

# CHAPTER 5: IMPLEMENTATION OF THE RESTORATION PLAN

## **Chapter Outline:**

	Page
5.1 Coordination of Restoration with Remediation .....	5-2
5.2 The Restoration Process .....	5-6
5.3 Timing and Milestones .....	5-9
5.4 Implementation of Restoration Actions .....	5-10
5.4.1 Plans and studies .....	5-10
5.4.1.1 Procedures .....	5-10
5.4.1.2 Timeframe .....	5-10
5.4.1.3 Budget .....	5-11
5.4.2 Near-term restoration .....	5-11
5.4.2.1 Procedures .....	5-11
5.4.2.2 Timeframe .....	5-11
5.4.2.3 Budget .....	5-12
5.4.3 Future restoration actions .....	5-12
5.4.3.1 Procedures .....	5-12
5.4.3.2 Timeframe .....	5-13
5.4.3.3 Budget .....	5-13
5.4.4 Emergency restoration .....	5-13
5.4.4.1 Procedures .....	5-14
5.4.4.2 Timeframe .....	5-14
5.4.4.3 Budget .....	5-14

## CHAPTER 5: IMPLEMENTATION OF THE RESTORATION PLAN

### 5.1 Coordination of Restoration with Remediation

In order to reverse the loss of natural resource values and uses stemming from PCB contamination of the New Bedford Harbor Environment, and to begin to compensate the public for such losses, implementation of the proposed restoration plan should begin as soon as is practicable. As discussed in Chapters 2 and 3, however, remediation is expected to be a long-term project, and certain remediation decisions may not be made for some years. Therefore, a flexible approach to restoration decisionmaking in New Bedford Harbor is necessary.

At specific sites within the Harbor Environment, particularly within the Upper Estuary and Inner Harbor, the range of restoration options available at a particular time will depend on the progress of the clean up. Current and future restoration decisionmaking in New Bedford Harbor must consider such factors as:

- time-scale and progress of remediation;
- levels of contamination remaining in the environment and natural resources;
- locations of CDFs along the Harbor shoreline.

As discussed in Chapter 2, EPA is the lead federal agency for Superfund site remediation, while the Corps is responsible for dredging and construction operations at the Site. EPA and the Corps are approaching the clean up of New Bedford Harbor in three phases.

Phase I was the clean up of the "Hot Spot" in the Upper Acushnet River Estuary--the most contaminated parts of the Superfund Site. The Hot Spot and its clean up are described more fully in Chapters 2 and 3, while **Figure 5.1** shows the areas affected by the Hot Spot clean up. Dredging for Phase I was completed in September, 1995.

Phase II will address contamination in the remainder of the Upper Estuary, Inner New Bedford Harbor, and parts of the Outer Harbor. Phase II will remediate sediments with lower levels of PCB contamination than Phase I, and it is by far the largest part of the clean up in terms of the area affected (170 acres) and volume of sediments to be removed (450,000 cubic yards). Phase II of the clean up is discussed in more detail in Chapters 2 and 3. EPA released a proposed plan for Phase II on November 6, 1996, which is expected to be finalized in mid-1997.

If all goes according to schedule, Phase II will be completed in approximately 15 years, or about 2011. Recovery of the water column to "ambient water quality criteria" (AWQC)--that is, acceptable levels of PCBs in the water column--may take even longer. EPA intends to begin clean up in the Upper Acushnet River Estuary, and proceed southward. **Figure 5.2** shows the area affected by Phase II of the clean up.

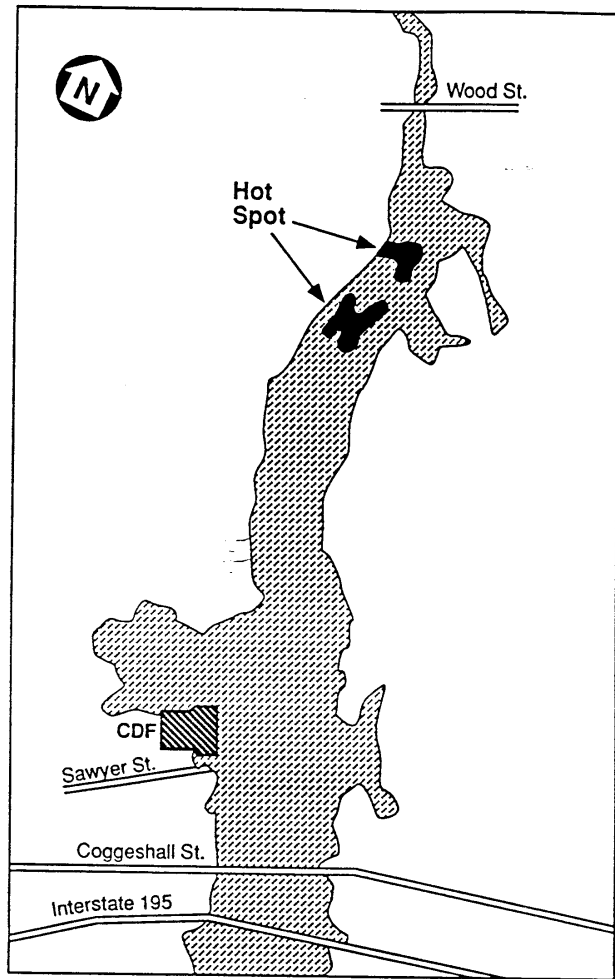
Phase III of the clean up will address additional areas in the Outer Harbor. A schedule for this phase has not yet been set, nor is a site map yet available.

As sediments are dredged from the Harbor, they will be deposited in CDFs, along the shoreline of the Upper Acushnet River Estuary and Inner New Bedford Harbor. Sediments from navigational dredging projects may be used as CDF interim cap material. In the Inner Harbor, the CDFs themselves may be appropriate for a variety of uses including open space/parkland, bird sanctuaries, or wharves. **Figure 5.2** shows EPA's proposed locations for CDFs at the New Bedford Harbor Superfund Site, while Figures 5.3 and 5.4 show how the CDFs will be constructed.

To ensure that restoration actions are effective and are not reversed or “undone” by remediation actions, the Trustees envision a restoration process that is coordinated with the ongoing clean up work over a period of years. The Trustees would periodically select restoration actions that are practicable, effective, and appropriate in the context of the Harbor clean up. Specific milestones--decisions, events or accomplishments pertaining to the remediation and related processes--would trigger new rounds of restoration action by the Trustees.

As mentioned above, EPA has begun dredging the Upper Estuary and intends to proceed southward with the clean up. Therefore, restoration actions will probably become practicable in the Upper Estuary before clean up has been completed in the Inner Harbor. As remediation continues, more restoration options will become available. In some cases, it may be appropriate to adapt the restoration plan, or to shift restoration priorities from those initially identified in the Request for Ideas. This adaptive approach to management of the restoration process would ensure that restoration and remediation actions work together to produce maximum benefit for the Harbor Environment.

Figure 5.1  
Hot Spot Location Map

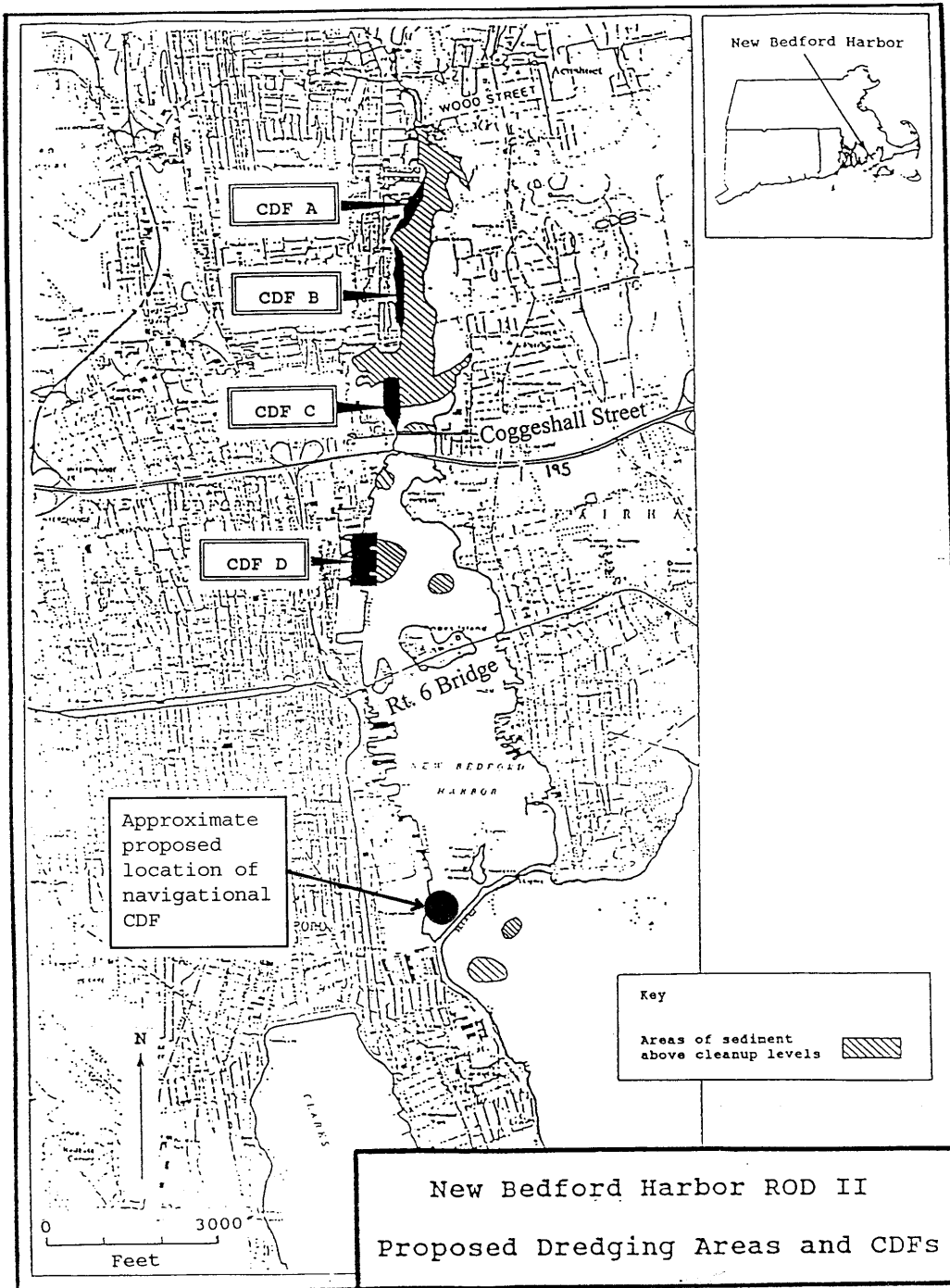


Legend

- |  |  |  |
|--|--|--|
|  Hot Spot |  Confined Disposal Facility (CDF) |  Acushnet River Estuary |
|--|--|--|

Source: EPA Proposed Cleanup Plan for the Hot Spot Area, July 1989

Figure 5.2



Source: EPA Proposed Cleanup Plan, November 1996

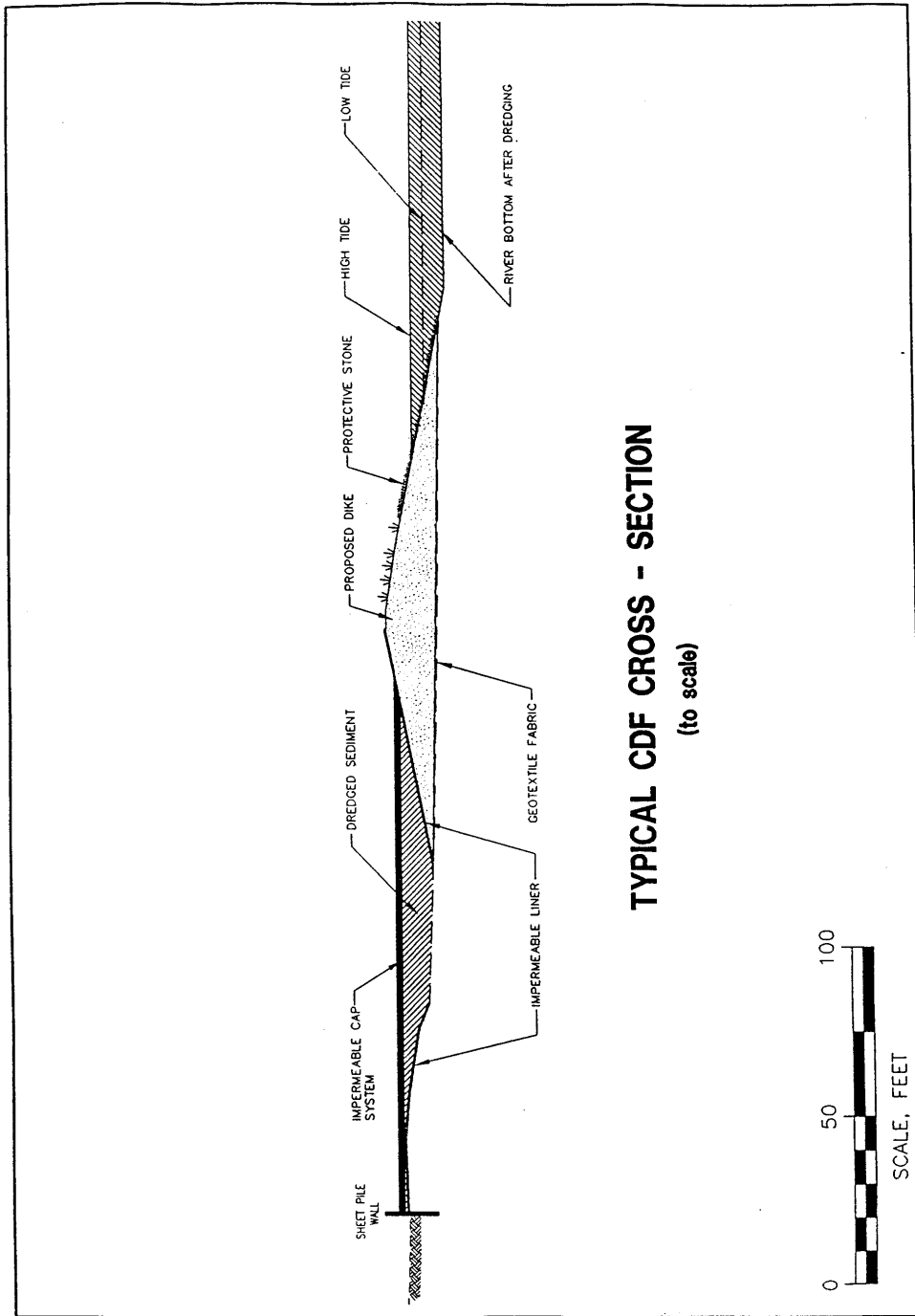
## 5.2 The Restoration Process

Initially, restoration would focus on actions that are not immediately dependent on the progress of the clean up. As described in Chapter 2, the terms of the restoration settlements allow the Trustees to commission plans, studies, reports or assessments of use to restoration planning prior to completion of the RP/EIS. Other restoration actions (with the exception of emergency restoration actions, discussed below) must wait until completion of the RP/EIS. Therefore, finalization of the RP/EIS is an important milestone in the restoration process.

As remediation, CDF construction, and ecological recovery progress, more restoration options will become available, and restoration actions in the Upper Estuary and Inner Harbor will become feasible. The passage of new remediation milestones will allow new rounds of restoration decisionmaking, and implementation, by the Trustees, until completion of the Harbor clean up--the last milestone--allows completion of the restoration. At this point, the Trustees would dedicate the remainder of the restoration trust fund to a final set of restoration actions, and, following necessary oversight or implementation of these actions, the New Bedford Harbor Trustee Council would disband.

Since the Superfund Site remediation is a long-term process, it is impossible to predict with precision the progress of the clean up, timescales of ecological recovery, and other key variables across the next decade and beyond. The Trustees propose the following restoration process and milestones, but flexibility will be necessary to adapt the process to the progress of the remediation and other variables. Particularly in the medium to long-term, the Trustees may need to adapt this schedule by adding or omitting milestones from consideration or by modifying the approach to restoration which is described by this document.

This RP/EIS is designed to accommodate the flexible planning process necessary to begin the restoration process as soon as possible, while maintaining coordination with remediation and other relevant, ongoing projects or processes. The RP/EIS evaluates specific alternatives that can be implemented in the near term, and describes options for the future in a more general way. The Trustees will initially consider proposed alternatives pertaining to a two-year period of action, while the development and selection of future restoration alternatives will be left to future rounds of decisionmaking. This step-by-step approach will allow the Trustees to incorporate the most up-to-date information into their decisionmaking and to adapt the ongoing process of restoration to the condition of the Harbor Environment as clean up and other developments proceed.



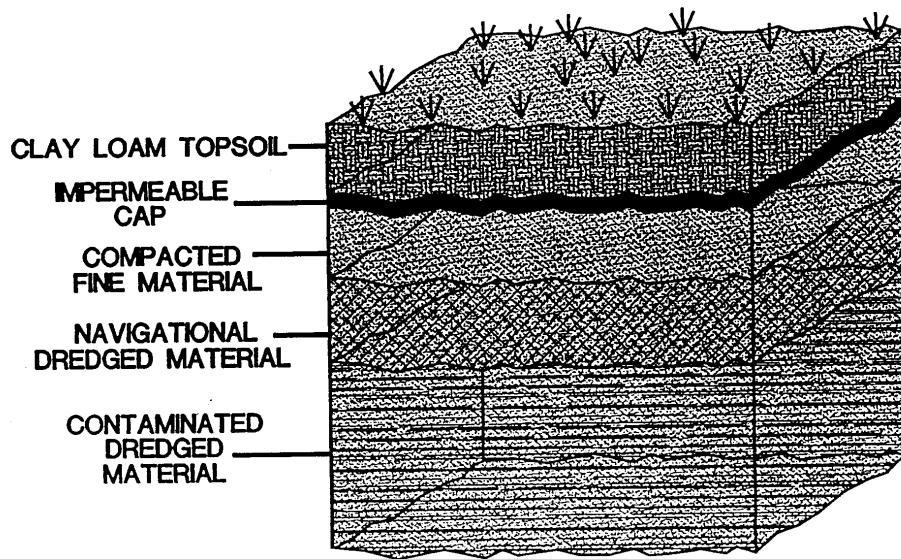
**Figure 5.3 Typical CDF Cross-section**

Source: EPA Proposed Cleanup Plan, November 1996

## BUILDING A CDF

### STEP 5 : INSTALL FINAL IMPERMEABLE CAP

- THE FINAL CAP WOULD ACT AS A PERMANENT UMBRELLA OVER THE DREDGED SEDIMENTS. THE LAYERS WITHIN THE CDF WOULD THEN BE TYPICALLY AS FOLLOWS:



### STEP 6 : IMPLEMENT FINAL LAND USE DESIGN

- ONCE THE FINAL CAP IS COMPLETED, THE CDFs COULD BE BENEFICIALLY RE-USED AS DETERMINED BY THE COMMUNITY. EXAMPLE END USES COULD BE:
  - BIRD SANCTUARIES
  - LIGHT COMMERCIAL FACILITIES
  - ATHLETIC FIELDS
  - SHORELINE PARKS
  - BIKE PATHS

Figure 5.4 Building a CDF

Source: EPA Community Forum Poster Session, November 1995



### 5.3 Timing and Milestones

Following is a general outline of past activities and the expected schedule of restoration in New Bedford Harbor, real or potential milestones, and a summary of the range of restoration actions practicable at each stage of the process.

**Milestone 1 (1991):** Formation of the New Bedford Harbor Trustee Council

**Practicable Actions:** Restoration planning; emergency restoration; commissioning and completion of plans, studies, reports or assessments of use to restoration; outreach activities.

**Milestone 2 (1995):** Completion of the Hot Spot dredging

**Milestone 3 (1998):** Completion of the RP/EIS for New Bedford Harbor

**Practicable Actions:** In addition to the actions listed above, near-term restoration actions (2-year period of funding) that are not directly dependent on the progress of the Harbor remediation or which are not in areas that will be dredged or filled by the remediation. Examples are listed under Section 5.4.2, near term restoration, below.

**Milestone 4 (est. 1998):** ROD II: Finalization of plans for Phase II of the Superfund Site remediation

**Practicable Actions:** ROD II will define EPA's plans for clean up of the Upper Estuary, Inner Harbor, and parts of the Outer Harbor and will determine the locations of most or all of the CDFs along the Harbor shoreline. Therefore, in addition to the actions listed above, ROD II will facilitate the planning and implementation of restoration actions which require knowledge of EPA's plans for the shoreline and sediments of the Upper Estuary and Inner Harbor.

#### **Probable Future Milestones:**

Foreseeable future milestones are:

- Completion of plans and studies commissioned in support of restoration decisionmaking
- Completion of CDF construction
- Completion of contaminant dredging: Upper Estuary
- Completion of contaminant dredging: Inner Harbor
- Completion of Phase II remediation actions
- Completion of contaminant dredging: Outer Harbor
- Completion of disposal site decisionmaking for navigational dredged material
- Completion of navigational dredging activities
- ROD III: Finalization of plans for Phase III of the Superfund Site remediation
- Completion of Phase III remediation actions

Because they depend upon future decisionmaking, it is impossible to predict exactly when or in what order these future milestones will occur. Some will undoubtedly prove to be of greater importance than others, while new milestones, impossible to foresee, may arise.

**Practicable Actions:**

Completion of future clean up activities and related projects in specific parts of the New Bedford Harbor Estuary will allow the implementation of restoration projects directly dependent on the progress of the Harbor remediation in that particular area.

**5.4 Implementation of Restoration Actions****5.4.1 Plans and studies**

As discussed in Chapter 2, the terms of the restoration settlements allow the Trustees to commission plans and studies in support of restoration planning prior to completion of the RP/EIS.

**5.4.1.1 Procedures**

Soon after formation of the New Bedford Harbor Trustee Council, the Trustees began awarding grants and contracts for the development of necessary plans and studies. Some of these studies were conceived by the Trustee Council and affiliated agencies, while others were suggested during the Request for Ideas process described in Chapter 2. The Trustees have used consensus decisionmaking in selecting which studies to commission in advance of the restoration plan.

**Plans and studies commissioned to date by the New Bedford Harbor Trustee Council:**

- New Bedford Harbor: Historic Overview and Natural Resources and Uses Status Report. (VHB, 1996). (\$49,208)
- New Bedford Harbor Contaminated Shellfish Relay Proposal and Shellfish Survey. Massachusetts Division of Marine Fisheries. (\$92,974)
- PCB Tissue Analysis Data Summary, Acushnet River (PCB levels in alewife). Massachusetts Division of Marine Fisheries. (\$3,000)

**Plans and studies currently under consideration:**

- New Bedford/Fairhaven Harbor Master Plan. New Bedford/Fairhaven Harbor Master Planning Committee. Funding amount to be determined, by competitive bid.
- Wetlands Restoration Planning and Implementation: New Bedford Harbor Environment. Massachusetts Office of Environmental Affairs, Wetlands Restoration and Banking Program. \$35,000 requested.

**5.4.1.2 Timeframe**

While the plans and studies commissioned to date have provided information necessary to beginning the restoration process, needs for plans and studies will continue to arise as the restoration proceeds. Plans and studies specific to particular projects, resources or geographic sub-areas of the Harbor Environment will be necessary to evaluate or to implement specific restoration proposals. In addition, some plans and studies will be required to monitor the success of individual restoration projects, and of the restoration as a whole. The Trustees intend to commission plans and studies as necessary throughout the restoration process in order to ensure the success of ongoing and completed restoration projects and to adapt the restoration process as need be to changes in the condition of the Harbor Environment.

### **5.4.1.3 Budget**

While a budget for future plans and studies cannot be accurately set at present, the Trustees do not foresee spending more than 5% of restoration funding on plans and studies.

### **5.4.2 Near-term restoration**

Near-term restoration actions are those which can be selected through the RP/EIS process and implemented immediately following completion of the Plan. Alternatives appropriate to near-term restoration include:

- plans and studies;
- restoration actions that are not directly dependent on the progress of the Harbor remediation;
- restoration actions that are not in areas to be dredged or filled by the remediation.

Examples of appropriate near-term restoration actions include:

- projects on the coast or waters of the Outer Harbor, Clarks Cove, Buzzards Bay, or freshwater sections of the Acushnet River;
- projects onshore or in the watershed, such as land acquisition or recreational development;
- projects that transplant or remove living resources from contaminated areas.

#### **5.4.2.1 Procedures**

Preferred alternatives for near-term restoration were identified through the process described in Chapter 2. Following the Restoration Workshop in 1993, six priority areas for restoration were established: 1) marshes or wetlands; 2) recreational areas; 3) the water column; 4) habitats; 5) living resources; and 6) endangered species. To solicit restoration ideas from all parties with an interest in the New Bedford Harbor Environment, a RFI was published in the *Federal Register*, *New Bedford Standard-Times*, and elsewhere in late 1995. As a result, 56 restoration ideas were submitted to the Trustees by citizens, businesses, non-profit groups, local governments, academic institutions, and others.

As discussed in Chapter 2, the Trustee Council's Technical Advisory Committee and Community Restoration Advisory Board reviewed the ideas and made their recommendations to the Trustees at a public meeting on April 9, 1996. The Trustees solicited further public comment in writing and at a public hearing on April 30. On May 14, 1996, the Trustees selected the set of preferred restoration alternatives described in Chapter 4.

Chapter 4 of this document evaluates the preferred alternatives to determine whether implementation of this set of alternatives is the best course of action for near-term restoration in the New Bedford Harbor Environment. Once the RP/EIS has been finalized, the restoration alternatives selected would be implemented through contracts, grants, or inter- or intra-governmental transfers of funds, as appropriate.

#### **5.4.2.2 Timeframe**

In identifying preferred alternatives for near-term restoration, the Trustees decided to limit the period of consideration for implementation and funding to two years. Following completion of the RP/EIS, implementation of near-term restoration could begin in 1998, continuing through 1999. By limiting the period of near-term restoration actions, maximum flexibility would be retained for coordinating restoration with remediation. Future rounds of restoration decisionmaking might continue near-term projects or identify new restoration alternatives to implement, as appropriate.

#### **5.4.2.3 Budget**

The Trustees chose to limit funding for near-term restoration to approximately \$5 million of the \$22 million restoration fund. In so doing, the Trustees can ensure that funding will be available for appropriate future restoration activities throughout the remediation process and on completion of the clean up.

#### **5.4.3 Future Restoration Actions**

Future restoration actions are those that the Trustees would undertake following near-term restoration. These actions would be administered through future rounds of restoration idea consideration and implemented at appropriate intervals throughout the remediation process and on completion of the clean up. Future restoration actions are beyond the specific alternatives analysis of this document but are considered in a more general way in Chapter 4. The same general priority areas applied to near-term restoration would apply to future restoration actions. However, as restoration and remediation proceed it may be appropriate or necessary to shift or modify these restoration priorities to adapt the restoration process to changing circumstances or newly apparent needs.

##### **5.4.3.1 Procedures**

In order to develop future restoration alternatives, the Trustees envision a series of processes similar to the first round of restoration idea solicitation and selection. At appropriate intervals, and taking into consideration the remediation milestones noted above, the Trustees would initiate new solicitations, selecting ideas based on a combination of technical and public advice as was done in 1996.

The major difference is that, since the RP/EIS process will have been completed and alternatives evaluated in a general way, the NEPA process will have been satisfied in advance. Selection and implementation of future restoration ideas would not require the preparation of an overall NEPA document, as was the case for the 1996 round of near-term restoration ideas.

In some cases, however--for example, unusually large or complex restoration projects, or those that require separate federal permits--implementation of a specific restoration action (or set of restoration actions) may require the preparation of an Environmental Assessment (EA). The EA satisfies NEPA's requirement for environmental and public review, but is quicker and less burdensome to produce than an EIS. The use of this procedural framework classifies this RP/EIS as a "programmatic EIS"--an EIS that undertakes general analysis for an entire program, but is linked to project-specific EAs as necessary.

As noted above, the Trustees see this RP/EIS as a flexible management plan which should serve the needs of restoration planning and NEPA compliance throughout the restoration of the New Bedford Harbor Environment. However, should environmental conditions change substantially in unforeseen ways over the course of the restoration, or should the restoration plan require major modification, the preparation of a "Supplemental Environmental Impact Statement" to evaluate the new situation may be necessary at some point in the future.

#### **5.4.3.2 Timeframe**

As noted above, the Trustees intend to coordinate restoration with clean up, completing restoration once the clean up has been completed. Future restoration actions would begin in about 2 years (following the 2-year funding period of the near-term restoration round) and continue through the life of the remediation, until 2011 or so. At that point, the Trustees would initiate a final round of restoration actions, follow through with implementation and oversight as necessary, and disband.

#### **5.4.3.3 Budget**

The Trustees would spend the entire remainder of the restoration settlement account, plus accumulated interest, on future restoration actions. That is, all funds not expended on the initial plans and studies or near-term restoration actions would be expended on future restoration actions (which, as noted above, might include some additional plans and studies, as necessary). Following completion of the remediation, any funds remaining in the restoration settlement account would be committed to a final round of restoration projects, using an idea solicitation and selection process similar to that described above. Decisions will be made regarding funds management for administration, oversight, and monitoring of these final restoration actions.

As discussed in Chapter 2, the restoration settlement account currently stands at approximately \$22 million. Interest will continue to accrue on whatever portion of the settlement is unspent during the restoration process. Therefore, after allocating approximately \$5 million for near-term restoration, at least \$16 million is expected to be available for future restoration actions.

#### **5.4.4 Emergency restoration**

CERCLA provides for emergency, pre-restoration plan restoration actions where immediate action is required "to avoid an irreversible loss of natural resources or to prevent or reduce any continuing danger to natural resources or similar need" (42 USC 9611(i)). The Trustees did not find it necessary to undertake emergency restoration actions in the New Bedford Harbor Environment prior to beginning preparation of this RP/EIS, and once this document has been finalized, the Plan should encompass most if not all restoration needs. It is possible but not likely that an emergency situation may become apparent before finalization of this document that would require expedited action as an emergency restoration.

If an emergency situation within the meaning of CERCLA becomes apparent to the Trustees, the Trustees might in rare cases be required to take action first, followed by environmental review. Such actions could only be taken to avoid, prevent, or reduce an irreversible loss of, or continuing danger to, natural resources.

#### **5.4.4.1 Procedures**

By definition, emergency restoration actions are those that are undertaken before adoption of a restoration plan and the consideration of public comment. Should the need for emergency restoration actions that are unforeseen by this plan become apparent, the Trustees would involve the public in the decisionmaking process to the maximum extent practicable.

#### **5.4.4.2 Timeframe**

It is conceivable but unlikely that emergency restoration needs could arise at any point during the restoration process. Should such needs arise, the Trustees would make every effort to implement the emergency action quickly, and to consider public comment and undertake environmental review at the earliest practicable time.

#### **5.4.4.3 Budget**

Since emergency restoration needs are by nature unforeseen, a budget cannot be estimated in advance. However, should emergency restoration needs arise, the Trustees would limit the budget for such actions to the practicable minimum, while incorporating public comment into as much of the financial decisionmaking as practicable. Even in a worse-case situation, it is unlikely that emergency restoration funding needs would be greater than a few percent of the restoration settlement funds. In any event, the Trustees anticipate that all or nearly all of restoration monies will be spent with full public participation and oversight of the Trustees' financial decisionmaking.