Salt Marsh Restoration

Comment 10: Two commenters supported the restoration of Nonquitt Salt Marsh citing the long-term degradation of the marsh to a fresh water wetland and the extended period of study that has already occurred.

Response: The Council notes this support and for the reasons discussed in the EA has decided to implement this project.

Comment 11: One commenter questioned what impact occurred to the marsh from PCBs in the harbor. The commenter explained that PCBs were heavy and would settle into the sediments before they reached Buzzards Bay, or Nonquitt Marsh in Dartmouth. The commenter believed the decision "smacks" of politics and stated that the residents were trying to tap restoration monies to clean up their own discharges.

Response: The release of PCBs from New Bedford Harbor has not affected Nonquitt Marsh. Rather PCBs affected other marshes in the Harbor Environment and the species that use those marshes. By restoring this poorly functioning marsh, the Council

would be compensating for the natural resource injuries to other marshes in the harbor area and the injuries to fish and other biota using these marshes.

6.2.2.1.3 New Bedford Aquarium - Salt marsh Creation

Comment 12: Three comment letters expressed general support for providing funds to the New Bedford Aquarium.

Response: The Trustee Council notes the support and refers the commenters to the specific projects the Council intends to fund.

Comment 13: One commenter suggested that the salt marsh creation proposal be funded with the amount in reserve ($7 million) and that this proposal should implemented after completion of the EPA funded cleanup.

Response: The salt marsh would be created in an existing upland area and would be unaffected by cleanup activities. It is important to note that project implementation is largely dependent on reaching an adequate funding level for the entire Aquarium project and securing the necessary regulatory permits for all on-site construction. The Council would not release funds for the salt marsh creation until these conditions have been met. The commenter is directed to the response for Comment #7 regarding the use of the funds being held in reserve.

Comment 14: Approximately 91 comment letters disagreed with providing funds for the salt marsh creation project stating that poor water quality would hamper success.

Response: The full ecological functioning of salt marshes and the extent of success of salt marsh restoration and creation is dependent on the daily exchange of tidal waters that are free of substantial contamination and floating debris. The Trustee Council and its Technical Advisory Committee (TAC) well recognize the potential adverse affects to the proposed marsh creation at the Aquarium site, and emphasize that the TAC will thoroughly review the proposed preliminary marsh construction design plans to ensure that potential flotsam and other problems are adequately addressed. As a requirement of the funding of the marsh creation, federal, state and local regulatory authorizations will be required before any funds are allocated. This permit process will include review by various agencies to ensure an adequate plan is prepared and implemented, and the constructed site is then monitored to identify and correct any potential problems associated with floating debris or other contamination. The proposed salt marsh creation is expected to provide treatment of discharges waters from the Aquarium, as well as functioning to improve water quality in the Inner Harbor.

Comment 15: Two comment letters supported the proposal for salt marsh creation at the Aquarium site.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project. In addition, prior to disbursement of restoration funds, the Aquarium must obtain full funding for construction of the Aquarium and all necessary permits for all on-site construction. However, the Council's decision to fund this project will be subject to review every three years to consider the extent of progress made on the Aquarium.

Comment 16: One comment letter considered the funding of this project to be an irresponsible waste of limited funds because it would be constructed in a contaminated commercial/industrial site.

Response: The salt marsh would serve multiple purposes. It would provide a natural environment within an industrial harbor and benefits to the species associated with the harbor. Moreover the salt marsh would filter Aquarium effluent and reduce the nutrient load to the harbor. The project would also serve to educate the public first hand on the ecological functions and benefits of salt marshes and their importance to the harbor and the species using the harbor.

6.2.2.2 Recreational Areas

6.2.2.2.1 Community Rowing Boathouse

Comment 17: One commenter agreed with the proposal to build a boat house but suggested that the facility be located north of Coggeshall Street to provide greater safety to the rowers.

Response: If the proposal is ultimately funded, the Whaling City Rowing Club would be looking at a variety of locations within the harbor that would best address the goals of their program. The Council will encourage the Club to explore the option of locating north of Coggeshall Street.

Comment 18: Ten comment letters urged the Trustee Council to provide funding for the boathouse citing numerous benefits including: increased public access to the harbor; education of young people on safe boating practices; education of the maritime history of the area; increased appreciation and enjoyment of the harbor; and a stewardship of the harbor and its resources.

Response: The Council acknowledges that there are many possible public benefits to be derived from the establishment of a boathouse supporting the rowing program in the Harbor. However, the Council is limited by the legal requirement that restoration funds be used only to restore, replace or acquire the equivalent of the injured natural resource.

Any funding for this idea is contingent upon obtaining the results of the study, described below, that demonstrate a sufficient injury to recreational boating and access to the Harbor due to PCB contamination to justify the expense of the proposal. Accordingly, if the study demonstrates such an injury to recreational boating and access to the Harbor due to PCB contamination, the overall goal of this project is to compensate for that lost access and natural resource service by providing the equivalent of such lost access and natural resource service, namely providing people with a means of direct access to the Harbor through an on-the-water activity within the Harbor. The provision of additional boats or construction of new boat(s) and/or a boathouse would address this goal by allowing an expansion of an existing harbor-oriented boating program with an emphasis on youth rowing. In addition the boathouse could possibly be used for similar programs offered by other groups. If the project were funded, participation in the boating programs would be offered free of charge to all New Bedford schoolchildren.

Several of the restoration ideas received in both Round I and Round II have involved projects to restore lost recreational uses. It has become apparent that the Council requires more information on certain injuries to recreational uses resulting from PCB contamination, before the Council can evaluate the merits of additional projects which address specific impacts to recreational use of the Acushnet River and New Bedford Harbor. The Harbor has been closed to fishing since 1979 and swimming since 1982. The 1986 damage assessment considered lost use values associated with impacts to the commercial lobster fishery, recreational fishing, beach use and coastal property value decreases associated with public awareness of the PCB contamination. The damage assessment did not study any impacts to other recreational uses, including boating. It is not known whether these other uses were considered at the time that the prior studies were performed.

The Council recommends commissioning a study to evaluate whether there has been other lost recreational use(s) of the New Bedford Harbor Environment. The information resulting from the study would then be available to determine which recreation projects are legally fundable and, possibly, the level of funding the Trustees should consider relative to other recreational projects and restoration priorities.

Comment 19: One comment letter (applicant) cited a “1986 Trustees’ report which revealed that recreational activities, including boating, were determined to have been adversely impacted ...” The letter suggested that the information in this report was sufficient so that further study was no longer necessary. The letter also said that the educational aspects of the project should be considered. Finally the letter explained the distinction between the marina slips and moorings and access to and use of the harbor.

Response: The report cited in this letter was determined to be the 1998 RP/EIS (NBHTC 1998). The quoted language was a qualitative discussion but was not based upon any quantitative damage assessment studies produced in 1986, which addressed only recreational fishing and beach use. The Council believes there is need for a study to determine if recreational boating was impacted by the PCB contamination present in the harbor. The study should also quantify any impact to determine whether the cost of

the proposal is justified by the lost use and whether other similar projects in the future may also be justified. The study should focus on recreational boating and other potential water related services injured by PCB contamination. The educational component of the project will be evaluated in conjunction with the results of the study.

6.2.2.3 Water Column

6.2.2.3.1 Upper Sconticut Neck Shellfish/Sewer Installation

Comment 20: Over 500 comment letters requested the Council to provide funding to establish sewerage in areas of Sconticut Neck. Many of the comment letters stated that the Sconticut Neck Sewer project would do more to help clean up the harbor than the Aquarium or other proposed projects (306 letters).

Response: The Council acknowledges that the Sconticut Neck sewering project would do more to clean up the harbor than the other Council-preferred projects because while the other selected projects restore natural resources injured by PCB contamination, the selected projects are not designed to clean up the PCB contamination in the harbor. While EPA is vested with the responsibility for cleaning up PCB contamination, the Council's mandate is to restore natural resources injured by PCB contamination in the harbor. The Council's preferred projects have been determined to meet that mandate. The Council is providing a portion of the funding for this project to determine definitive sources and magnitude of contamination which may be affecting the shellfish harvesting. The study should determine whether sewering Sconticut Neck will allow the reopening of the shellfish beds. If sewering Sconticut Neck would fail to reopen the shellfish beds, there is insufficient justification or nexus for funding this project. Until such a study is completed, a final decision would be premature without this requisite information.

Comment 21: One commenter believed that funding this proposal would be the best use of the restoration funds to meet the goal of improved water quality. The commenter explained that the individual septic systems have been identified as a major source of water quality deterioration. The commenter suggested that the funding level was inadequate and recommended $4.5 million could be made available by eliminating the marine stock enhancement proposal and delaying the artificial reef and salt marsh creation proposals.

Response: In determining the funding level for this and other projects, the Council must take into consideration future needs, other restoration projects and the best use of the restoration funds to accomplish the goal of restoration among a variety of restoration priorities. Many of the projects will likely receive less money than applicants request. Other projects will receive funding for only those components that the Council can legally fund. The same types of decisions must be made with regards to this project.

Comment 22: Seventy-three comment letters requested that funding for the project be increased to amounts varying between $4.5 million and $7.2 million.

Response: The amount chosen is the amount the Council has determined to be appropriate for the fundable components of the project while balancing the needs of other projects.

Comment 23: One comment letter supported the idea of an area needs assessment for a sewerage system.

Response: The Council is providing money for an assessment of the reasons for shellfish bed closures. The Council is not providing funding to determine the general public's need for a sewer system.

Comment 24: One comment letter suggested that the restoration of the harbor should focus on returning the system back to its normal condition by tailoring restoration efforts to enhance the natural processes and functions. The letter suggested that degraded water and habitat quality issues, which the Sconticut Neck Sewer Project is designed to address, be addressed through remediation efforts focusing on point and non-point source runoff discharge treatment.

Response: The Council believes that the work proposed is what this commenter suggests. The Council has undertaken projects that have a high likelihood of success. One of the Council's criteria focused on whether the project uses proven technology. The implemented eelgrass restoration project is based on transplanting eelgrass to areas where eelgrass historically occurred. Salt marsh restoration efforts would return wetlands back to fully functioning salt marsh conditions. Typically restoration actions do not focus on remediation efforts.

Comment 25: One comment letter stated that PCBs were flushed out of the harbor and accumulated in the Outer Harbor long before the hurricane barrier was constructed and that the area of impact extends out to Sconticut Neck. Marine life in this area has been degraded to varying degree.

Response: The Council's proposed study will determine whether PCBs are present in this area. The study is also expected to examine the contention that marine life has been degraded by PCBs.

Comment 26: One comment letter (applicant) asked the Council to reconsider the need for a study to perform water quality testing. The letter cited the various surveys and testing that have been conducted by the Division of Marine Fisheries (DMF) in the area of concern. The letter went on to say that DMF indicated that correcting failed septic systems and reducing the amount of stormwater flow would improve water quality. Since it is unlikely that the Inner Harbor will be opening soon, the proposed project would restore/replace an injured resource and restore the human uses of that resource.

Response: DMF has conducted periodic sampling of the area and has shared with the Council the results of those surveys. The Division's focus is on fecal coliform bacteria for which there is considerable information. This information will be examined by the consultant and incorporated in but not duplicated by the study.

Comment 27: One comment letter (applicant) cited the steps already taken by the Town of Fairhaven to correct the problems of the septic systems. Despite these efforts the waters still are not opened due to continued pollution. The Fairhaven Board of Health now understands that the requirements of the Massachusetts Title 5 regulations may not be effective and adequately protective of the environment with all septic systems. The letter urged the Council to begin the project by appropriating the necessary funds.

Response: The Council applauds the steps taken by the Town of Fairhaven to correct the septic problems in this area. Whether Title 5 provides adequate protection of the environment is not for determination by the Trustee Council. Fairhaven is encouraged to address its concerns to the Commonwealth's Department of Environmental Protection. The Council is concerned that if the actual sources of contamination are not determined ahead of time, the effort to reopen the shellfish beds may continue to fail. The Council would like to completely address the actual problem and believes further study is necessary.

Comment 28: One comment letter referenced the "holistic view" approach cited in the RP/EIS (Section 4.2.4) and believes that the Council failed to follow this approach with regard to water column quality. The letter emphasized that the Outer Harbor water quality was continuously contaminated by fecal contaminants as well as historic PCB contaminants and heavy metals. The letter requested an increase in funding to $4.7 million.

Response: The Council interprets the holistic view as implementing a variety of appropriate projects addressing a number of restoration priorities. The Council believes it has accomplished this goal in both Rounds I and II. The Council also must evaluate the merits and appropriateness of each individual project. If a project does not meet the requirement that it restore, replace or acquire the equivalent of the natural resources injured by PCB contamination, then the Council will not fund the project.

6.2.2.4 Habitats

6.2.2.4.1 Popes Beach Land Purchase (North and South)

Comment 29: Over 100 commenters supported funding the purchase of the Popes Beach properties by the Town of Fairhaven. The commenters believe the purchase would protect this area from further pollution and help restore "shellfish, birds, fish

habitat and improve the water quality." The commenters suggested that the purchase would complement the efforts to restore the nearby Atlas Tack Superfund Site.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project.

Comment 30: One commenter offered that the purchase could benefit fishermen, shellfishermen, beach users, and could be used for aquaculture and student research.

Response: The Council agrees that there are public benefits that would occur through funding the purchase of these properties.

Comment 31: Two comment letters expressed concern that the amount proposed by the Town and preliminarily approved by the Trustee Council may not be sufficient to complete the purchase.

Response: The Trustee Council notes that the amounts provided in the request for restoration ideas form are estimates and subject to change due to unanticipated conditions, more complete information or a more thorough analysis of costs or required actions.

The Council will determine the market value of the properties through real estate appraisals. These appraisals will take into account market conditions, potential future use and the recent selling price of other similar properties within the area. If the market appraisal determines a property value significantly different from the estimated amount, the Trustee Council will review the information and make a decision on whether to go forward with the purchase.

Similarly, the Council will conduct title examinations, environmental site assessments and habitat value analyses. If any of these indicate that there is a problem with going forward with the purchase, the Council will also review this information before rendering a final decision.

Comment 32: One commenter simply questioned the land purchase.

Response: The Trustee Council was unable to determine what the commenter's specific concern was and directs the commenter and other readers to the rationale provided in the EA.

Comment 33: One commenter noted that the Northern portion includes environmentally affected flora, is near to designated wetlands and consists of sand and dune and that the present owners may not realize the property may be unbuildable which would affect the value.

Response: See the response to **Comment 31**.

6.2.2.4.2 Artificial Reef

Comment 34: One commenter suggested that this proposal should be funded with the amount in reserve ($7 million) and that this proposal would be best suited for implementation after the completion of the EPA funded cleanup.

Response: The Council does not believe that construction of an artificial reef has to wait until after the cleanup. The reef would not be constructed in any area where Superfund or navigational dredging will occur.

The reef(s) would likely be located in the Outer Harbor portion of the site, in areas where the reef would benefit marine life. The reef(s) would not be located in areas with high levels of contamination, in areas necessary for vessel navigation or areas where it would not be successful at attracting and supporting marine life. Prior to any construction, the Council will require an analysis of site, design and material alternatives. The goal of the project will be the increased recruitment of one or more finfish species to enhance fish populations. The Council hopes that the reef(s) will provide opportunities for future study and additional recreational use. Provided that an appropriate location(s) can be found, there is no reason to delay implementation of this project.

Comment 35: Two comment letters supported the proposal for construction of an artificial reef citing the benefits to tautog and lobster.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project.

Comment 36: Ninety-one comment letters did not agree with funding the artificial reef due to the poor water quality affecting success. One additional commenter stated that it made no sense to create an artificial reef and then let pollutants clog it up.

Response: The reef(s) would not be located in the Inner Harbor in areas where there is significant contamination. The reef(s) would be located in areas where study has shown that conditions are favorable for fish or lobster to use such a structure. The reef(s) is/are expected to be located in the Outer Harbor where contaminant levels are at or near background levels. It would not be located in areas where tidal action or currents would create conditions where sediments would potentially cover the structure(s).

The Council would only provide funds after a survey of the area has been conducted with the goal of determining the best location for a reef. There would also be a study on the type of structure or materials most appropriate to be used. This will be largely dependent on the target species on which the project will focus.

Comment: 37: One commenter suggested that before construction of the reef begins there needs to be a baseline survey and an understanding of where reefs are appropriate.

Response: The Council agrees with this comment and its preliminary determination calls for a similar study to be conducted (see 2.3.4.2.3).

6.2.2.4.3 Riverside Auto Wrecking Land Acquisition

Comment 38: Two commenters offered support for the proposal.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project.

6.2.2.4.4 Acushnet River Valley Land Conservation Project

Comment 39: Two comment letters expressed support for land acquisition projects and specifically cited this project.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project.

6.2.2.4.5 Upper Harbor Confined Disposal Facility (CDF) Enhancements for Recreation, Habitat and Access

Comment 40: One commenter believes that there should be greater concern about what to do with the dredged and stored contaminated sediments rather than the "prettying up" of the containment facilities and surrounding areas.

Response: The Environmental Protection Agency, U.S. Army Corps of Engineers and the Massachusetts Department of Environmental Protection are responsible for developing and implementing the means to clean up the contaminated sediments at Superfund sites. Their primary concern is the safe and effective removal, disposal or confinement of the contaminated materials. These agencies have already expended considerable efforts on providing a solution that best serves the human population and the natural resources present on the New Bedford Harbor site. Their deliberations resulted in the Record of Decision for the Upper and Lower Operable Unit, New Bedford Harbor Superfund Site (EPA, 1998). The commenter is directed to this document for further information.

The Council's intended action is to provide enhancements to the CDF which will provide increased benefits to the natural resources. The goal is to provide greater habitat value to this permanent structure by planting native vegetation on the CDF beyond the normal

cover material provided by EPA. CERCLA contains cost effectiveness requirements (42 U.S.C. §9621(b)(1)(g)) which limit the types of enhancements EPA is allowed to undertake. EPA may only provide the necessary cover material to maintain the structure. It is appropriate for the Council to undertake modification of the structure to benefit natural resources.

The Council's initial action is to determine if there are plant species that will provide benefits to natural resources while at the same time not impacting the integrity of the structure. If such plantings can be found, the Council will release funds in the future for this project. Information received now will allow planning for the plantings in the design.

6.2.2.4.6 Winsegansett Field Station

No comment letters were received on this proposed project.

6.2.2.5 Living Resources

6.2.2.5.1 Fish stock enhancement

Comment 41: One commenter thought this was an "excellent" idea and stated that it was the human race's obligation to replenish what we use.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to pursue implementation of this project. However, the Council will first fund a feasibility study to evaluate the potential for such a facility to meet the Council's objectives to restore, replace or acquire the equivalent of the injured fish species. If justified by the findings of the study, the Council may fund appropriate design and construction costs. In addition, prior to disbursement of restoration funds, the applicant must obtain full funding for construction of any associated structures and all necessary permits for all on-site construction. However, the Council's decision to fund this project will be subject to review every three years to consider the extent of progress made on the facility.

The Council is required to follow applicable Federal or state procurement laws for this and other projects. The Council expects that there will be a competitive solicitation of specific proposals to address fish stock enhancement at the Aquarium facility or elsewhere before restoration funds are released.

Comment 42: Ninety-one comment letters did not agree with funding the stock enhancement project saying that the poor water quality would affect success. Two additional comment letters stated that this project should not be funded because of the high risk and low benefit due to the low chance of survival due to poor water quality.

Response: A clean source of water is a primary requirement for raising fish in a closed system. The facility would be expected to treat the incoming harbor water. The water used could be taken from sources other than the Inner Harbor. The feasibility study should discuss the water source(s) to be used for the facilty.

Comment 43: Two comment letters supported the proposal for marine fish stock enhancement associated with the New Bedford Aquarium.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project with the conditions as stated in the above response to comment #41.

Prior to funding this project, the Trustee Council will review the results of the feasibility study to determine whether the proposal is viable.

6.2.2.5.2 Regional Shellfish Grow Out-Up Well System

Comment: 44: Twenty-seven comment letters were received in support of the Regional Shellfish Restoration Committee's proposal for a shellfish grow-out upwell system.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project. The grant will be awarded after open competition pursuant to Federal financial assistance requirements.

Comment 45: One commenter suggested that it made no sense to try to clean up a shellfish bed and allow fecal matter to clog it up.

Response: The Council is not undertaking any efforts to clean up shellfish beds. Rather, in Round I, the Council funded a regional approach to restoring shellfish in the Outer Harbor which involves: 1) relaying juvenile and adult shellfish stock from "Restricted" waters to clean waters of the Outer Harbor where the shellfish are allowed to depurate; and 2) transplanting hatchery raised shellfish seed to clean waters. For this second round of funding, the Council expects to continue shellfish restocking efforts in the Outer Harbor, since vast areas of the Inner Harbor have contaminant levels that exceed the Food and Drug Administration's levels for safe harvest. The placement areas that have been used in the Round I efforts, and will be used in this round, are not affected by fecal contamination. Those areas that are closed to shellfish harvest will remain closed, and will not be used for shellfish transplants for as long as the fecal contamination continues.

6.2.2.6 Endangered Species

6.2.2.6.1 Restoration and Management of Tern Populations

Comment 46: One commenter supported the proposal.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project.

6.2.2.7 Studies, Plans or Educational Activities

6.2.2.7.1 New Bedford Aquarium - (Exhibit)

Comment 47: One commenter agreed with this proposal but suggested that it be located in the downtown area to give it greater visibility to local citizens and tourists.

Response: The Council believes that greater viewership would occur in a facility such as the New Bedford Aquarium which is described as being a draw of both local citizens and tourists in the area. Viewing an exhibit of this type surrounded by the other marine life exhibits should assist in creating an appreciation and stewardship for the harbor.

Comment 48: One commenter believed that funding the “PCB museum” would be a complete waste of money.

Response: The Council respectfully disagrees. The goal of the exhibit would be to change behavior through a better understanding of the impacts contamination had and continues to have on the harbor and its resources and to develop a sense of stewardship to prevent and reduce contamination. This changed behavior could manifest itself in homes, when the decision is made to refrain from disposing hazardous substances down the drain or storm drain which could eventually end up in the harbor. It also could occur if people no longer dispose of their waste in the harbor or contributing waters to the harbor, of if industries work to reduce the waste load in their effluent stream.

This exhibit would provide benefits for as long as people view the exhibit. The Council believes that this is a beneficial use of the funds.

Comment 49: Two comment letters supported the proposal for an Aquarium exhibit on PCB impacts to the Harbor Environment.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project subject to the conditions as stated in response to comment #15.

6.2.2.7.2 Buzzards Baykeeper - On the Water for New Bedford Harbor Restoration

Comment 50: One commenter stated that the proposal sounded like an attempt by the Council to “appoint an old friend to an invented position requiring little work”.

Response: The proposal was submitted by an independent environmental group and the Council had no involvement with the development of the initial proposal. To date, water keeper programs have been established on 40 major waterways where baykeepers or riverkeeper perform important functions. The Council believes the establishment of the Buzzards Baykeeper will assist the Council’s efforts to monitor restoration projects and provide greater protection to New Bedford Harbor natural resources.

Comment 51: One commenter believed the proposal is a good use of funds to identify current/future sources of harbor contamination.

Response: The Trustee Council notes this support and for the reasons discussed in the EA has decided to implement this project.

6.2.3 Non-preferred Alternatives

6.2.3.1 Landing and Recreational Facilities on Palmer’s Island

Comment 52: One commenter (applicant) stated that the harbor and Palmer’s Island need to be made accessible to the citizens. The commenter took issue with the statement in the EA regarding “concerns that the project would primarily benefit a commercial entity”. The commenter explained that the water taxi business would not be the only group to benefit from the increased access to the island. The commenter suggested that a portion of the $750,000 for the Marsh Island Salt Marsh Restoration proposal be used to fund Palmer’s Island and the Harbor Open Space Public Access Study.

Response: The Council does not support the project for the following reasons: 1) the proposed construction of a dock could have a negative impact on the shellfish beds which are in high concentrations in the cove; and 2) there is no evidence to suggest that access to the Island has been, or is currently being, impacted by the presence of PCB contamination in the harbor.

The amount proposed for Marsh Island restoration is the amount estimated to fund the project to completion. To redistribute this amount may cause the project to fail in its attempts to benefit natural resources and the public.

6.2.3.2 Striped Bass Project

Comment 53: Five commenters urged support for the Striped Bass Project citing how it would restore a saltwater fish population negatively affected by PCB contamination. They also stated that the proposed upland facility would provide opportunities for demonstration, research and handicap-accessible education.

Response: The Council has previously determined that the culture of striped bass would not be needed due to the restored status of the stocks and fishery.

Comment 54: One commenter (applicant) asked the Council to revisit its preliminary decision not to fund the project. The applicant stated that water must be brought in to the facility because treatment of the PCBs and heavy metals would be prohibitive. The lack of suitable water applies to any species to be cultured and not just striped bass. The applicant is willing to culture any species but the culture of striped bass would have the greatest likelihood of success. The applicant also stated his willingness to release all of the fish produced with funding from the Council.

Response: The Council has previously determined that the culture of striped bass would not be needed due to the restored status of the stocks and fishery. Regarding the issue of unsuitable water, the Council questions whether other facility locations have been pursued that would allow the taking of suitable water.

If the feasibility study described in Section 5.2.2.5.1 determines that a facility for stock enhancement is a feasible means for the Council to achieve its restoration objectives, the Council may fund the design and construction costs for an appropriate portion of the facility.

The applicant has indicated a willingness to change the proposal. In the event that a feasibility study described in Section 5.2.2.5.1 supports a stock enhancement project the applicant, and all other interested parties, will be invited to submit an application and bid during the procurement for the stock enhancement project.

6.2.3.3 Eliminating Toxic Chlorine Discharge from Fairhaven Wastewater Treatment Plant

Comment 55: One commenter stated that the damage done to fish and shellfish resulted from free chlorine in the sewer discharges in the Inner and Outer Harbors. The chlorine killed off eelgrass and prevented oyster and scallop spawning success by killing the larvae. The commenter explained that the Acushnet River PCBs were toxic only to sea worms who ingested the PCBs. The commenter provided a copy of a 1980 study on PCBs in Chesapeake Bay (Eisenberg et al). The commenter believes that the chlorine problem should be fixed first before planting eelgrass and shellfish in the harbor.

Response: There have been a variety of contaminants and stressors on the Harbor Environment. Chlorine is being discharged as a result of wastewater treatment

operations. Heavy metals are being discharged as a result of industrial operations. During storm events, combined sewer overflows drain septic contaminants into the harbor. Vessels in the harbor release waste oil. And for a period of close to 40 years, PCBs were discharged into the harbor from the two manufacturing facilities. These PCBs also entered the waste stream and were transported to and discharged from the municipal outfall.

The Trustee Council is responsible for restoring, replacing, or acquiring the equivalent of the natural resources injured by PCBs in the Harbor Environment. The PCBs have affected a variety of natural resources including marine organisms in addition to sea worms and at levels significantly higher than those found in the 1980 Chesapeake Bay study. Levels exceeding the Food and Drug Administration limit have been found in summer, winter and windowpane flounder, scup, bluefish, tautog, striped bass, river herring, oysters, soft-shelled clams, blue crabs and lobster. In addition elevated levels have been found at both ends of the food chain - in both amphipods and terns. It is appropriate and necessary for the Council to address these injuries from PCB contamination

The Council acknowledges that there may be toxic chlorine levels in the Harbor Environment. Discharges from wastewater treatment plants are subject to permitting requirements under the Clean Water Act. The Council will not fund projects that are otherwise required by a separate consent decree, court order, statute or regulation. As such, the Council is not legally able to to provide funding for this project.

6.2.4 Non-Preferred Studies, Plans, Educational Opportunities

6.2.4.1 New Bedford State Pier Buzzards Bay Education Center

Comment 56: Seven comment letters urged the Trustee Council to reconsider the preliminary decision not to fund the proposal. The letters cited the recommendations of the New Bedford Harbor Master Plan and the New Bedford Whaling National Historic Park Master Plan. They also stressed the contribution to environmental education that the facility would provide. Several of the letters urged consideration of the planning component if the full amount could not be funded.

Response: The Council acknowledges the positive contribution that the Ernestina has already provided and the potential contributions of the Education Center. The Council does not find a nexus to PCB injury nor is it apparent how the proposal would affect a change in behavior that would specifically benefit the injured natural resources or the harbor environment.

Comment 57: One commenter (applicant) questioned why this proposal was not recommended when other proposals have shortcomings with regard to site acquisition, present ownership or general articulation with current master plans and current

planning processes. The commenter stated that the proposal did not have these shortcomings (site is currently owned by the Commonwealth of Massachusetts, identified within master plans and municipal, state and federal endorsement and public support).

Response: Each proposal was judged on its ability to meet the selection criteria set forth in the request for restoration ideas. The other proposals were determined to meet these criteria. While the Council recognizes that there may be difficulties in implementing some of the projects, these shortcomings are not believed to be insurmountable. The Council notes the support of the many different groups and the project's incorporation in the various master plans, but the shortcoming of this proposal with regards to the requirements of CERCLA render it ineligible.

6.2.4.2 Harbor Open Space Public Access Study Phase II/Implementation

Comment: 58: Three comment letters were received urging support and reconsideration of the proposal. The letters cited the importance of continuing the work of the previous study and noted that this study would extend and expand the area of analysis. The Phase II study would identify specific opportunities for public access, recreational space and open space within the harbor. The study would represent the cognitive process of establishing the physical link to the areas and habitats proposed for biological restoration.

Response: The Council reiterates its desire to pursue direct restoration rather than to provide funding for continuing an access study. The Council has already committed funds to a variety of restoration projects that afford the public greater access to the harbor and its resources.

Comment 59: One comment letter suggested that a portion of the $750,000 for the Marsh Island Salt Marsh Restoration proposal be used to fund Palmer's Island and the Harbor Open Space Public Access Study.

Response: The amount proposed for Marsh Island is the amount estimated to fund the project to completion. To redistribute this amount may cause the project to fail in its attempts to benefit natural resources and the public.

6.2.5 New Alternatives

Comment 60: One commenter raised concerns about raw sewage and storm water draining into the harbor during periods of significant rain. The commenter suggested that large holding tanks be installed at the problem locations to store the effluent until the wastewater treatment plant is able to process it. The commenter also stated that the City of New Bedford is in violation of Massachusetts Title 5 regulations.

Response: The City of New Bedford has made considerable improvements to the wastewater flow by the addition of the wastewater treatment plant. The plant is able to handle greater quantities of wastewater, is able to provide more substantive treatment, and as a result the water quality in the harbor is reported to be improving. The City is making efforts to correct the combined sewer overflow problem which allows raw sewage to mix with storm water and be released into the harbor during storm events. This is an enormous problem in terms of the money required to correct it but the City is actively pursuing options to undertake this work. The project proposed by the commenter would be far too expensive for the Council to undertake and would require substantial planning and permitting.

Index of Restoration Ideas

Restoration Idea **Page**