NEW BEDFORD/FAIRHAVEN MUNICIPAL HARBOR PLAN

2010

City of New Bedford, Massachusetts
Mayor Scott Lang

Town of Fairhaven, Massachusetts
Board of Selectmen

May 26, 2010

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Funding for the New Bedford/Fairhaven Harbor Plan was provided by the Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs, Coastal Zone Management Office.

DECISION ON THE REQUEST FOR APPROVAL
OF THE
NEW BEDFORD/FAIRHAVEN MUNICIPAL HARBOR PLAN RENEWAL
AND
DESIGNATED PORT AREA MASTER PLAN
PURSUANT TO 301 CMR 23.00

June 14, 2010

Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs

Ian A. Bowles, Secretary

I. INTRODUCTION

Today, as Secretary of the Massachusetts Executive Office of Energy and Environmental Affairs (EEA), I am approving a renewal to the New Bedford/Fairhaven Municipal Harbor Plan ("Plan") dated May 26, 2010. The original Harbor Plan was approved by the EEA Secretary on September 25, 2002. This Decision on the Plan renewal presents a synopsis of the Plan's content and my determinations on how the renewal Plan complies with the standards for approval set forth in the Review and Approval of Municipal Harbor Plan regulations at 301 CMR 23.00 *et seq*.

The Municipal Harbor Planning regulations establish a voluntary process under which cities and towns may develop and submit Municipal Harbor Plans to the EEA Secretary for approval. These plans serve to promote and implement a community's planning vision for their waterfront and to inform and guide state agency decisions necessary to implement such a vision. Specifically, approved Municipal Harbor Plans can provide licensing guidance to Massachusetts Department of Environmental Protection (DEP) in making decisions pursuant to MGL Chapter 91: The Massachusetts Public Waterfront Act ("Chapter 91") and the Waterways Regulations (310 CMR 9.00 *et seq*.). Approved harbor plans may include "substitute provisions" that establish certain numerical and dimensional requirements alternative to those stipulated in the Waterways Regulations, and may also specify provisions that "amplify" any of the discretionary requirements of the regulations.

Pursuant to the review procedures contained at 301 CMR 23.00 *et seq*., the Plan renewal, along with a separate document addressing compliance with the plan approval standards ("Compliance Statement"), was submitted at the beginning of September 2009. Following a review for completeness, CZM published a notice of public hearing and 30-day opportunity to comment in the *Environmental Monitor* dated October 26, 2009. A public hearing was held in New Bedford on November 12, 2009 where oral testimony was accepted. Written comment was also received from two parties prior to the close of the public comment period on November 25, 2009: the U.S. Environmental Protection Agency (EPA) on November 25, 2009 and DEP on September 16, 2009. The review process was led on my behalf by the Massachusetts Office of Coastal Zone Management (CZM) and included formal consultation between CZM, DEP's Waterways Program and Bureau of Waste Site Cleanup, the Massachusetts Department of Transportation-Massachusetts Bay Transportation Authority, the Massachusetts Department of Conservation and Recreation's (DCR) Waterways Division, the City of New Bedford and Town of Fairhaven ("Municipalities"), and Fort

Point Associates (as consultants for the Municipalities). The Plan review followed the administrative procedures set forth at 301 CMR 23.04 and in accordance with the standards in 301 CMR 23.05. Based upon input and issues identified through the public comment period and consultation session, the Municipalities submitted an updated version of the plan on May 26, 2010.

The 2010 New Bedford/Fairhaven Harbor Plan Renewal reflects a significant effort on the part of the Municipalities, including the New Bedford Harbor Development Commission staff and the Fairhaven Planning Board staff, the 13 members of the Harbor Plan Renewal Committee, the 45 key waterfront harbor stakeholders who were interviewed for the plan, members of the public who attended the four focused workshops and the two general public meetings, and those who attended the public hearing on the plan and who participated in the process of plan development. I would like to applaud all of these organizations and individuals for their time and effort toward development of this Plan. In reaching my approval decision, I have carefully considered the oral and written testimony submitted during the public comment period; I have also accounted for the circumstances, challenges, and opportunities of the planning areas, including the Designated Port Area (DPA), local economic and development conditions, and the social and cultural characteristics of the neighborhood.

II. PLAN CONTENT

A. Overview

As shown in Figure 1 in Attachment A, the Harbor Planning Area includes a primary and a secondary district. The majority of the planning activities focused on the primary district that extends from the Wood Street Bridge which crosses the Acushnet River at the extreme northern end of the New Bedford/Fairhaven Harbor ("Harbor") to the hurricane barrier which defines the entrance to the inner Harbor at the southern end of the Acushnet River, and includes the Northeastern shoreline of New Bedford's Clarks Point Peninsula. This district includes the entire watersheet and the land inland to the first major public street in most areas although further inland in a few areas to encompass those activities with direct or indirect ties to the waterfront. The primary planning district is also where almost all of the marine industrial activities occur. In addition to significant port-related marine industrial areas on either side of the Harbor, the primary harbor planning district encompasses the central downtown areas of both New Bedford and Fairhaven,

including a significant number of residential properties on the Fairhaven side of the Harbor. The incorporation of the downtown areas is an explicit recognition of the importance of waterfront activities to the economic and environmental health of these business, historic, and cultural centers. The secondary planning district includes the rest of the waterfront area of New Bedford, encompassing the shoreline bordering the Fort Rodman peninsula and Clarks Cove. Limited planning activities occurred in this area with the focus being on maintaining public access for swimming, parks and beaches, and other amenities that encourage public use to the water.

Since the 2002 harbor plan, there have been some notable changes in conditions and circumstances that have affected the Municipalities and planning area, including: the modification of fisheries management regulations that have led to a consolidation of full-service fishing ports like New Bedford; an increase in cruise ship visits to the port and opportunities to expand that industry; projected expansion of short sea shipping as a substitute for traditional trucking; authorization for offshore renewable energy projects and the need for onshore industrially-based support facilities; an expansion of import/export activities in the Harbor; and a strong local interest in increasing opportunities to serve as a service port for large yachts and increased recreational boating.

The local planning process identified four overriding community goals that served to guide the plan development. These included:

- Support Traditional Harbor Industries: Preserve and enhance the Port's traditional strengths in fishing, seafood processing, and their supporting industries.
- Rebuild and Add to the Harbor Infrastructure: Upgrade port infrastructure essential to the future economic vitality of both the working port and the region and to the public's use and enjoyment of the Harbor.
- Capture New Opportunities: Take advantage of new opportunities for the expansion of marine industry in the Port and other supporting industries (such as tourism, short sea shipping, recreational boating, import/export, and alternative energy) while ensuring that new activities do not conflict with the traditional working port.
- Enhance the Harbor Environment: Demonstrate leadership in Harbor cleanup, recycling and energy conservation under a "Green Port" initiative, with the goal of creating an environmentally healthy Harbor that will encourage a large variety of compatible uses.

The 2010 Plan lays out New Bedford's and Fairhaven's vision for the Harbor, reviews the existing conditions in and around the Harbor, and discusses the current land use and zoning in the planning area. The Plan also summarizes major initiatives taken in the Harbor since the approval of

the original plan in 2002. The Plan includes an economic analysis for both the Fairhaven side of the Harbor and the New Bedford side. This analysis estimates that port activities in the two municipalities account for approximately $600 million of direct economic output and more than $1 billion of economic output when economic multipliers are included. The analysis estimates that more than 5,000 jobs are directly or indirectly attributable to the port activities in the two communities. The Plan estimates that in New Bedford harbor industries make up 13% of the city's total economic output and 12% of the city's total employment. Opportunities identified in the Plan for future economic activities include niche waterfront uses such as refrigerated cargo and short sea shipping, and collaborations between the fishing and seafood processing industries with marine science and tourism. The economic analysis also highlights opportunities in emerging industries and waterfront tourism.

The New Bedford/Fairhaven Municipal Harbor Plan is somewhat unique from other harbor planning efforts in that it seeks to closely coordinate the harbor planning process with the EPA's Superfund cleanup and the State Enhanced Remedy (SER) provisions (that go beyond the cleanup levels used for the Superfund activities). While strongly supporting the ongoing Superfund and associated SER cleanup efforts, the Plan also encourages and supports EPA and DEP efforts to speed up the Superfund cleanup and expand the SER cleanup. The Plan articulates New Bedford's desire to ensure that strategies selected for expedited and expanded environmental cleanup result in appropriate marine industrial infrastructure improvements to the port. These improvements include: maintenance dredging, existing bulkhead reconstruction, and potential creation of new shoreline Confined Disposal Facilities (CDFs).

B. General Recommendations

The 2010 Plan includes an array of recommendations some of which are harbor-wide initiatives and others targeted to specific sub-areas within the Harbor. One key harbor-wide initiative is the ongoing and future dredging within the Harbor. This initiative includes the ongoing and proposed cleanup dredging being carried out under the EPAs' Superfund initiative, the navigational maintenance dredging facilitating maritime commerce, and another category of dredging associated with the SER provision of the Superfund law. This SER provision allows a state to request that areas within a designated superfund site that are below the EPA's target levels for cleanup, but which still contain contaminants targeted in the overall cleanup, be added to the

Superfund remedy as long as the cost for the enhancement is covered by the state. Clean-up activities conducted under Superfund and SER—including navigational dredging in this case—are relieved of the need to request or receive formal permit or license from state and/or federal resource agencies. While the enhanced remedy dredging projects still must meet the substantive standards of the relevant permits and licenses, the formal permitting waiver serves to expedite project implementation. A cornerstone of the Harbor's ongoing dredging initiative is the use of Confined Aquatic Disposal (CAD) cells for the disposal of the dredged material. Identification of the CAD strategy and potential CAD locations was included in the Dredge Material Management Plan Environmental Impact Report for New Bedford and Fairhaven developed and coordinated by CZM on behalf of the communities in April 2002.

A second key harbor-wide initiative is the rehabilitation of existing bulkheads and construction of new bulkheads in several places throughout the Harbor. In the Plan, the Municipalities underscore the importance of maintaining critical marine industrial use infrastructure in keeping ports viable and competitive. In particular, the Plan identifies the need for deepwater access adjacent to existing and new bulkheads to allow for maritime industry. Two areas are proposed for rehabilitation of existing bulkheads: (1) the New Bedford State Pier and (2) Fairhaven's Union Wharf. Three key areas are proposed for new bulkhead construction: (1) an extension of the South Terminal Bulkhead, (2) an extension of the North Terminal Bulkhead, and (3) a new Popes Island Terminal Bulkhead. The South Terminal Bulkhead extension includes a 500 to 1000 foot extension off the southern tip of the existing bulkhead. The Plan targets this area as being highly suited to potential loading and offloading area for the construction of alternative energy infrastructure as well as for the long-term services of maintenance and testing. The North Terminal Bulkhead is proposed to take advantage of adjacent deepwater access as well as nearby road and rail infrastructure. New Bedford envisions this area as a potential location of a major intermodal transportation center focusing on the interconnection between freight transported via ship, rail, and truck.

A third harbor-wide initiative is the continued support of commercial fishing interests within the port. The Plan discusses the need for increased commercial fishing boat berthing space through a combination of expansion of fishing piers, better use of commercial moorings, dredging to increase the usefulness of existing piers, and more efficient management of commercial fishing

berths. The Plan also discusses the potential for installing electric and water utilities to selected fishing piers. The Plan mentions the importance of preserving and supporting the full range of services and facilities that are essential to maintaining a strong and economically viable commercial fishing fleet.

The Plan supports the improvement of freight operations through continued use and expansion of existing freight handling facilities and creation of new freight handling locations. Short sea shipping is one method the Plan proposed for freight expansion. The Plan recognizes that effective short sea shipping will not only require infrastructure on the waterfront for vessels, but also infrastructure for rail service and truck operations including a truck staging area away from the immediate waterfront. At this time the Plan does not identify a proposed location for a short sea shipping operation. However, as one of the Commonwealth's major industrialized ports with extensive deepwater access, numerous waterfront parcels suitable for marine industrial purposes, good road connections, and potential rail access, it is reasonable that a highly suitable location could be identified in the future.

Increased public appreciation of the Harbor is an overriding theme inherent to several initiatives included in the Plan, including a desire to increase public access throughout the waterfront while fully recognizing the challenges of allowing public access in the marine industrial portions of the Harbor. The Plan also supports continued development of a harbor-wide water shuttle service, the expansion of tourism activities—specifically those that present opportunities for people to observe an authentic working port—and efforts to integrate the arts community into the working waterfront through murals, sculpture, monuments, and artwork that celebrates and highlights the working port and help the community to better appreciate and support the port activities. Included in this effort is the continuation and expansion of events such as New Bedford's Working Waterfront Festival. Still another initiative that will positively impact the public's ability to appreciate the Harbor is the Municipalities' desire to establish a more proactive environmental stewardship program within the Harbor. This program would focus on a range of activities including elimination of stormwater and wastewater discharges to the Harbor, infrastructure for the collection and treatment of sewage discharges and oily bilge water discharges from commercial vessels, increased education of recreational boaters on discharge elimination, and a number of other

green port initiatives that will minimize the environmental impacts of port development and operations on the Harbor and surrounding areas.

An element of the Plan related to increased public appreciation is the Municipalities' desire for increased recreational boating facilities within the Harbor. The Plan supports the expansion of both recreational slips and moorings within the Harbor and targets existing marinas and areas "outside the main industrial parts of the harbor" typically not used by commercial vessels because of limited water depth. Three areas the Plan identifies as having potential for new marina development are: (1) the area near the Gifford Street boat ramp, (2) the shoreline in front of the Hicks-Logan planning area, and (3) the area near the Route I-195 and Coggeshall Street bridges. The Plan does recognize that the Gifford Street site is located within the DPA, and as such, opportunities for recreational boating facilities at this location are currently limited under the DPA provisions of Chapter 91 regulations.

C. Synergistic Relationship with the Port's Superfund Designation

One unique characteristic of the New Bedford/Fairhaven Harbor that significantly impacts its management and use is the designation of the entire Harbor as a Superfund site by EPA under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) because of the presence of sediments contaminated by polychlorinated biphenyl (PCB). An ongoing cleanup action has been underway for more than a decade and is expected to continue for an extended period (decades) because of limits in the federal funding schedule. The PCB contamination and associated cleanup activity affects most of the water-side infrastructure improvements either currently underway or proposed in the Plan.

In 1998 the EPA issued its Record of Decision (ROD) for the cleanup of the Harbor's Superfund site. The method of cleanup and disposal of the PCB contaminated sediments used by the EPA has been hydraulic dredging of the material followed by de-sanding, dewatering, and then rail shipment to a suitable landfill in Michigan. This approach has resulted in a protracted and expensive cleanup. Also included in the ROD was EPA's agreement to a request by the Commonwealth to allow the state to pursue certain enhancements to the EPA cleanup under the SER provisions of CERCLA. The SER has the added critical benefit of further cleaning up the Harbor by removing sediments with PCB concentrations below the EPA cleanup action level. The

SER was a key tool identified in the 2002 Plan to help speed up maintenance dredging in the Harbor while at the same time helping to clean the Harbor. To date three phases of navigational dredging have occurred in the Harbor aided by the provisions of the SER.

In an effort to reduce the costs and timeframe of final cleanup, EPA and the Municipalities are discussing the use of CAD cells within the Harbor for the permanent disposal of PCB contaminated sediments. EPA is currently preparing an Explanation of Significant Differences (ESD) outlining the differences and benefits between the originally proposed cleanup strategy and the future use of CADs as a key component of a modified cleanup strategy. DEP has requested that the ESD include an expansion of the SER currently used to facilitate navigational dredging in areas of the Harbor not planned for Superfund cleanup dredging. Included in the Commonwealth's proposed expansion of the SER is the ability to dispose of mostly clean sediments, and potentially some contaminated sediments, excavated during construction of the CADs into CDFs. Two of these CDFs are located adjacent to South Terminal and North Terminal. The CDFs would provide a seaward bulkhead allowing deepwater access, and material from the CADs would be disposed behind the bulkheads and then capped in a fashion that would facilitate marine industrial uses on the newly created land.

While the proposed harbor plan identifies six general CDF areas with 11 specific CDF locations, my approval today shall not be construed as an authorization of these or any other disposal projects, which will be reviewed in a process separate from the Municipal Harbor Plan decision. I anticipate that any CDF identified in the 2010 Plan and approved as part of an expanded SER would receive the benefit of streamlined permitting as afforded by inclusion in the CERCLA cleanup of the Harbor. Otherwise, I anticipate that any CDFs not approved as part of an expanded SER would require applicable local, state, and federal permits and licenses.

D. Designated Port Area Recommendations

The 2010 Plan includes a Designated Port Area Master Plan that revises the previous approach to the preservation and enhancement of the capacity of the DPA to accommodate water-dependent industry and prevent displacement of these activities by other nonwater-dependent uses. Figure 2 (in Attachment A) shows the approximate area of the DPA. The primary modification from the 2002 Plan is the elimination of the Eligibility Credit Program which previously served to

control certain aspects of siting "supporting" commercial and industrial uses (as defined in 310 CMR 9.02) within the DPA. The new Plan simplifies the local management of such uses by reverting back to the standards contained in the state's Chapter 91 Waterways Regulations. This change eliminates the enhanced flexibility allowed for supporting commercial at some parcels as well as the more restrictive limitations for both supporting commercial and industrial uses imposed on other parcels and identified in the 2002 Plan. The Plan now will rely upon the standard limitations and flexibility provided in the Waterways Regulations for the management of any supporting DPA uses. In regards to this modification, I note that during the consultation process, DEP and CZM confirmed with City of New Bedford officials the presence of a few parcels where the current extent of "supporting" commercial use would not be able to be licensed at their current supporting use densities within the limits of flexibility provided by the Chapter 91 regulations. Specifically, it is understood that while the 2002 Plan Eligibility Credit Program provided an opportunity for these buildings, structures, and uses to obtain Chapter 91 licenses without a variance, this opportunity is no longer provided by the renewed Plan.

III. STANDARDS FOR PLAN APPROVAL

The 2010 Plan contains the New Bedford's and Fairhaven's planning vision and other specifics to guide use and development of the planning area. It is important to note that while this approval represents a general endorsement of the Municipalities' Plan and associated recommendations, my Decision today is governed by the authority, standards, and provisions contained in the regulations at 301 CMR 23.00 ("Review and Approval of Municipal Harbor Plans") and is applicable only to those discretionary elements of the Chapter 91 Waterways regulations that are specifically noted in this Decision. Other elements of the Plan provide important contextual guidance but do not serve as binding for state agency actions. Moreover, this Decision does not supersede separate regulatory review requirements for any project or activity contained in the Plan.

A. Consistency with CZM Program Policies and Management Principles

The federally-approved CZM Program Plan establishes 20 enforceable program policies and nine management principles which convey the formal coastal program policy of the Commonwealth. The policies and management principles applicable to the New Bedford/Fairhaven 2010 Harbor Plan Renewal are briefly summarized here:

- Water Quality Policy #1: Ensure that point-source discharges in or affecting the coastal zone are consistent with federally approved state effluent limitations and water quality standards.

- Water Quality Policy #2: Ensure that non-point pollution controls promote the attainment of state surface water quality standards in the coastal zone.

- Habitat Policy #1: Protect coastal resource areas including salt marshes, shellfish beds, dunes, beaches, barrier beaches, salt ponds, eelgrass beds, and fresh water wetlands for their important role as natural habitats.

- Protected Areas Policy #3: Ensure that proposed developments in or near designated or registered historic districts or sites respect the preservation intent of the designation and that potential adverse effects are minimized.

- Ports Policy #1: Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes, marine productivity and public health.

- Ports Policy #2: Obtain the widest possible public benefit from channel dredging, ensuring that designated ports and developed harbors are given highest priority in the allocation of federal and state dredging funds. Ensure that this dredging is consistent with marine environment policies.

- Ports Policy #3: Preserve and enhance the capacity of Designated Port Areas (DPAs) to accommodate water-dependent industrial uses, and prevent the exclusion of such uses from tidelands and any other DPA lands over which a state agency exerts control by virtue of ownership, regulatory authority, or other legal jurisdiction.

- Ports Management Principle #1: Encourage, through technical and financial assistance, expansion of water-dependent uses in designated ports and developed harbors, re-development of urban waterfronts, and expansion of visual access.

The aforementioned policies are relevant to the major initiatives identified in the Plan renewal: continued navigational and cleanup dredging, rehabilitation and construction of existing and new bulkheads for expanded marine industrial uses, continued support and infrastructure enhancements for commercial fishing, expansion of existing and creation of new freight handling opportunities, and increased public use and appreciation of the Harbor through a range of activities, especially through expansion of recreational boating facilities in the Harbor. Based on the review of the Plan, its accompanying Compliance Statement, and the assessment of CZM, I find the Plan meets the intent of each relevant policy statement and, as required by 301 CMR 23.05(2), I conclude that the Plan is consistent with these policies and management principles. In its assessment, CZM noted that the Plan continues to view protection and expansion of water-dependent industry within the DPA as central to the long-term success of the waterfront, while simultaneously striving to

diversify the DPA use mix with compatible non-marine industrial port uses in select areas of the Harbor to increase the overall economic vitality of the area.

B. Consistency with Tidelands Policy Objectives

As required by 301 CMR 23.05(2), I also must find that the Plan renewal is consistent with state tidelands policy objectives and associated regulatory principles set forth in the state Waterways Regulations of DEP (310 CMR 9.00 *et seq.*). As promulgated, the Waterways Regulations provide a uniform statewide framework for regulating tidelands projects. Municipal Harbor Plans present communities with the opportunity to integrate their local planning goals into state Chapter 91 licensing decisions by proposing modifications to the Chapter 91 regulatory standards through either: 1) the amplification of the discretionary requirements of the Waterways Regulations; or 2) the adoption of provisions that—if approved—are intended to substitute for the minimum use limitations or numerical standards of 310 CMR 9.00 *et seq.* The approved substitution provisions of Municipal Harbor Plans, in effect, allow DEP to waive specific Chapter 91 use limitations and numerical standards affecting projects in tidelands, in favor of the modified provisions specified in an approved Municipal Harbor Plan.

While the Plan effectively articulates broad goals and principals and also discusses specific harbor-wide and site specific initiatives, in only one area—the standards associated with public access—does the Plan propose numeric substitutions intended to be binding guidance within the DEP's Chapter 91 licensing process. For all other areas and specific initiatives, the Plan proposes to rely on the existing Chapter 91 standards contained in 310 CMR 9.00 *et seq.* The original 2002 Plan chose to decrease permitting flexibility in selected areas and increase permitting flexibility in other areas, primarily through a tool called the Eligibility Credit Program. In contrast, the current Plan chooses to use the provisions contained in the Chapter 91 regulations and to rely upon DEP to apply regulatory flexibility, as it is applicable under the rules, throughout all areas of the Harbor, and for all development initiatives proposed in the Plan, as well as other development initiatives that may not currently be envisioned by the Plan. This reliance upon the existing Chapter 91 regulatory standards simplifies the review necessary to determine the Plan's consistency with tidelands policy objectives.

Evaluation of Proposed Substitute Provision

The framework for evaluating proposed substitution provisions to the Chapter 91 Waterways requirements is established in the Municipal Harbor Plan Regulations at 301 CMR 23.05(2)(c) and 301 CMR 23.05(2)(d). In effect, the regulations set forth a two-part analysis that must be applied individually to each proposed substitution in order to ensure that the intent of the Waterways requirements with respect to public rights in tidelands is preserved.

In the first part of the analysis, as per 301 CMR 23.05(2)(c), there can be no waiver of a Waterways requirement unless the Secretary determines that the requested alternative requirements or limitations ensure that certain conditions—applicable to each minimum use limitation or numerical standard—have been met. Part two of the analysis, as specified in 301 CMR 23.05(2)(d), requires that the municipality demonstrate that a proposed substitution provision will promote—with comparable or greater effectiveness—the associated state tidelands policy objective.

The Plan provides detailed guidance regarding public access and the standards for utilization of the shoreline for water-dependent purposes as covered in 310 CMR 9.52(1)(b)(1). This section of the Waterways Regulations requires project sites that contain a water-dependent use zone to include a pedestrian access network consisting of "walkways and related facilities along the entire length of the water-dependent use zone…no less than ten feet in width…." As a substitution to the ten-foot standard in the regulations, the Plan proposes to establish a dedicated 20-foot wide public access walkway along the portion of New Bedford and Fairhaven shoreline that is located outside the DPA and within that portion of the Harbor bounded by the hurricane barrier on the South and the Rt. 195 bridge on the North. As required in the harbor plan approval standards [301 CMR 23.05(2)(c)(6)], this alternative width appears to be appropriate given that the minimum water-dependent use zone is typically 25 feet. In areas where the limit of Chapter 91 jurisdiction is less than the minimum 25 foot water-dependent use zone, DEP would uphold this substitute provision to the limit of jurisdiction and any other administration and enforcement would be the responsibility of the Municipalities. The Municipalities' intent with this proposed extended width is to enhance the general public's waterfront experience. Associated with the 20-foot wide public access walkway, the Plan also provides DEP guidance on the allowed uses within the walkway and guidance on how DEP should apply this standard when an existing building is within 20 feet of the shoreline. As required in the harbor plan approval standards [301 CMR 23.05(2)(c)], I find that the proposed

substitution to require a 20-foot wide pedestrian access walkway and the related guidance is "appropriate given…the size and configuration of the water-dependent use zone and the nature and extent of water-dependent activity and public uses that may be accommodated therein."

As further required in the harbor plan approval standards [301 CMR 23.05(2)(d)], I find that the proposed substitution and related guidance "will promote, with comparable or greater effectiveness, the state tidelands policy objectives." I have also determined that no offsetting measures are necessary because the proposed substitution serves to strengthen the standards and corresponding public benefits provided by 310 CMR 9.00. Accordingly, I hereby approve the proposed substitution including all related guidance associated therewith as explicitly set forth in the Plan.

Amplification Provisions

The Review and Approval of Municipal Harbor Plans regulations at 301 CMR 23.05(2)(b) require a finding that any provision that amplifies a discretionary requirement of the Waterways regulations will complement the effect of the regulatory principle(s) underlying that requirement. Upon such a finding, DEP is committed to "adhere to the greatest reasonable extent" to the applicable guidance specified in such provisions, pursuant to 310 CMR 9.34(2)(b)(2). The Plan does not contain amplifications that will have significance to the Chapter 91 licensing process pursuant to 301 CMR 23.05(2)(b).

Evaluation of DPA Master Plan

The portion of the Plan that pertains to lands and waters of a DPA, serves as a DPA Master Plan. The approval criteria at 301 CMR 23.05(2)(e) requires a general finding that the DPA Master Plan "must preserve and enhance the capacity of the DPA to accommodate water-dependent industrial use, and must prevent substantial exclusion of such use by any other use eligible for licensing in a DPA pursuant to 310 CMR 9.32." The Plan approval standards go on to present four criteria that must be met for DPA Master Plan approval.

The first approval criterion speaks to the need of reserving "extensive amount of DPA land in close proximity to the water" for water-dependent industrial uses and ensuring that commercial uses will not "occupy more than 25% of the total DPA land area." The Plan and the accompanying

Compliance Statement discuss that these standards are met in two ways. Firstly, by virtue of ownership by the New Bedford Harbor Development Commission and long-term leases granted for occupancy by marine industrial users, extensive amounts of land near the water are reserved for water-dependent industrial uses. The Plan's Compliance Statement also states that the federal government and Commonwealth own seven percent of the DPA land area, primarily the State Pier and the EPA Superfund dewatering facility. The Compliance Statement also states that "over 30 percent of the DPA land is owned and actively used by privately held marine industrial companies and another ten percent is owned and used by warehousing and manufacturing companies, many with ties, or that are accessory, to the Port's water-dependent industries." The Compliance Statement further states that currently about ten percent of the DPA is occupied by commercial or residential uses. This level of commercial/residential use has remained steady since the development of the 2002 Plan. The information presented by the Plan and Compliance Statement present a convincing case that the high level of ownership and occupancy of marine industrial uses in conjunction with the low level and stable trend of commercial uses in the DPA, within the context of the Chapter 91 standards which limit the amount of supporting commercial use on each individual site to no more than 25%, will serve to ensure that no more than 25% of the DPA will be occupied by commercial uses within the expected approval period of this Plan.

The second approval criterion requires the Plan to prevent commitments of space that would "significantly discourage present and future water-dependent industrial activity". The Plan proposes to rely upon the Chapter 91 licensing process to ensure that supporting commercial uses do not exceed the 25% site coverage limit. Under this regulatory framework, 75% of each project site in jurisdiction will remain committed to water-dependent industrial uses. The Compliance Statement also discusses the historic long-term use and ownership of many waterfront sites by long established marine industrial users. As explained in the Plan and Compliance Statement, the combination of state licensing standards in conjunction with the long established use patterns of the Harbor will serve to avert uses and area that are needed to sustain present and future water-dependent industrial activity.

The third approval criterion requires the Plan to identify the industrial and commercial uses allowable under municipal zoning that shall qualify as supporting DPA uses. For this criteria the municipalities have chosen to take a broad inclusive perspective and allow all uses allowed by zoning

to qualify, with the exception of any uses which may be allowable under zoning but which are prohibited in DPA under 310 CMR 9.00.

The final approval criterion requires the Plan to identify a "strategy to guide… promotion of water-dependent industrial use." This strategy shall include recommendations for capital improvements, for preserving and enhancing navigational channels and other transportation infrastructure, and commitments to maintain a surrounding land use and buffers to avoid operational conflicts between water-dependent industrial uses and other community uses. The Plan includes a robust strategy for promotion of water-dependent industrial uses including the following: recommendations for continued navigational and environmental cleanup dredging, proposals for new bulkheads to expand water-dependent industrial uses, expansion of berthing space for fishing vessels, expansion of waterborne freight infrastructure, and others.

Based on the information provided in the Plan and supporting documents as discussed above, I am satisfied that the DPA Master Plan components of the Plan are consistent with the requirements of 301 CMR 23.05(2)(e).

C. Relationship to State Agency Plans

The approval criteria at 301 CMR 23.05(3) requires the Plan to "achieve compatibility with the plans or planned activities of all state agencies owning real property…within the harbor planning area." The only state-owned property abutting New Bedford Harbor is the State Pier, which is owned and operated by the Massachusetts Department of Conservation and Recreation (DCR). The Plan contains a wide range of recommendations and initiatives for the State Pier that include replacement of the pile supported portion of the pier with a solid-fill structure including a new bulkhead. The Plan calls for building improvements at different locations on State Pier. Generally the Plan's proposed activities for State Pier include: continuing the ferry terminal operations, expanding warehouse and storage space, enhancing cargo and cruise ship utilization of the facility, and increasing use of the pier by harbor visitors through efforts such as a floating dock for excursion and charter boats, providing the Schooner Ernestina docking space, and using the pier for special events. DCR's Office of Waterways has reviewed the actions proposed in the Plan for the State Pier and provided written support of the proposed Plan to CZM on February 2, 2010.

The Plan also covers an inland area currently proposed by the Massachusetts Department of Transportation (MassDOT) for a commuter rail station for service between New Bedford and Boston. MassDOT has been working closely with New Bedford officials for several years to ensure that the proposed project will meet the needs of both the City and MassDOT. MassDOT has reviewed the sections of the Plan that have implications for their site and project and have found the Plan compatible with their planned activities. MassDOT provided written comments to CZM on February 19, 2010, affirming that the Plan is compatible with their proposed plans and activities. The Plan also covers parts of the area included in MassDOT's redevelopment of Route 18. The Route 18 redevelopment project has been in the planning and design stages since the approval of the original harbor plan in 2002. The current Plan recognizes and continues to support this ongoing traffic calming project as one way to better connect New Bedford with its waterfront.

Based on the information described above, I find, as required in the harbor plan approval standards [23.05(3)], that the Plan achieves "compatibility with the plans…or activities of all state agencies…within the harbor planning area."

D. Implementation Strategy

Pursuant to 301 CMR 23.05(4), the Plan must include enforceable implementation commitments to ensure that, among other things, all measures will be taken in a timely and coordinated manner to offset the effect of any Plan requirement less restrictive than that contained in 310 CMR 9.00. The Plan includes a chapter on implementation which discusses significant projects and recommendations of the Plan including general time frames for completion, the stakeholder or authority primarily responsible for implementation, other interested stakeholders, and potential funding mechanisms. The Plan does not contain any requirements that are intended to be less restrictive than those contained in 310 CMR 9.00. Accordingly, I find that this approval standard is met.

IV. EFFECTIVE DATE AND TERM OF APPROVAL

This Decision shall take effect immediately upon issuance on June 14, 2010, except as may otherwise be provided in accordance with 301 CMR 23.04(5). As requested by New Bedford and Fairhaven, the Decision shall expire five (5) years from the effective date unless a renewal request is filed prior to that date in accordance with the procedural provisions of 301 CMR 23.06, or if the

Secretary extends the original expiration date in accordance with 301 CMR 23.06(2)(a). As required under 301 CMR 23.06(2)(b), no later than six months prior to the expiration date of the Plan the Secretary will notify the Municipalities of the need to renew the Plan. The notification may request the Municipalities review the Plan's effectiveness in promoting state tidelands policy objectives and public interests.

V. STATEMENT OF APPROVAL

Based on the Plan, its associated documents, public comments, and information from the consultation session submitted pursuant to 301 CMR 23.04 and evaluated herein pursuant to the standards set forth in 301 CMR 23.05, I hereby approve the 2010 Plan Renewal to the New Bedford/Fairhaven Harbor Plan as the Municipal Harbor Plan for these Municipalities, subject to the limitations and conditions included in this decision, particularly those outlined below.

The Approved New Bedford/Fairhaven Harbor Plan Renewal ("Approved Plan") shall be the revised Plan dated May 26, 2010, containing changes to both the Plan and Compliance Statement required by CZM and DEP during the consultation session, and shall also include a copy of this Approval Decision. Bound and electronic copies of the Approved Plan shall be provided by the Municipalities and kept on file at the New Bedford and Fairhaven Municipal Clerks Office, the New Bedford Harbor Development Commission Office, the Fairhaven Planning Board Office, the CZM Offices in Boston and in Wareham, the DEP/Waterways offices in Boston and in Lakeville, and the DCR Waterways Office in Hingham. Copies of the Approved Plan including the Compliance Statement and this Approval Decision shall be made available to the public via the New Bedford Harbor Development's website and at the libraries of both Municipalities.

For waterways licensing purposes, the Approved Plan shall not be construed to include any of the following:

- Any subsequent addition, deletion, or other revision to the submitted plan dated May 26, 2010, except as may be authorized in writing by the Secretary as a modification unrelated to the approval standards of 301 CMR 23.05 or as a plan amendment in accordance with 301 CMR 23.06(1).
- Any provision which, as applied to the project-specific circumstances of an individual license application, is determined by DEP to be inconsistent with the waterways regulations at 310

CMR 9.00 or with any applicable qualification, limitation, or condition stated in this Decision.

- Any plan conformance requirements that are binding pursuant to 310 CMR 9.34(2), with the exception of the approved substitute provision for 9.52(1)(b)(1).
- Eligibility of any properties for the 2002 Plan approved substitution allowing expanded supporting DPA uses. This substitution is no longer valid and previous licenses issued with such increased supporting DPA uses would not be renewable at the supporting use densities licensed under the approved substitute provision.

Further, this Decision shall not be construed to incorporate any determination by DEP, express or implied, as to the conformance of any project requiring authorization under M.G.L. Chapter 91 with the applicable standards of the Waterways Regulations at 310 CMR 9.00. To achieve conformance to standards contained in Chapter 91 on a case by case basis DEP retains full discretion to condition the license of any proposed use program, layout, or design.

By letter from the Waterways Program Chief in Attachment B, DEP has expressed support for approval of the renewal Plan and stated that the Plan will become operational for Waterways licensing for all applications for which the effective date of the Plan approval occurs prior to the close of the application's public comment period. Subsequent to Plan approval, a determination of conformance with the Plan will be required for all proposed projects in accordance with 310 CMR 9.34(2).

Ian A. Bowles
Secretary of Energy and Environmental Affairs

6/14/10
Date

Attachment A: Figures

Figure 1 Aerial View of Planning Area

New Bedford / Fairhaven
Harbor Plan Update 2008
Planning Areas

2008 Primary Planning Area
2008 Secondary Planning Area
2002 Planning Area
Municipal Boundary

N

0 1,000 2,000 4,000 Feet

Prepared by the
Urban Harbors Institute
of the University of Massachusetts Boston

For the
New Bedford / Fairhaven
Harbor Plan Renewal Committee

On behalf of
Fort Point Associates
Urban Harbors Institute
Apex Companies
and
FXM Associates

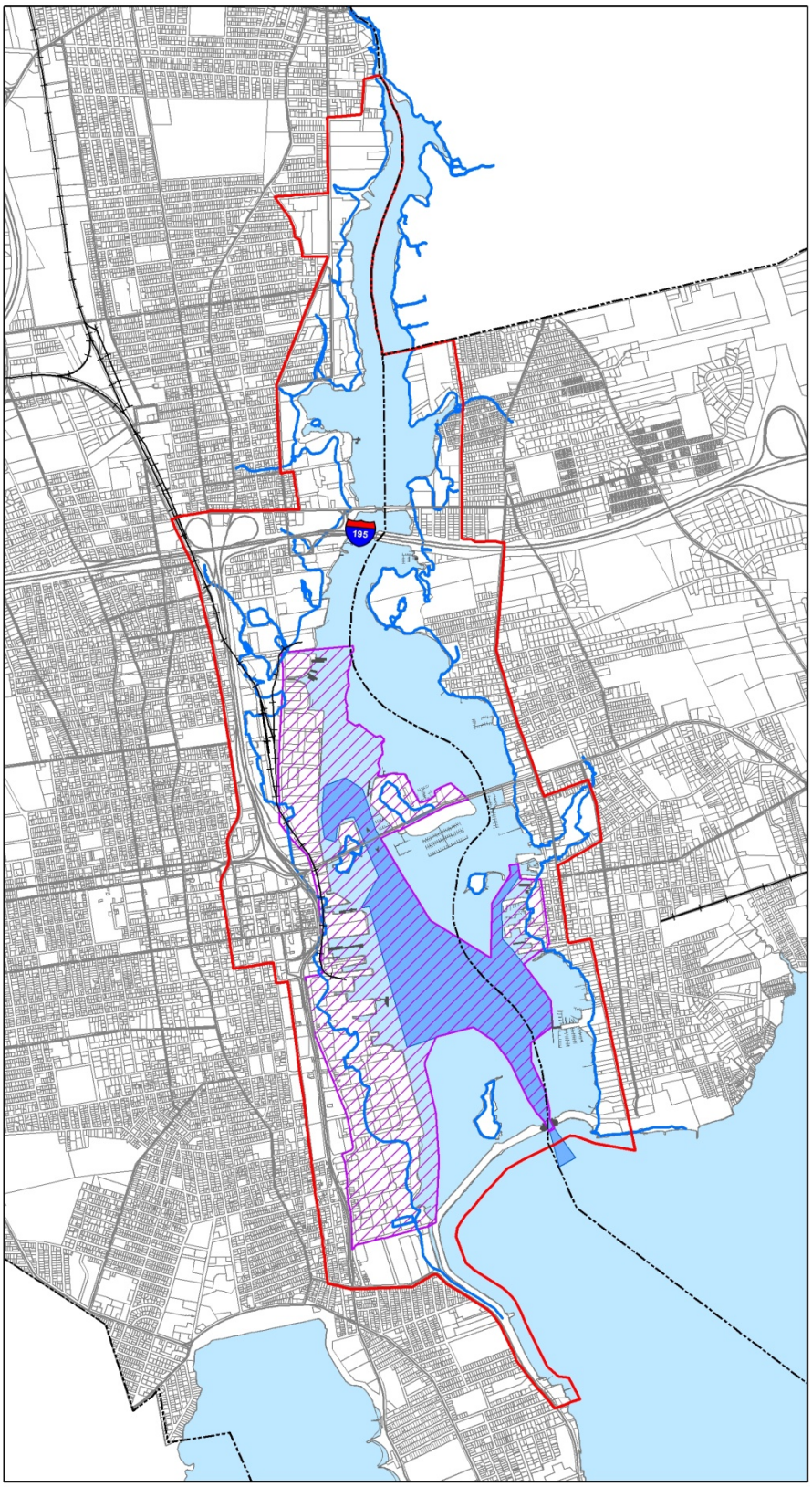
Data from
MassGIS
City of New Bedford
Town of Fairhaven
Urban Harbors Institute
Apex Companies

September 2008

Figure 2 Designated Port Area

New Bedford / Fairhaven Harbor Plan Update 2008

Approximate Chapter 91 Jurisdiction, Approximate Designated Port Area and Federal Channels, Turning Basins and Anchorage



2008 Planning Area

Approximate Ch. 91 Jurisdiction

Approximate Designtaed Port Area

Federal Channels etc.

N

0 750 1,500 3,000 Feet

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Data from
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Urban Harbors Institute
Apex Companies

September 2008

Attachment B: Letter from DEP Waterways Chief

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

LAURIE BURT
Commissioner

June 8, 2010

Ian Bowles, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street
Boston, MA 02114

RE: DEP Recommendation for the Approval of the New Bedford/Fairhaven Harbor Plan and Designated Port Area Master Plan Renewal, dated May 26, 2010.

Dear Secretary Bowles:

The Department of Environmental Protection, Waterways Regulation Program (MassDEP) has reviewed the New Bedford/Fairhaven Harbor Plan and Designated Port Area Master Plan Renewal ("Plan"), dated May 26, 2010. WRP staff members have worked closely with the Massachusetts Office of Coastal Zone Management (CZM) and representatives of New Bedford and Fairhaven throughout the planning process and our comments have been adequately addressed and incorporated into the final Plan. The WRP, therefore, recommends that you approve the Plan and make a finding that it is consistent with state tidelands policy objectives, as required by 301 CMR 23.05(3).

In accordance with the provisions of 310 CMR 9.34(2), the MassDEP will require conformance with any applicable provisions of the approved Plan in the case of all waterways license applications submitted subsequent to the Plan renewal's effective date. It will apply as well to all pending applications for which no public hearing has occurred or where the required public comment period has not expired by the effective date of the approved Plan renewal.

The MassDEP will adopt as binding guidance in all License application review any Substitute Provisions contained in the Plan. The only Substitution contained therein pertains to pedestrian waterfront access in certain limited areas of the Planning area. The Substitution increases the width of public pedestrian access ways along sections of the shoreline located *outside* of the Designated Port Area (DPA) jurisdiction. Pursuant to 310

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD# 1-866-539-7622 or 1-617-574-6868.

MassDEP on the World Wide Web: http://www.mass.gov/dep
Printed on Recycled Paper

CMR 9.52(1), projects with water-dependent use zones (WDUZ) must provide a ten (10) foot wide pedestrian walkway the entire length of the WDUZ. This Substitution increases the standard to a twenty (20) foot width along the length of the subject project shorelines. If during the license application review process, the MassDEP determines that existing site constraints make it infeasible to provide a 20 foot wide walkway, the MassDEP will require the maximum width possible. I look forward to further guidance to be provided on this topic in the waterfront public access plan to be submitted in the future.

For projects identified in the Plan as Waterfront Development Shoreline Facilities (WDSFs) that do not qualify for the streamlined permitting processes pursuant to the State Enhanced Remedy (SER) provisions of the Superfund Act, the MassDEP will apply its conventional regulatory standards pursuant to 310 CMR 9.00, including but not limited to those found at 310 CMR 9.32(1)(b), 9.35 and 9.36(5)(b) for projects in the DPA.

For all DPA projects proposing to incorporate nonwater-dependent commercial or industrial Supporting Uses on their project sites, the MassDEP will employ the standards found at 310 CMR 9.02 in its review of such projects. On the filled tidelands portion of the project site only, that standard allows up to 25% of the land and pier area in jurisdiction to be devoted to Supporting Uses. In addition the uses must provide direct operational or economic support to the DPA, and must be compatible with activities characteristic of a working waterfront and its associated backlands. Any such proposed use shall also comply with applicable standards including, but not limited to, 310 CMR 9.36(5) and 9.51(3).

The MassDEP looks forward to continuing its work with CZM and the representatives of New Bedford and Fairhaven in the implementation of this important planning effort. Should you have any questions in regard to the foregoing, please contact me at (617) 292-5615. Thank you for your consideration.

Sincerely,

Ben Lynch
Program Chief
Waterways Regulation Program

Cc: Mayor Scott Lang, New Bedford
Kristin Decas, Executive Director, New Bedford HDC
Jeff Osuch, Executive Secretary Fairhaven
Bill Roth, Town Planner, Fairhaven
Deerin Babb-Brott, Director, CZM
Bruce Carlisle, Assistant Director, CZM
Dave Janik, South Coast Regional Coordinator, CZM
Andrea Langhauser, MassDEP

EXECUTIVE SUMMARY

The historic harbor lying between the City of New Bedford and Town of Fairhaven has shaped the identities and economies of these two municipalities for centuries. Today, the Harbor is one of nation's preeminent fishing ports, ranked # 1 nationally in 2007 in dollar value ($268 million) of fish landings with an estimated total economic regional impact of nearly $1 billion. The New Bedford's seafood processing industry has grown in size and sophistication in recent years and is an internationally established center for this industry. Marine service and vessel repair industries, centered in Fairhaven, have an excellent reputation with commercial fleets all along the East Coast and have successfully diversified to capture markets associated with recreational vessels. With the creation of the New Bedford Whaling National Historical Park in 1996, the Harbor's history and cultural heritage have gained increased visibility and recognition nationally, resulting in a more vibrant local tourism industry. An increase in the number of cruise ship port calls, the addition of fast ferry service to Martha's Vineyard, and the return of maritime shipping are among the recent changes that have added new vitality to the Port and the promise of renewed economic growth. Dredging, harbor cleanup and shoreside infrastructure improvements underway and/or planned will all promote and support a healthy working port and sustainable development.

Despite clear strengths, the Harbor is also encountering challenges. The difficulties of the fishing industry have had a substantial impact on fishing families throughout New England. In response to the decline in the amount and value of fish landed, there has been a consolidation of port services and of the harvesting fleets in just a few remaining commercial fishing hub service ports including New Bedford/Fairhaven. Although not immune to the struggles experienced by this industry, New Bedford/Fairhaven Harbor has successfully retained its position as one of the nation's leading fishing ports. Unfortunately, as port consolidation continues, there has proven to be insufficient accessible waterfront land or dock space to safely and efficiently accommodate all the commercial fishing vessels that would like to make the New Bedford/Fairhaven their homeport. Several infrastructure improvements are badly needed to increase the Port's capacity and a number of projects have already been initiated to help alleviate this problem.

The 2010 New Bedford/Fairhaven Municipal Harbor Plan includes a larger planning area from that used in the 2002 Plan. The area of the Harbor addressed in this Harbor Plan extends from the hurricane barrier to the Wood Street Bridge with a primary focus on the inner harbor's working port. Some attention is also given to the New Bedford waterfront south of the hurricane barrier around the peninsula

extending down to Fort Rodman, primarily focused on public access and some related commercial opportunities.

This Harbor Plan defines the communities' vision for the future of the Port. It offers a number of specific recommendations that build on the Port's many strengths and outlines a strategy for implementing these initiatives.

The Plan also has a key regulatory function. For any proposed development along the waterfront, the Department of Environmental Protection (DEP) evaluates the projects for conformance to the Commonwealth's Waterways (Chapter 91) and Designated Port Area (DPA) regulations. During this State review and approval process, the Harbor Plan carries significant weight in assessing whether individual waterfront projects match the communities' vision and economic goals for the Harbor. Understanding this, the two communities have worked closely with officials from DEP and the state's Office of Coastal Zone Management (CZM) in developing this Plan. As a result, the Plan provides a strong framework for advancing desirable development, public access and conservation activities within the planning area.

This 2010 Harbor Plan Renewal has benefitted from and built on the guidance offered in numerous previous municipal and state planning initiatives. In addition to the 2002 New Bedford/Fairhaven Municipal Harbor Plan, these include the 1994 report of the Governor's Commission on Port Development and two studies on port management, the SRPEDD/EOTC "Section 269 Port Authority Feasibility Study" and the Massachusetts Seaport Advisory Council "Port Governance Study." A summary of port-related studies completed since 2002 and considered in developing this Plan is included as Appendix B to this Plan.

The Harbor Plan has been guided by the following four overriding principles:

<u>Support Traditional Harbor Industries</u> - preserve and enhance the Port's traditional strengths in fishing, seafood processing, and their supporting industries.

<u>Rebuild and Add to the Harbor Infrastructure</u> - upgrade port infrastructure essential to the future economic vitality of both the working port and the region and to the public's use and enjoyment of the Harbor.

<u>Capture New Opportunities</u> – take advantage of new opportunities for the expansion of marine industry in the Port and other supporting industries such as tourism, short sea shipping, recreational boating, import/export, and alternative energy, taking care that new activities do not conflict with the traditional working port while also demonstrating leadership in maritime innovation and technology.

Enhance the Harbor Environment – demonstrate leadership in harbor cleanup, recycling and energy conservation under a "Green Port" initiative, with the goal of creating an environmentally healthy harbor that will encourage a large variety of compatible uses.

In support of these principles, years of work by New Bedford and Fairhaven are now coming to fruition as several major infrastructure projects within the Harbor move from planning to implementation. A summary of the projects recently completed or currently underway is included in the Plan.

Among the major newly proposed or on-going initiatives supported by this Plan are:

1. **Harbor Dredging** to clear navigational channels and berthing areas of years of accumulated silt and debris thus improving water-borne access to key waterfront facilities,
2. **Wharf and Dock Expansion/Improvements** including increased capacity for the safe and efficient berthing of commercial fishing vessels, expansion of North and South Terminals' bulkheads, and creation of a new terminal facility on Pope's Island,
3. **Improved Transportation Connections** including an intermodal transportation center in the Hicks Logan/North Terminal area, replacing the Route 6 swing bridge, establishing a passenger rail link to Boston, and improving both land (rail and truck freight) and water-borne transportation connections to the working port (e.g. expanded passenger and freight ferry service),
4. **Pursuing Opportunities for the Port's Economic Expansion** including short sea shipping, marine science/alternative energy technology, tourism, import/export trade, and support for offshore energy production and exploration that will complement existing marine industries,
5. **More Public Amenities and Waterfront Access Points** to improve residents' and visitors' use and enjoyment of the Harbor including:
    - a continuous walk/bicycle path around the entire harbor (from Fort Rodman to Fort Phoenix with extensions along the top of the hurricane barrier and along the Acushnet River north of Wood Street) where feasible, new waterfront platforms/sites for observing and interpreting port activities within the DPA,
    - new activities, amenities and access improvements that will attract more people to the water's edge and out onto the water, and
    - an Upper Harbor District (above I-195) reserved primarily for public events/activities and use by low-powered or non-motorized craft including creation of a competitive rowing course.

6. **New Harbor Gateways** with improved harbor view corridors and pedestrian connections. For New Bedford, the gateway would be on the waterfront side of Whaling National Historic Park complemented by planned improvements to Route 18/JFK Highway and to the waterfront in the vicinity of State Pier. For Fairhaven, a new harbor gateway will be created on or next to the Route 6 causeway (Seaport Marina and Hotel site) and extend south to Pease Park with significant visual elements and improved access for those approaching the Town via the New Bedford/Fairhaven bridge,
7. **Expanded Use of the State Pier** to support a compatible mix of water-dependent activities including handling of marine freight, ferry and cruise ship operations and historic vessel(s) along with an appropriate blend of non-conflicting facilities of public accommodation (e.g. seafood market place, second floor restaurant, port observation deck(s), restrooms),
8. **Revitalizing the Former Power Plant Site** as a mixed-use development with both water-dependent industries and supporting commercial businesses possibly including a new permanent home (either here or at the State Pier) for the New Bedford Seafood Display Auction,
9. **Expanded Facilities for Recreational Boats,** both homeported in the Harbor and transiting the area, including additional moorings, shore-side facilities and support services,
10. **Centralized Port Operations Center** at one waterfront site to accommodate municipal harbor operations staff, other government maritime regulatory/enforcement agencies, and their waterborne response resources,
11. **Reinstituting Traditional Chapter 91 Permitting** with elimination of Eligibility Credit Program that had been approved with the 2002 Harbor Plan but had proven to be of no significant value in promoting the Harbor's economic development/expansion,
12. **Infrastructure Upgrades and Operational Support for Port Security** in response to new threats and in support of Homeland Security initiatives,
13. **A Comprehensive "Green Port" Strategy** to support/complement on-going efforts to clean up the Harbor and to incorporate energy efficiencies, operational improvements, and recycling initiatives,
14. **Adjustments to Port Governance** including a more structured Port Alliance between New Bedford and Fairhaven and reorganizing State Pier management, and

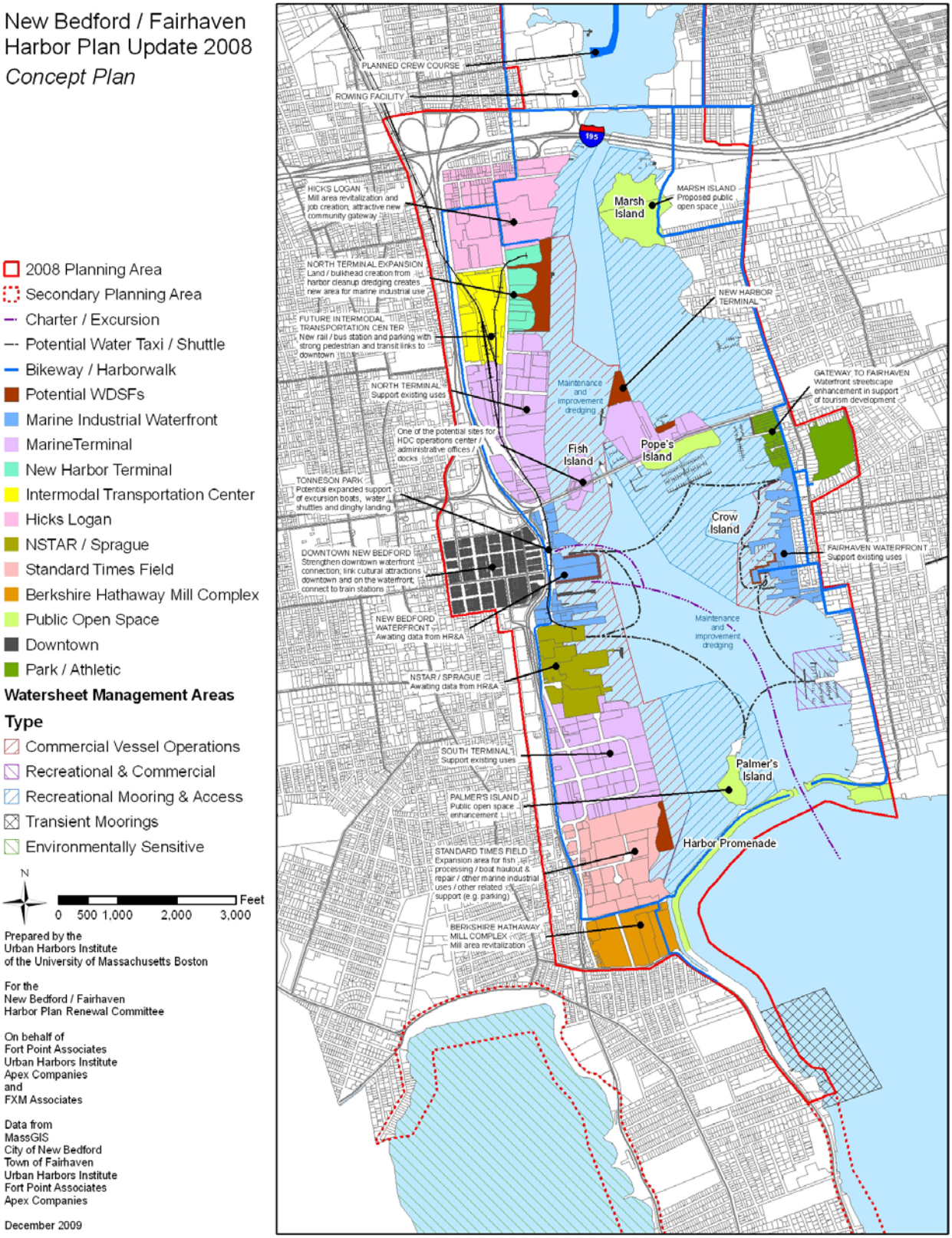
15. **Completing Follow-on Studies** including:
    - precise determination of the **Harbor Line**,
    - reevaluation of **DPA Boundary Line,**
    - creation of a detailed **Waterfront Public Access Plan (**including a recreational boating access and support**)**, and
    - development of a **Green Port Strategy** Plan.

Figure 1.1 offers a visual summary of many of the key recommendations included in this Plan.

The initiatives supported by this Harbor Plan are designed to strengthen the Port's capability to support both traditional and emerging marine industries that appear to be a good fit for the Port while also providing new opportunities for the public (both residents and visitors) to use and enjoy the waterfront. The Harbor Plan reinforces the strength of DPAs as areas for water-dependent industry. If carefully planned and located, non-water dependent supporting uses in the DPA adjacent to the downtown business districts can be accommodated without negatively impacting maritime operations or the needs of the commercial fishing fleet.

Following a brief introduction and discussion of the planning process (Chapters 1 and 2), this Harbor Plan outlines the existing conditions in the Harbor (Chapter 3) and the findings from economic analyses of both the New Bedford and Fairhaven waterfront (Chapter 4). The Harbor Plan then presents a Watersheet Management Plan (Chapter 5), identifies issues impacting the Harbor, offers recommendations to address these issues (Chapters 6 and 7), and presents an implementation strategy (Chapter 8). The final section (Chapter 9) provides regulatory guidance primarily for state and local officials and waterfront developers. Appendices have been attached, including a Dredge Management Plan and a summary of Past Studies and Surveys.

Figure 1.1 Concept Plan



1.0 INTRODUCTION

1.1 OVERVIEW

The 2010 New Bedford/Fairhaven Municipal Harbor Plan defines the communities' vision for future development of the New Bedford/Fairhaven Harbor, including broad planning goals, specific projects, funding mechanisms, and management controls to guide the Plan's implementation. The Plan provides guidance to the Commonwealth's Department of Environmental Protection (DEP) in fulfilling its mandates under the Chapter 91 regulatory program. In addition, the Plan is designed to be useful to developers in matching their project goals and designs with the City's and Town's vision for the waterfront and for obtaining public funding for harbor programs and infrastructure improvements.

This Municipal Harbor Plan (MHP) builds upon the 2002 MHP. It assesses the changing character of the Port, sets some new goals based on findings from research and harbor stakeholders, modifies recommendations from the 2002 MHP as appropriate, and defines the vision and port development objectives for the next 5 years.

1.2 PORT VISION

Just as New Bedford/Fairhaven Harbor was at the center of the region's illustrious past, it holds great potential for continuing to shape its future. The Harbor Plan describes opportunities to unlock the significant potential benefits that such a resource represents for the City and Town and their residents. The Plan outlines a *comprehensive strategy* for protecting and enhancing the economic, environmental, historic and cultural resources of the Harbor. This effort has sought to achieve a balance between the residential and business needs of the waterfront neighborhoods, the opportunities offered by this unique asset, and the role of the Port as a regional resource.

A number of important initiatives already underway or recently completed in and around the Harbor will serve as building blocks to support the expansion of existing industries and take advantage of future opportunities. These include harbor dredging, a new ferry terminal, private and public investments in waterfront infrastructure, and a cleaner port with new amenities to attract visitors and residents to the water's edge and out onto the water. The success of the Fast Ferry to Martha's Vineyard, the growing number of cruise ship visits, the continuing role of the Port as a regional hub for the harvesting, processing and distribution of seafood, the growing demands of recreational boating for facilities and services, continued

opportunity for boat and ship maintenance, repair and construction, and an expanding mix of other marine industries have all contributed to the base that will serve to attract new businesses and to increase the vitality to the Port. The additions to the Whaling National Historic Park, the restoration of the Schooner Ernestina, the success of the annual Working Waterfront Festival and its related activities throughout the year, the expansion of the City's waterfront visitor center, and several other visitor amenities set the stage for an expanding tourism industry which is expected to complement the Port's water-dependent commercial and industrial activities that have and are expected to continue to serve an important role in the City's and Town's economic health.

In this Plan, inviting, easily used and safe connections between the downtown areas and the waterfront are identified as essential elements to realize the full potential of both the Harbor and the many attractions and businesses that exist in or may become part of the retail centers of both New Bedford and Fairhaven. The opportunities to enjoy the Harbor are plentiful and it can become a lively source of activities throughout the year, a place where the waterfront's heritage can be celebrated. The public's access and enjoyment of the Harbor should complement, rather than compete with, the marine industries that define the Port. In addition to the ability of waterfront infrastructure to support a broad mix of uses, future improvements will meet the highest standards of environmental quality.

The general vision for the Harbor's future can be expressed as follows:

- A major regional resource recognized as a vibrant working waterfront serving as the Country's #1 commercial fishing port while also demonstrating leadership in maritime innovation and technology.
- A port which optimizes the use of its waterfront with a balanced mix of industrial, commercial and recreational water-dependent activities.
- A harbor offering high-quality landside facilities and services to support these activities in an environmentally beneficial and economically sustainable manner. The region's distinguishing historic maritime character is preserved and public access to the water's edge is encouraged, enhancing the quality of life for local residents and businesses and for visitors.

Key objectives to realize this vision are:

1. To establish a clear identity for the Port emphasizing its rich maritime heritage and its vibrant working waterfront which offers a full-range of modern maritime facilities (e.g. well maintained and adequate dock space, water depths and shore-side infrastructure) and services supporting both traditional and new water-dependent uses (e.g. increased domestic and international trade).

2. To add needed waterfront infrastructure that will more efficiently and safely support existing marine industries and new opportunities within the Port, including but not limited to commercial fishing vessel berthing, navigational dredging, rehabilitation of existing and creation of new marine terminal facilities.
3. To maximize the Port's economic potential and the return on the investment of public dollars in the Port's infrastructure and services.
4. To effectively promote the Port, attracting new maritime industries that will add to the economic vitality of the region, complement the Port's existing identity and not conflict with the mix of uses envisioned for the waterfront.
5. To encourage and support appropriate new private waterfront development.
6. To govern port operations and enforce regulatory compliance through a City/Town alliance that reduces or eliminates redundancy, promotes consistency in the quality of port services, and standardizes fees structures and compliance requirements.
7. To provide amenities and services which promote the public's enjoyment of and access to the waterfront and watersheet. This includes adding cultural, recreational and tourism-based space and facilities, preserving key elements of the Harbor's heritage, and providing opportunities for waterfront retail, such as a waterfront "Market Place" that supports marine industries.
8. To implement an effective watersheet management strategy that balances the need for open water that is essential to the efficient and safe operation of both commercial and recreational vessels in the Harbor with the need for fixed facilities such as mooring fields, wharf/dock space and other over-water structures that support water-dependent uses and the Port's marine industries.
9. To have a clean harbor safe for commercial and recreational uses and to encourage the use of sustainable and cost beneficial "green technology" throughout the Port. Establish the identity of New Bedford/Fairhaven Harbor as a "Green Port".
10. To ensure that resources and operational plans are in place to effectively support port security needs including surveillance and incident response.

1.3 PURPOSE AND AUTHORITY

This Plan has been developed in accordance with applicable state regulations governing the preparation of Municipal Harbor Plans (301 CMR 23.00).

Development on the New Bedford and Fairhaven waterfronts is subject to local land use regulations (zoning, subdivision, etc.) unique to each municipality, but also to State land use regulations on filled and flowed tidelands under Chapter 91 of the Massachusetts General Laws. Chapter 91 compliance is administered by the Department of Environmental Protection (DEP) under the Executive Office of Energy

and Environmental Affairs, in accordance with applicable waterways regulations (310 CMR 9.00).

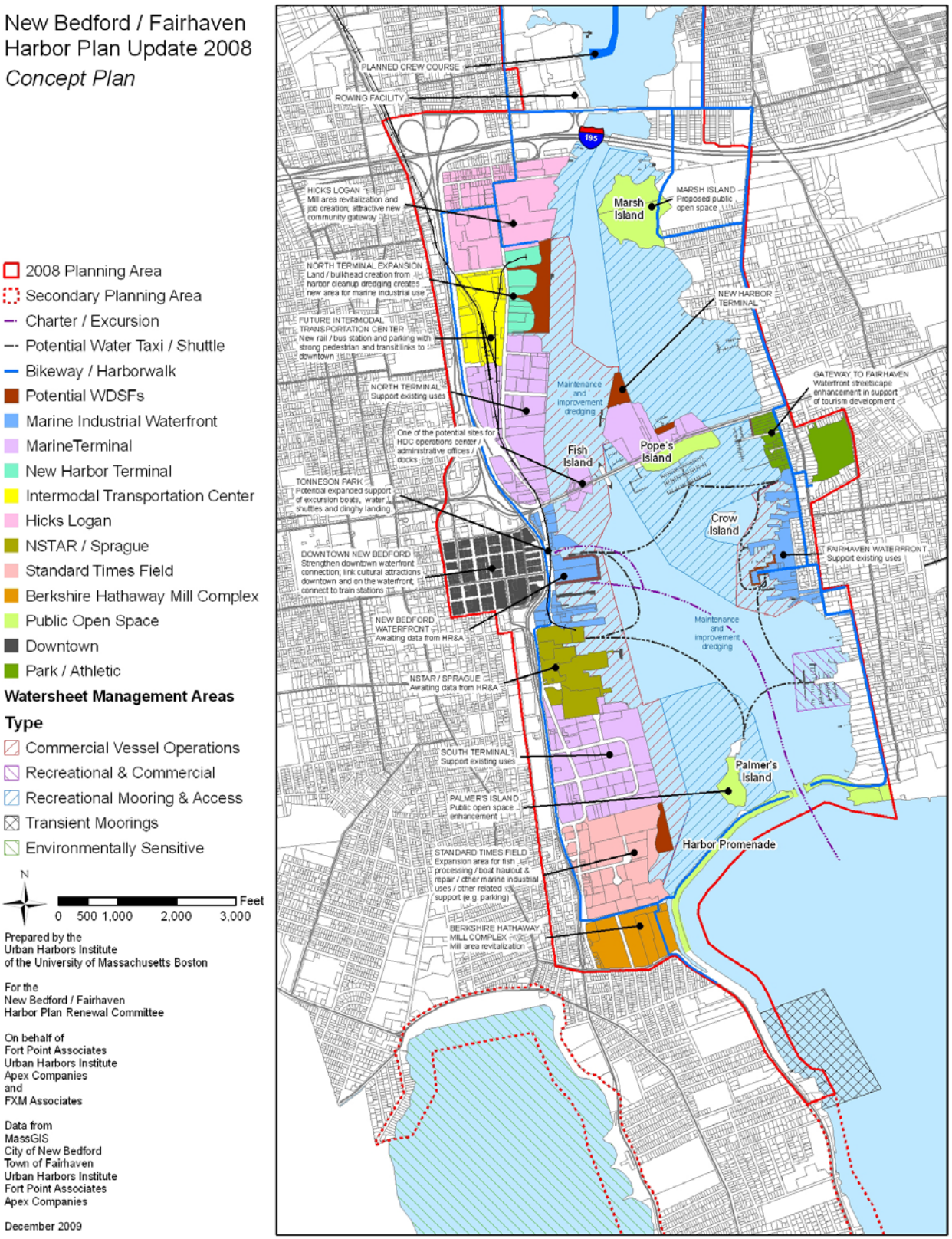
Chapter 91 and the implementing regulations recognize the public rights in tidelands and define the constraints under which activities affecting those rights may take place. In general, activities and development in tidelands which are water-dependent—as defined by the regulations—are presumed to serve a proper public purpose. There are several constraints on those activities, but the constraints are not nearly as great as those placed on projects that are not water-dependent. Water-dependent uses are varied, including marine industry, commercial and recreational boating and waterborne passenger transportation facilities, parks, boardwalks, sanctuaries, marine research and educational facilities, and others.

Development in tidelands of nonwater-dependent projects must also comply with numerous standards to ensure that the benefit to the public resulting from this development is greater than the detriment to the rights held in public trust. Application of these standards is, in part, a negotiated process that may result in the identification of mitigation measures intended to preserve and enhance water-dependent activity and public use and enjoyment of tidelands.

In recognition of the Harbor's importance in supporting water-dependent industry, portions of the waterfront in New Bedford and Fairhaven are also located in Designated Port Areas. The Designated Port Area (DPA) program was established in Massachusetts in 1978 in order to preserve and promote maritime industry by requiring that these areas be dedicated primarily to the support of marine industries. Established under the State's Coastal Zone Management Program, DPAs are subject to specific provisions under the Chapter 91 regulations. In addition to land use restrictions, DPAs are also officially identified as priority areas for federal and state funding including that available under the Massachusetts Seaport Bond (aka Energy and Environmental Bond Bill). Some minor adjustments to DPA boundaries will likely be needed to provide the flexibility to support and sustain vital 21st-century urban port economies.

Any specific new proposals for development of individual waterfront properties within the Port (either public or privately owned) will require additional public review and comment beyond that conducted as part of this harbor planning process and, through permitting and licensing, must be found to meet municipal, state and federal regulatory requirements. The Plan strongly encourages and supports appropriate private water-dependent development along the harbor's edge if these improvements/changes will enhance, or at least have no significant negative impact on, the economic vitality of the Port, or serve a proper public purpose which provides greater benefit than detriment to the rights of the public on Commonwealth's tidelands.

Figure 1.1 Concept Plan



2.0 PLANNING PROCESS

2.1 PLANNING AREA BOUNDARY

The planning area covered by this Harbor Plan extends from the Wood Street Bridge which crosses the Acushnet River at the extreme northern end of the Harbor to the hurricane barrier which defines the entrance to the inner harbor at the southern end of the Acushnet River. This area includes the entire watersheet and the land inland to the first major public street in most areas although further inland in a few areas to encompass those activities with direct or indirect ties to the waterfront. The Plan also includes discussion of some waterfront access and water-dependent development opportunities south of the Hurricane Barrier along Rodney French Boulevard around to the Hurricane Barrier extension at the northern end of Clarks Cove. In addition to significant port-related marine industrial areas on either side of the Harbor, the harbor planning area includes central downtown areas of both New Bedford and Fairhaven, as well as a significant number of residential properties on the Fairhaven side of the Harbor. The incorporation of the downtown areas is an explicit recognition of the importance of waterfront activities to the economic and environmental health of these business, historic, and cultural centers. The planning area has been expanded from that used in the 2002 Harbor Plan primarily to include the upper harbor above the I-195 and Coggeshall Street bridges and some shoreline south of the Hurricane Barrier. See Figure 5.1.

2.2 DATA COLLECTION

Data collected for use in this update of the Harbor Plan came from site visits and harbor surveys, a comprehensive review of existing public and private data bases and recently completed reports with information relating to the Harbor, stakeholder interviews, public meetings, and an analysis of marine industries that were located in or had realistic potential for moving into the Port.

2.3 PUBLIC PARTICIPATION

This 2010 New Bedford/Fairhaven Municipal Harbor Plan largely retains the key issues and direction provided in the original 2002 Plan. As with the original Plan, public participation was a key element in developing this update:

Harbor Plan Renewal Committee

The Harbor Plan Renewal Committee had thirteen (13) members - seven from New Bedford and six from Fairhaven. Six New Bedford members were named by the Mayor and the seventh by the President of the City Council. The Fairhaven Town Selectmen named the six Fairhaven members. The Committee met approximately monthly over the period of Plan development, commencing in February 2008 until August 2008 and than during review and approval of the draft plan in the spring of 2009. All Committee meetings were open to the public. The Committee reviewed the consultants' analyses and findings and provided overall policy direction and guidance in shaping the Harbor Plan.

Consultant Team

Fort Point Associates, Inc (FPA) led the consultant team and was responsible for overall project planning and public participation. FPA was assisted by Apex Companies, Urban Harbor Institute/UMass Boston, and FXM Associates with their team of professional planners, engineers and economists.

Public Workshops

Four public workshops and two general public meetings were held. The workshops focused on the commercial fishing industry, dredging, recreational boating, and tourism/public access/environmental issues. A general public meeting was held near the beginning of the process to inform the public about the goals and objectives of the renewal, to obtain preliminary input and an update on the planning process, and to offer an opportunity for the public to contribute to shaping overall project direction. A second public meeting was in May 2009 to review the draft plan with interested individuals and organizations. Notices were placed on the Harbor Development Commission website and in the local newspaper, emails sent out and flyers posted to advertise workshops and public meetings.

Individual Interviews

Over 45 individual interviews were held with key waterfront harbor stakeholders who offered a broad range of perspectives on harbor issues and activities.

2.4 AGENCY/ORGANIZATIONAL COORDINATION

This project was managed by the Harbor Development Commission (HDC) with active involvement of officials from both the City of New Bedford and Town of Fairhaven. Representatives from state agencies participated continuously throughout the planning process and provided informal input and invaluable technical advice. Representatives from the following state agencies participated on a regular basis:

- Office of Coastal Zone Management (CZM),
- Department of Environmental Protection (DEP),
- Department of Conservation and Recreation (DCR), and
- Seaport Advisory Council (SPAC).

2.5 DECISION PROCESS

The Harbor Plan renewal was completed over a 16-month period. After collecting and analyzing port data, survey results, findings from other recent studies and public input, the consultants produced a draft of the updated plan. Sections of this were distributed to stakeholders who had provided extensive input on specific topics asking for their review and comment. The entire document was then reviewed by the Harbor Plan Renewal Committee and by public officials directly involved in the Plan's development. After adjustments were made based on this input, the document was distributed for broader public review including publishing the draft on the City and Town web sites. A public meeting was then held to discuss the Plan and seek further public input. Following this, comments were considered and appropriate adjustments made to produce a final plan ready for acceptance by both New Bedford and Fairhaven.

After being formally accepted by both the City and the Town, the Plan will be forwarded to the State Executive Office of Energy and Environmental Affairs (EOEEA) along with a compliance document outlining how the Plan complies with various local, state and federal mandates and regulations. At this stage, the Harbor Plan is of use for local planning and implementation but, without final State acceptance and approval, it can not officially be used by the Department of Environmental Protection and other state agencies to guide them in their review and approval/disapproval of local waterfront development initiatives. For this reason, the value of the Harbor Plan is not fully realized until approved by the EOEEA.

3.0 FRAMEWORK FOR PLANNING

3.1 EXISTING CONDITIONS

An extensive mapping exercise was undertaken to document conditions within the Harbor Planning area. This effort identified current land uses including the location of cultural/historic, recreational and environmental assets, regulatory boundaries, and zoning districts. The position of navigational channels and the planned dredging areas and dredged material disposal sites were also mapped. Figures illustrating these issues have been inserted into the next few chapters of this Plan.

3.2 LAND USE

This section discusses the patterns of land use[1] within the entire planning area (Table 3.1), the Designated Port Area (Table 3.2) and the DPA within State jurisdiction (Table 3.3). Figure 3.2 offers a graphic depiction of land use.

Roughly 70 percent of the land in the primary harbor planning area is on the New Bedford side of the Harbor with the remaining 30 percent in Fairhaven. Nearly a third (304 acres) of the total land area (938 acres) is currently used for industrial (including seafood processing) activities. Approximately 16 percent of the land is owned or directly control by government entities (municipal, county, state or federal government), much of this leased for marine industrial uses. About 7 percent of the land is used by commercial businesses that indirectly support marine industry. The remainder is used for parks, open space and cemeteries (12 percent), residential (15 percent), parking and transportation services (5 percent), and assorted other businesses (e.g. hotel, utilities) uses (8 percent). About 4 percent is currently vacant.

The land use shows a distinct difference between the uses of the New Bedford and Fairhaven portions of the study area. For Fairhaven, 40 percent of the land in the planning area is used for residential, 28 percent for parks, cemeteries and open space (largely Marsh Island and the adjacent cemetery, Cushman Park) and, in addition to parks and open space, nearly 8 percent is owned or directly control by government agencies. Only 10 percent of the land is used to support industry and 6 percent for commercial activities (including 4 percent by marinas). The remainder is vacant or used for other activities (including parking, lodging).

[1] For this analysis, one predominant land use has been identified for each parcel. This skews the analysis slightly since many parcels have a mix of uses. Both the New Bedford and Fairhaven assessors employ the same land use classification system based upon guidelines developed by the Massachusetts Department of Revenue. Information from these databases was used to group parcels into the categories shown in following tables in this chapter.

For the planning area on the New Bedford side (not including the secondary area south of the hurricane barrier), over 40 percent of the waterfront is used for industrial purposes (including seafood processing), 9 percent for commercial and 21 percent by the government, much of it leased for or supporting industrial uses. Only 4 percent of it is used for residential. Stated slightly differently, nearly 70 percent of the New Bedford waterfront planning area directly supports the industrial working port while only 16 percent of the Fairhaven waterfront is currently used by industrial and commercial business.

New Bedford has the majority of the seafood processing and industrial uses and, since many of the industrial uses are water-dependent, these, as would be expected, are generally located on or near to the water. Many of these areas are also within the boundaries of the Designated Port Area. The Northern and Southern Fairhaven sub-areas contain many privately owned residential properties, parks or other open space. The Central Fairhaven sub-area contains the Town's DPA and is where the bulk of the marine industrial activity is located.

Table 3.1 Land use by parcel within the planning area

Planning Area Land Use by Parcel	New Bedford		Fairhaven		Both	
	Acres	%	Acres	%	Acres	%
Commercial	59.8	8.9	6.2	2.3	66.0	7.0
Commercial (Vacant)	6.9	1.0	3.6	1.3	10.4	1.1
County	0.1	0.0	1.0	0.4	1.1	0.1
Federal	5.1	0.8	0.2	0.1	5.3	0.6
Hotels, Motels & Boarding Houses	0.0	0.0	3.6	1.4	3.6	0.4
Industrial	211.6	31.6	24.8	9.2	236.4	25.2
Industrial (Vacant)	19.6	2.9	1.0	0.4	20.6	2.2
Marinas, Docks, Piers & Wharves	0.2	0.0	11.5	4.3	11.8	1.3
Mixed Commercial-Residential	8.3	1.2	1.0	0.4	9.3	1.0
Municipal	113.5	17.0	15.8	5.9	129.3	13.8
Other	17.2	2.6	2.7	1.0	19.9	2.1
Parking	19.3	2.9	4.1	1.5	23.4	2.5
Parks, Open Space & Cemeteries	34.1	5.1	75.7	28.2	109.9	11.7
Public Buildings	3.7	0.6	1.0	0.4	4.7	0.5
Residential (High Density)	15.2	2.3	5.6	2.1	20.7	2.2
Residential (Low Density)	14.4	2.1	93.8	35.0	108.2	11.5
Residential (Vacant)	1.7	0.2	9.1	3.4	10.8	1.1
Seafood Processing	66.7	10.0	1.0	0.4	67.7	7.2
State	15.1	2.2	3.0	1.1	18.1	1.9
Transportation	22.4	3.3	2.6	1.0	25.0	2.7
Utilities	34.4	5.1	1.0	0.4	35.4	3.8
TOTAL	**669.2**	100.0	**268.3**	100.0	**937.5**	100.0

3.2.1 LAND USE WITHIN DESIGNATED PORT AREAS (DPAs)

The boundary line for the DPAs within the Harbor can be seen in Figure 9.1. The entire land area in the DPA encompasses 231.5 acres of which over 216 acres are in New Bedford. This does not include roads. The DPA has a total of 6.9 miles of shoreline in the working port, 5.7 miles of which is in New Bedford including Popes and Fish Islands. The most predominant DPA uses are for seafood processing (25 percent), other industry (24 percent), commercial (10 percent, including mixed use), utilities (15 percent), and government including the State Pier (16 percent). Only about one percent of the DPA is used for residential (including some classified as mixed use and motels/boarding houses)). (See Table 3.2).

Table 3.2 Land Use by Parcel in New Bedford and Fairhaven's DPAs

DPA Land Use by Parcel	New Bedford		Fairhaven		Both	
	Acres	%	Acres	%	Acres	%
Commercial	20.0	9.3	0.3	1.6	20.3	8.7
Commercial (Vacant)	0.0	0.0	0.0	0.0	0.0	0.0
County	0.0	0.0	0.0	0.0	0.0	0.0
Federal	2.2	1.0	0.0	0.0	2.2	1.0
Hotels, Motels & Boarding Houses	0.0	0.0	1.0	6.2	1.0	0.4
Industrial	50.7	23.5	3.8	23.4	54.5	23.5
Industrial (Vacant)	6.7	3.1	1.0	6.2	7.7	3.3
Marinas, Docks, Piers & Wharves	0.0	0.0	6.8	41.9	6.8	2.9
Mixed Commercial-Residential	1.0	0.5	1.0	6.2	2.0	0.9
Municipal	21.8	10.1	0.0	0.1	21.8	9.4
Other	0.9	0.4	1.0	6.2	1.9	0.8
Parking	3.3	1.5	0.0	0.1	3.3	1.4
Parks, Open Space & Cemeteries	0.3	0.1	0.0	0.0	0.3	0.1
Public Buildings	0.0	0.0	0.0	0.0	0.0	0.0
Residential (High Density)	0.0	0.0	0.0	0.0	0.0	0.0
Residential (Low Density)	0.4	0.2	0.0	0.3	0.5	0.2
Residential (Vacant)	0.1	0.0	0.0	0.0	0.1	0.0
Seafood Processing	56.8	26.4	0.0	0.0	56.8	24.6
State	11.4	5.3	1.3	7.8	12.7	5.5
Transportation	5.9	2.7	0.0	0.0	5.9	2.5
Utilities	33.8	15.7	0.0	0.0	33.8	14.6
TOTAL	**215.3**	**100.0**	**16.2**	**100.0**	**231.5**	**100.0**

Table 3.3 shows the land in the DPA that is within and that is outside State Chapter 91 jurisdiction - i.e. below the historic high water line (HHWL)). This is important because below the HHWL the City/Town share jurisdiction with the State under both local zoning and Chapter 91 regulations. Above this line, the municipalities have sole jurisdiction offering them some additional flexibility and simplification in the permitting process. Table 3.3 shows the land uses as a percentage of the whole DPA and also for that portion in State Jurisdiction.

The majority of the DPA land area (65 percent or 151 acres) lies within State jurisdiction. Most (60%) of the seafood processing done in the Port is located in facilities on land within DPA under State jurisdiction. A significant number is the percentage of land (slightly less than 10 percent) used for commercial or mixed commercial-residential purposes. Although strongly favoring marine industrial uses, the State DPA regulations will allow up to 25% of the DPA land area to be used for supporting commercial uses.

Table 3.3 Land Use by Parcel In and Out of Jurisdiction but within the DPA showing the Acreage and Percentage of Total Parcel Area in the DPA

DPA Land Use by Parcel	In Jurisdiction			Outside Jurisdiction		
	Acres	% in Jurisdiction	% of Total	Acres	% outside Jurisdiction	% of Total
Commercial	12.67	8.5	5.5	7.59	9.3	3.3
Commercial (Vacant)	0.00	0.0	0.0	0.01	0.0	0.0
County	0.00	0.0	0.0	0.00	0.0	0.0
Federal	2.25	1.5	1.0	0.00	0.0	0.0
Hotels, Motels & Boarding Houses	0.00	0.0	0.0	1.00	1.2	0.4
Industrial	37.11	24.8	16.0	17.38	21.3	7.5
Industrial (Vacant)	5.95	4.0	2.6	1.73	2.1	0.7
Marinas, Docks, Piers & Wharves	3.33	2.2	1.4	3.45	4.2	1.5
Mixed Commercial-Residential	2.00	1.3	0.9	0.00	0.0	0.0
Municipal	14.10	9.4	6.1	7.71	9.4	3.3
Other	1.00	0.7	0.4	0.90	1.1	0.4
Parking	0.92	0.6	0.4	2.37	2.9	1.0
Parks, Open Space & Cemeteries	0.28	0.2	0.1	0.00	0.0	0.0
Public Buildings	0.00	0.0	0.0	0.00	0.0	0.0
Residential (High Density)	0.00	0.0	0.0	0.00	0.0	0.0
Residential (Low Density)	0.00	0.0	0.0	0.48	0.6	0.2
Residential (Vacant)	0.00	0.0	0.0	0.09	0.1	0.0
Seafood Processing	40.97	27.4	17.7	15.87	19.4	6.9
State	9.66	6.4	4.2	3.05	3.7	1.3
Transportation	2.24	1.5	1.0	3.63	4.4	1.6
Utilities	17.26	11.5	7.5	16.51	20.2	7.1
TOTAL	**149.74**	**100.0**	**64.7**	**81.77**	**100.0**	**35.3**

3.2.2 LAND USE IN THE SECONDARY PLANNING AREA

The Clark's Cove / Fort Taber Peninsula section of the planning area (Figure 3.1) is a largely residential area with a shoreline of nearly 5 miles in length that offers significant waterfront public access and recreational opportunities for the general public. Both East and West Beaches are located on the peninsula and have free parking, restrooms, outdoor showers and, during the season, lifeguards on duty during much of the day. Additional recreational opportunities are available at Fort Taber Park and Hazelwood Park. A walkway/bike path already exists around much of the Peninsula. The waterfront area in the vicinity of the southernmost extension of the hurricane barrier off E. Rodney French Boulevard has in the past successfully supported a passenger ferry service and other water-dependent uses. Although ferry services are no longer operated from here, the site still has great potential to effectively support a variety of commercial and public water-dependent activities. These could possibly include services for recreational boats, cruise ships and water shuttle/excursion boats. The offshore area could serve as a mooring field for transient boats. With some infrastructure improvements, the existing boat ramp and the parking area just inside the hurricane barrier could significantly improve public access onto the water. The challenge with the site is its exposure during storms or other high wind conditions. The times that it can be comfortably used by small boats could be extended by construction of a breakwater or other wave attenuation system. Some dredging would also expand its suitability for use by a larger variety of water-borne craft. For larger cruise ships unable or unwilling to move into the inner harbor through the hurricane barrier, this site could offer a landing for launches carrying passengers from the ship (anchored in deeper water south of Butler Flats) to awaiting busses, private water shuttles and to the walkway and bike path passing through the area. The site is also well positioned to offer services for recreational boats using Buzzards Bay or otherwise transiting the region. The food service facilities currently located here would complement and benefit from these proposed activities.

3.3 ZONING

3.3.1 CITY OF NEW BEDFORD

The City's Zoning Ordinance is Chapter 9 of the Code of Ordinances of the City of New Bedford. The ordinance divides the City into a dozen districts and includes several overlay districts. Within the planning area, most properties are in one of the following districts: Waterfront Industrial, Industrial A or B, or Business. A Working Waterfront Overlay District also covers the area along the New Bedford waterfront

between Gifford Street and Interstate Route I-195. Figure 3.6 graphically depicts the current zoning.

Predominant Zoning Districts in the Harbor Planning Area are:

- Industrial B District (IB)
- Waterfront Industrial District (WI)
- Industrial A District (IA)
- Central Business District.

Overlay districts in the Harbor Planning Area are:

- Working Waterfront Overlay District (WWOD)
- Riverside Avenue Mill Overlay District (RAMOD)
- Wamsutta Mill Overlay District (WMOD)
- Cove Street Mill Overlay District (COSMOD)
- Downtown Business Overlay District (not shown in figure)
- Flood Hazard Overlay District (not shown in figure).

The primary uses allowed by-right in the Waterfront Industrial District are general manufacturing, transportation, warehousing and distribution, research and development, and several uses requiring a waterfront location such as fish processing, freight terminals, salvage and dry bulk, liquid bulk and other cargo-related activities. Other uses allowed by-right are commercial, institutional and municipal uses and facilities, but no residential. Although under State DPA regulations, hotels are prohibited uses, under City of New Bedford zoning, they are not. Thus hotels are allowed in the Waterfront Industrial District outside areas of State jurisdiction.

In the Industrial B district, primary uses allowed are manufacturing, research and development, warehousing and distribution, and transportation. Industrial uses specifically dependent on a waterfront location are not allowed by-right, nor are most commercial uses, with the exception of retail stores. Hotels are the only residential uses allowed by-right. Though the ordinance's Table of Principal Use Regulations prohibits fish processing, the WWOD provides that a fish fillet or fish processing plant shall only be allowed in Industrial "B" Zones.

The Industrial A district differs from Industrial B only in that a wider range of commercial uses including restaurants, offices, and business are allowed.

The other three overlay districts that intersect the Harbor Planning Area are the RAMOD, WMOD and COSMOD, each of which provides minimum standards and procedures for the construction of new and rehabilitation of existing structures so as

to promote economic and cultural development (as well as new housing in the Riverside Avenue and Cove Street areas).

3.3.2 TOWN OF FAIRHAVEN

The Zoning By-law is Chapter 198 of the Code of the Town of Fairhaven. Within the harbor planning area, the Town's waterfront is divided into several zoning districts: industrial, mixed use, multi- and single family residential, park, and agriculture. Figure 3.6 graphically depicts the current zoning

Significantly, the areas of working waterfront are industrially zoned. Among other uses, this district allows by right or by special permit boatyards and marinas, transportation terminals, and manufacturing, processing, research, and storage. Residential uses are prohibited except for motels/hotels and accessory apartments by special permit.

Another key area of the waterfront is zoned mixed use which allows combinations of business, recreational, residential, and institutional uses.

Fairhaven Code, Section 198-32.2 – Dock and Piers

This section creates a review process and standards for the construction of docks and piers. Docks are permitted by special permit in all zoning districts. The review criteria are designed to protect natural resources, recreational use of adjoining waters, and adjacent property owners, by limiting length, setbacks from property lines, total area, number of boats, and accommodation of lateral pedestrian passage in the intertidal zone for purposes of fishing and fowling.

3.3.3 OTHER MUNICIPAL PLANNING AND REGULATORY ISSUES

New Bedford Code, Section 5-7, Harbor Master Plan provisions

Section 5-7 requires that "all new uses, substantial changes in use, or increases in the intensity of a use, occurring within the study area of the New Bedford/Fairhaven Harbor Plan [within the municipal boundaries of the City of New Bedford], as amended, shall comply with the provisions of said harbor plan…:" The executive director of the Harbor Development Commission is given authority to enforce this provision.

3.4 HARBOR-RELATED INITIATIVES TAKEN SINCE APPROVAL OF 2002 HARBOR PLAN

The following list identifies the highlights of some of the major projects completed since 2002 or that have been or are about to be initiated. Approximately $12 million has been obtained from state and federal sources for port capital improvements including dredging since 2002.

1. **Dredging**
   - Received Portsfield designation and began State Enhanced Remedy process,
   - Initiated and continued project to dredge shipping channels and several waterfront facilities. (As of mid-2009, Phase III of the harbor dredging program is underway.),
   - Established CAD cell dredged material disposal sites,
   - EPA began production level cleanup dredging to remove contaminated sediments from Upper Harbor. Project may be expedited through use of new CAD cells.

2. **Wharf/dock/bulkhead and boat ramp revitalization**
   - Expansion of commercial fishing vessel berthing facilities. Operations evaluation, engineering analysis and condition survey completed. Final design, permitting and construction planned in 2010,
   - Permitting and funding requested to convert State Pier to solid-fill wharf,
   - Repair and safety improvements to South Terminal wharves including a vertical fendering system, replacement of cleats and access ladders, cap log repair,
   - New ferry terminal, RO/RO infrastructure and electrical upgrades for State Pier,
   - Union Wharf floats,
   - Gifford Street Boat Ramp - Engineering and construction of ramp/float system,
   - Pease Park boat ramp repairs
   - Lighting repairs/upgrades to piers and wharves.

3. **Significant private investment including**
   - Steamship Authority improvements to their Fairhaven facility,
   - MarLees' new facility at north end of North Terminal,

- Warren Alexander pier improvements,
- New Packer Transportation facility in North Terminal,
- Expansion of Fairhaven shipyards,
- Sprague Energy facility at old power plant site.

4. **Several "Green Ports" initiatives** including electrical hookups on commercial fishing vessels dock, programs to recover waste oil from vessels, collection of marine debris and work to restore several important harbor ecosystems (e.g. Marsh Island).

5. **Work on rail yard west of North Terminal** including Whale's Tooth Parking lot, back-up generator for parking lot operations, new berms, rail spur to waterfront EPA site and other intermodal infrastructure.

6. **Revitalization of Port's marine traffic** including regular cruise ship visits, new fast ferry to Martha's Vineyard and a trial service to Woods Hole, increased number of refrigerated cargo ships.

7. **Marketing of the Port** to marine industry opportunities including green technology manufacturing (e.g. South Terminal Renewable Energy Marine Park) and marine construction.

8. **Improved public access** and waterfront public amenities. The Wharfinger Building underwent extensive improvements including the addition of "Our Working Waterfront" exhibit and 42 outdoor interpretive wayside panels along the New Bedford waterfront and the central business district.

9. **Major improvements to Riverside Park** on the Upper Harbor waterfront with plans to add a crew boathouse and a rowing course.

10. **Hurricane barrier walkway** from New Bedford side planned for near future (additional negotiations with Army Corps required).

11. **Continued clean-up** and redevelopment of Standard-Times Field.

12. **Improved port security** with over $1 million in funding support coming from federal and state grants to acquire monitor cameras, patrol boat, underwater surveillance equipment, port security dive equipment, other port security infrastructure. Received donated fire boat from Boston FD that will be repaired/upgraded with $75k Seaport Advisory Council (SPAC) grant. Improved security for commercial fishing vessel docks are being considered as part of berthing expansion initiative.

13. **Port operations and intermodal transportation enhancement** have been included under a smart transportation/surveillance system initiative for the City.

Other proposed initiatives currently moving forward:

14. **New waterfront hotels**
    - Construction of new 100-room hotel on New Bedford waterfront scheduled to begin in 2010,
    - Renovation of the Seaport Marina and Holiday Hotel on Fairhaven waterfront to begin in 2010 including plans to improve public access and create new Fairhaven harbor gateway.

15. **New commuter rail service** to reach New Bedford by 2016 served by a new intermodal transportation terminal in the Hicks Logan district.

16. **The redesign of Rt. 18** and the JFK Memorial Highway including enhancement to promote improved pedestrian connections between the Port and New Bedford downtown and National Park.

Some major changes have occurred over the past eight years that have had an impact on port development plans. These include:

- New Bedford/Fairhaven (Route 6) Bridge (replacement now favored over relocation)
- Construction of the New Bedford Oceanarium (no longer viable)
- Coast Guard cutters (moved from New Bedford to Kittery, Maine)
- Disposal of dredged materials (use of CAD cells vs. CDFs)
- Eligibility Credit Program (proved to be not widely supported by private developers, difficult to enforce and ineffective in promoting waterfront development).

3.5 RECENT STUDIES COMPLETED

Appendix B contains a summary of studies and surveys completed since approval of the 2002 Harbor Plan. Information from these studies was considered during development of, and much of this incorporated into, this renewed Harbor Plan. Some of the ideas proposed by these studies include:

- Expanded berthing for commercial fishing vessels and addressing concerns over lack of security, existing safety hazards, boat damage and access for provisioning and repairs. Included expansion of facilities at Homer's and Leonard Piers.
- Intermodal transportation links including rail, truck and trolley/bus and water shuttle services.
- Expanded facilities to service recreational boats and mega yachts
- Pope's Island development
- State Pier renovation/upgrades and broader mix of uses, particularly its use as an intermodal facility for cruise ships, ferries, import/export trade, and short sea shipping
- Flexibility in the use of old power Plant Site
- Hicks Logan waterfront development
- Dredging, recreational boating facilities, walkways/ bike path and better connections to waterfront, intermodal transportation center, mix of uses but, where necessary, creating buffer zones to avoid conflict between uses that may be incompatible.
- Upper Harbor dedicated to recreational use and waterfront access including rowing course and support facilities.
- Improved coordination in management of the Harbor such as a more structured or formal New Bedford/Fairhaven Port Alliance
- Expanded marketing and use of Foreign Trade Zone # 28
- Market the Port as a destination for Short Sea Shipping and support needed infrastructure improvements.

Figure 3.1 Aerial View of Planning Area

Figure 3.2 New Bedford/Fairhaven Land Use

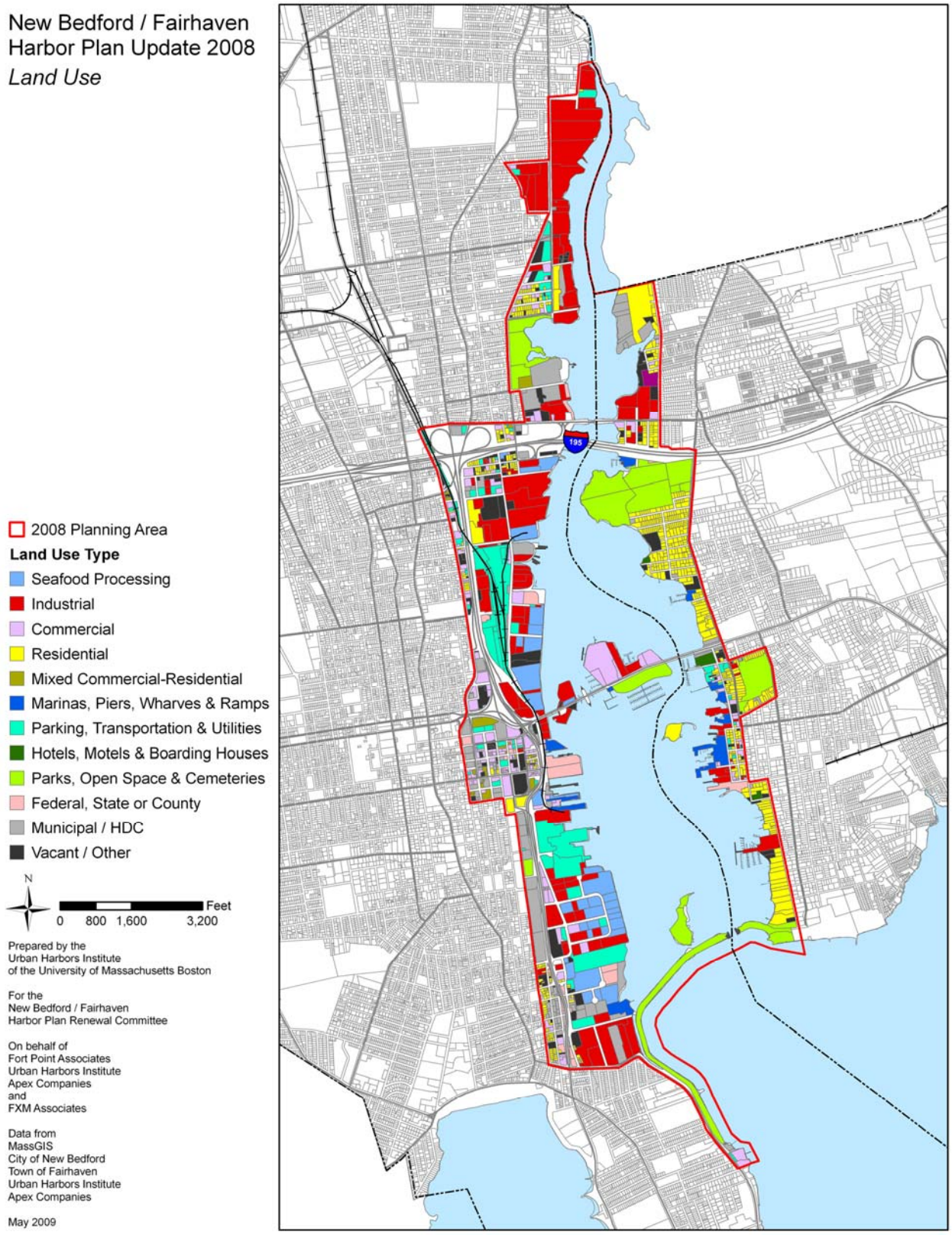


Figure 3.3 Harbor Use and Berthing

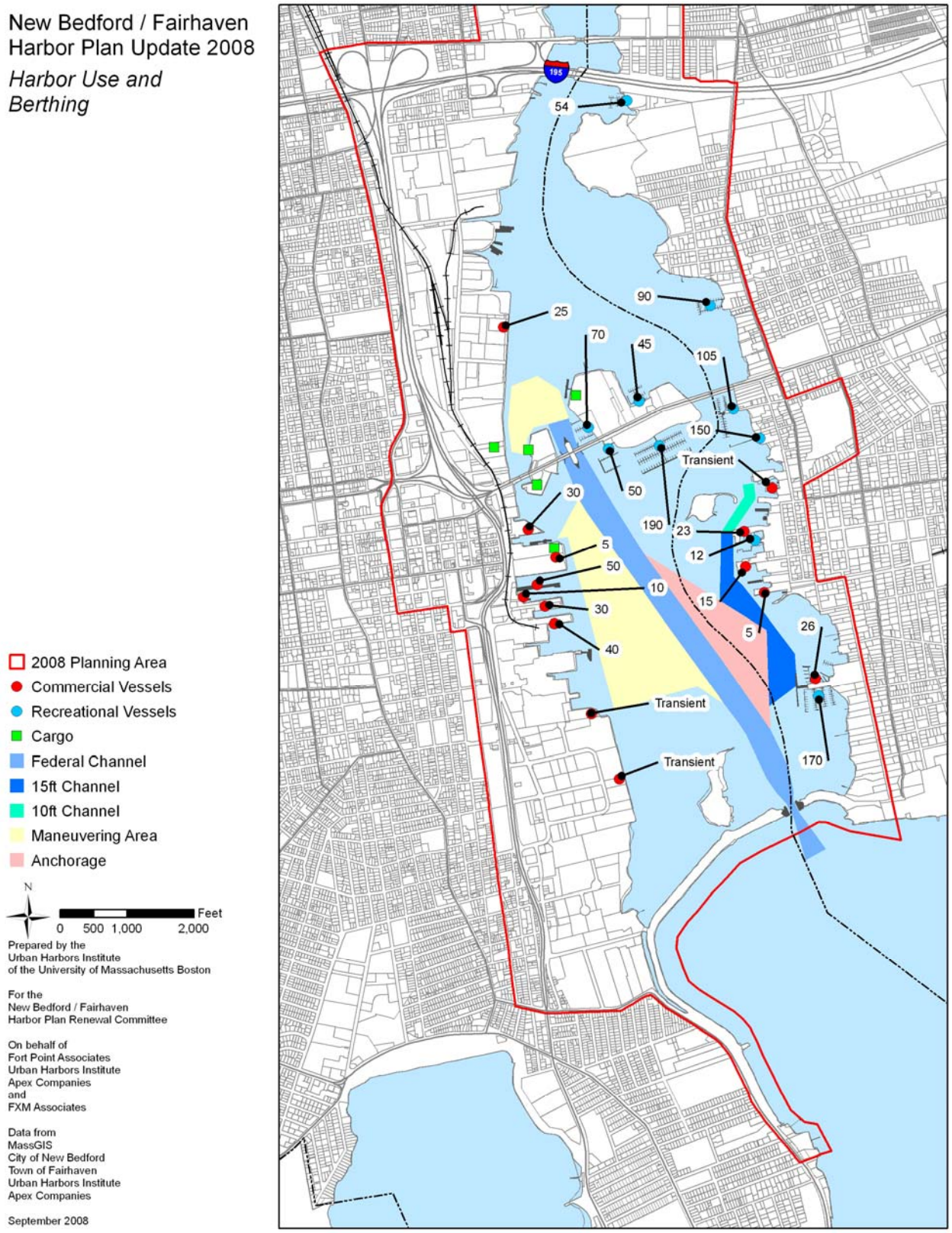


Figure 3.4 Cultural and Recreational Assets

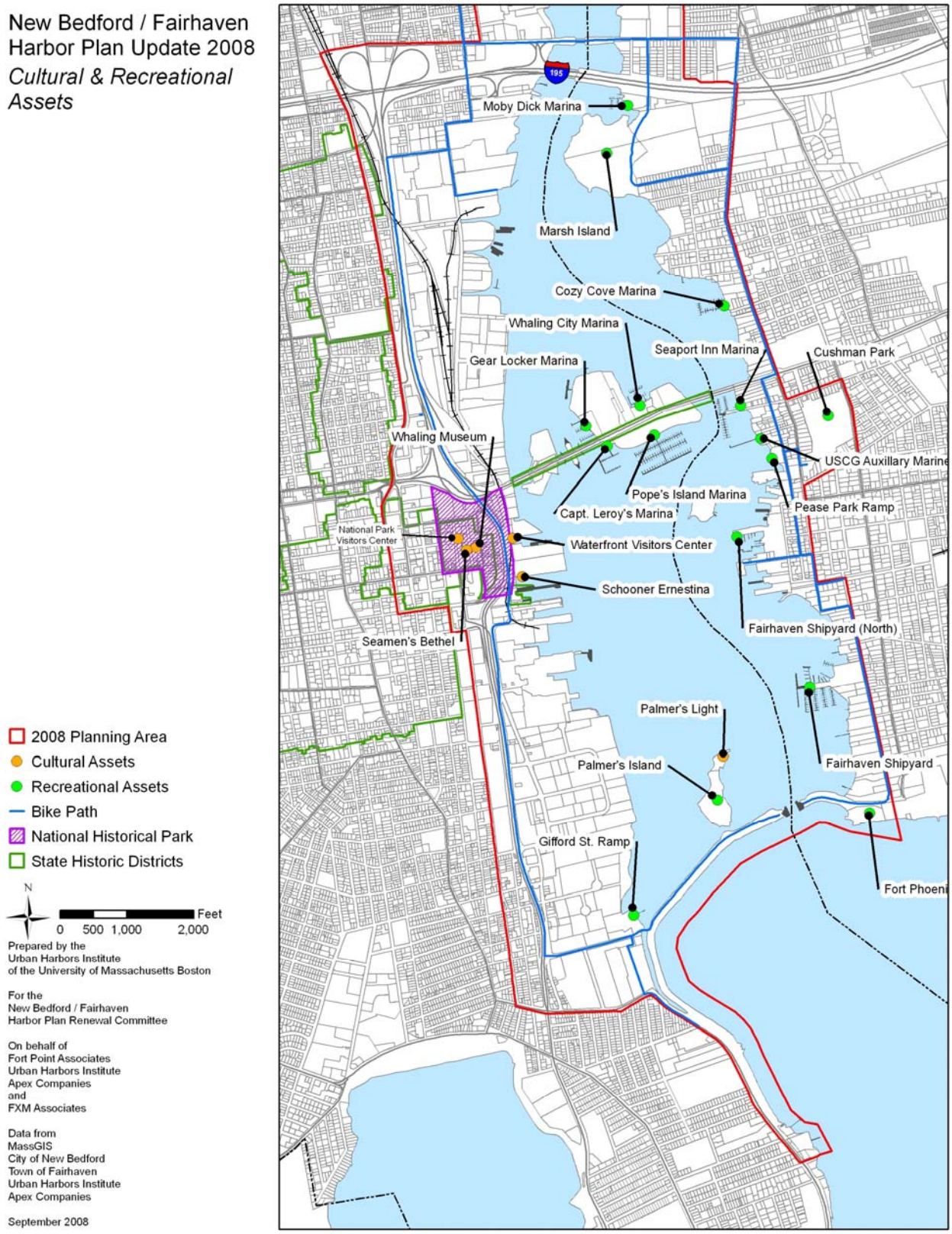
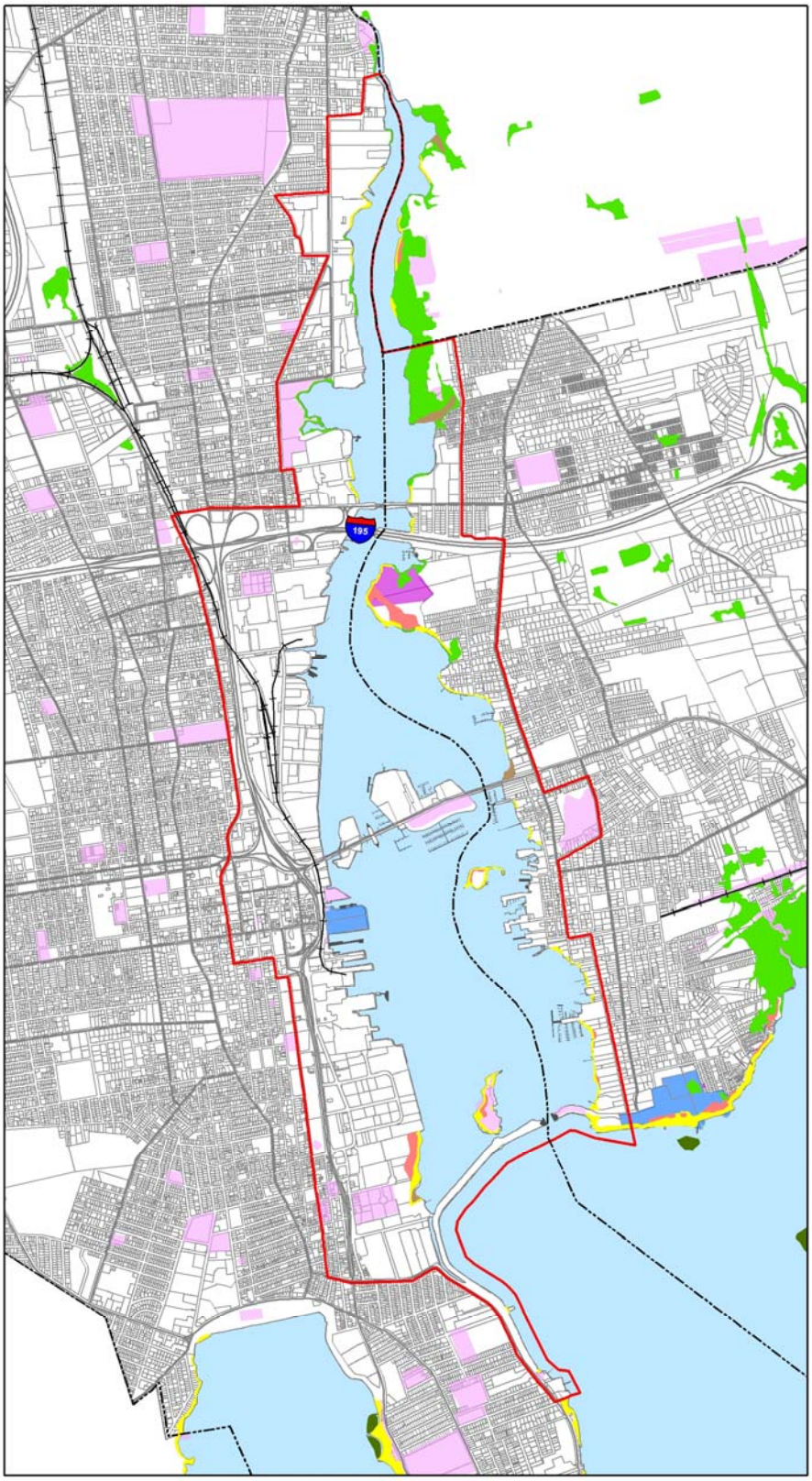


Figure 3.5 Natural and Cultural Resources



New Bedford / Fairhaven
Harbor Plan Update 2008
Natural Resources & Open Space

- 2008 Planning Area
- Beach
- Dune
- Marsh
- Tidal Flat
- Eelgrass
- DCR
- Municipal
- Land Trust

N

0 750 1,500 3,000 Feet

Prepared by the
Urban Harbors Institute
of the University of Massachusetts Boston

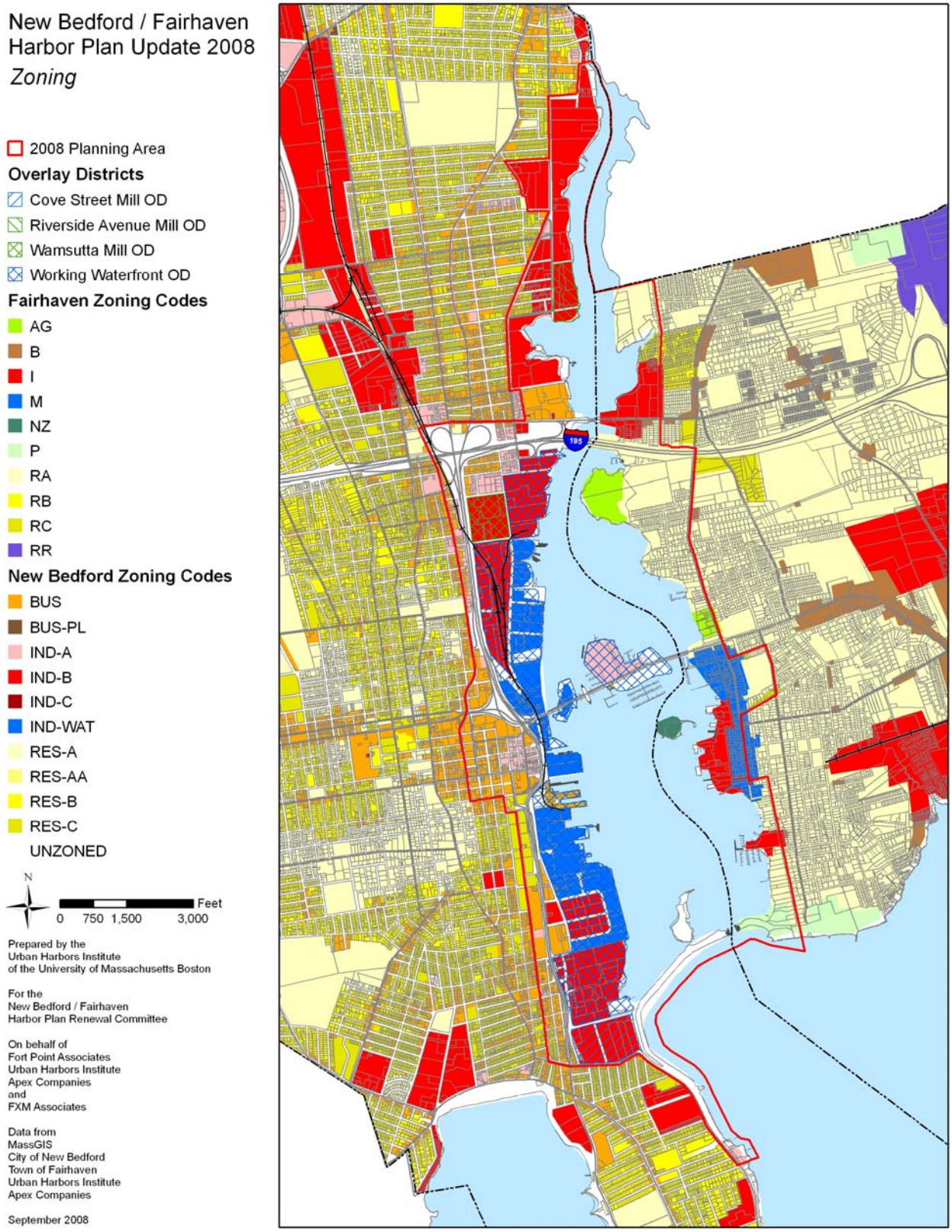
For the
New Bedford / Fairhaven
Harbor Plan Renewal Committee

On behalf of
Fort Point Associates
Urban Harbors Institute
Apex Companies
and
FXM Associates

Data from
MassGIS
City of New Bedford
Town of Fairhaven
Urban Harbors Institute
Apex Companies

September 2008

Figure 3.6 Zoning (including Historic District)



4.0 ECONOMIC ANALYSIS

4.1 FAIRHAVEN WATERFRONT

4.1.1 INTRODUCTION

FXM Associates prepared an economic analysis of Fairhaven Central Waterfront businesses in support of the process to update the 2002 New Bedford/Fairhaven municipal harbor plan. This economic analysis is an investigation of opportunities in the foreseeable future (3 to 5 years) which could increase private sector jobs in Fairhaven consistent with the community's goals and priorities for economic development within the harbor area. In the process of completing this analysis, FXM conducted interviews with representative waterfront businesses, examined relevant secondary source data and planning reports, and met with town officials.

4.1.2 PROFILE OF EXISTING CONDITIONS

The Fairhaven central waterfront includes publicly- and privately-owned berthing facilities for the commercial fishing fleet, significant marine repair and recreational boat marina operations, charter and excursion boat services, the Pease Park boat ramp, and a hotel. The waterfront area to the north and south of the central waterfront is predominantly residential and includes two marinas, Marsh Island, and the Fairhaven Shipyard. A portion of the central waterfront is a Designated Port Area (DPA), extending from Washington Street to South Street, and serves as the heart of the community's marine industrial business activity. The DPA is limited primarily to water-dependent uses and, consistent with state Chapter 91 regulations governing tidelands within DPAs, commercial and industrial supporting uses are concentrated along Water Street away from the water's edge. The town-owned Union Wharf is located within the DPA and is the only point of public access to the central waterfront.

4.1.3 BUSINESS AND HOUSEHOLD CHARACTERISTICS

Waterfront Business Activity Summary

Table 4.1 summarizes types, employees, and sales of business establishments within the Fairhaven waterfront from Route 6 south to the hurricane barrier and east to Main Street.

Table 4.1 Fairhaven Waterfront Business Activity Summary

SIC Code	Business Description	Total No. Businesses	Total No. Employees	Total Sales (in Millions)
09	Fishing Hunting and Trapping	1	3	.3
16	Heavy Construction (except Building)	1	12	1.2
20	Food and Kindred Products	1	5	.5
35	Industry & Commercial Machinery & Computers	3	10	1.2
37	Transportation Equipment	2	100	15.1
44	Water Transportation	7	61	9.2
50	Wholesale Trade – Durable Goods	4	59	9.2
54	Food Stores	1	2	.4
55	Automobile Dealers & Gas Service Stations	2	42	16.8
57	Home Furniture, Furnishings & Equipment	3	8	1.0
58	Eating & Drinking Places	8	84	4.3
59	Miscellaneous Retail	11	38	3.2
62	Security & Commodity Brokers & Service	1	2	.3
64	Insurance Agents, Brokers & Service	1	2	.5
65	Real Estate	2	9	1.2
70	Hotels & Other Lodging Places	2	21	.9
72	Personal Services	2	3	.2
73	Business Services	2	5	.5
75	Automobile Repair, Services & Parking	1	1	.1
80	Health Services	1	4	.3
81	Legal Services	2	4	.8
82	Educational Services	1	2	.3
86	Membership Organizations	7	33	4.2
87	Eng, Acct, research & Mgmt Related Services	3	26	2.4
99	Non-classifiable Establishments	1	3	0
Total	**All Industries**	**70**	**539**	**$74.10**

Source: Claritas *SiteReports* (2007) and FXM Associates' interviews

Waterfront Resident Demographic Overview

Table 4.2 summaries the type, number, and income of households, as well as housing characteristics of residents within the Fairhaven waterfront between Route 6 and the hurricane barrier and east (or inland) to Main Street.

Table 4.2 Fairhaven Waterfront Demographic Overview

Category	Sub-category	2007 Estimate	Percent
Population		733	
Median Age		42.37	
Households		347	
	Family	181	52.16
	Non-Family	166	47.86
Average household Size		2.08	
Household Income			
	Average	$49,973	
	Median	$41,118	
	Per Capita	$23,876	
Employment Status (Age 16+)	Civilian Employed	406	64.75
	Civilian Unemployed	10	1.59
	Armed Forces	7	1.12
	Not in Labor Force	204	32.54
Tenure of Occupied Housing	Owner Occupied	168	48.41
	Renter Occupied	178	51.30
Median Owner-Occupied Housing Value		$282,143	

Source: Claritas *Site Reports* (2007)

Waterfront Business Profile

Some businesses on the Fairhaven waterfront have benefited from 2006 maintenance dredging of harbor navigation channels and maneuvering areas funded by the State Seaport Council under the State Enhanced Remedy, as was projected in the economic analysis prepared for that project.[1] Businesses that did not participate have not experienced increased businesses sales and employment and there are additional dredging needs, both maintenance and improvement, which will be documented by study engineers.

[1] *Potential Economic Effects of Dredging New Bedford Harbor,* FXM Associates for New Bedford Harbor Development Commission (September 2004)

Marine Services

Fairhaven Shipyard North (formerly D. N. Kelley and Son, Inc. shipyard) at 32 Water Street has a world-wide reputation for specializing in maintenance, hauling, refit and repair projects for fishing boats, classic wooden schooners, yachts, and a variety of other commercial and recreational vessels. The full-service shipyard encompasses a 9-acre site with a main dock that can berth boats up to 210 feet in length, three railways with lift capacity of 850, 650, and 500 tons, and mechanical, machine, paint, metal, and carpentry shops. The facility services about 500 boats annually (about 50% commercial and 50% recreational) for national and international customers; vessels off-site in Newport, Cape Cod, and other New England ports; and product sales. There are 55 workers and purchases of paint, welding, engine supplies, and other materials come from dealers throughout the country. Subcontractors are located at the facility and elsewhere in the region for specialized services or additional labor.[2] The harbor dredging completed in 2005 increased water depth and allowed the shipyard to function more efficiently; however, business expansion is constrained waterside by the age of the infrastructure (built in the 1700s) that precludes additional improvement dredging, and is also constrained landside by businesses on both sides of the shipyard.[3] There are 35 slips berthing 23 large commercial fishing boats and 12 recreational boats; there are no moorings, and winter storage accommodates 75 boats on land and in the water.

Steamship Authority (SSA) Repair Facility (formerly Hathaway-Braley Wharf) at 14 Main Street is the primary repair facility for all of the Authority's vessels, and more than $6 million has been invested in a new maintenance building with a 15-ton crane, rebuilt pier, and new bulkhead.[4] The facility services about ten vessels a year (only SSA vessels), and berths 1 to 2 inactive SSA vessels at the pier on a seasonal basis. The facility has a permanent crew of 15 employees, which fluctuates up to 40 when more vessels are being serviced. The SER Dredging Project in Fairhaven began in early 2009 and will include the harbor area from the Acushnet River Safe Boating Club property to the Steamship Authority Facility in the Fairhaven central waterfront. The Steamship Authority repair facility will be able to use 800 feet of the south pier and 300 feet on the north side, thereby increasing capacity and improving operational efficiency.[5]

[2] FXM Associates interview with D. N. Kelley, President, D. N. Kelley and Son, Inc. Shipyard (May 2008)
[3] Fort Point Associates Team interview with Andrew Kelley, Vice President, D. N. Kelley and Son Inc Shipyard (February 2008)
[4] FXM Associates interview with Bill Cloutier, Facilities Manager, Woods Hole Martha's Vineyard and Nantucket Steamship Authority (April 2008)
[5] FXM Associates interview with Bill Cloutier, Facilities Manager, Woods Hole Martha's Vineyard and Nantucket Steamship Authority (April 2008)

Linberg Marine at 50 Middle Street is a marine construction business that works on bridges, cofferdams, piers and wharves, oil terminals, and also provides barge loading/unloading services utilizing a 100-ton capacity roll on-roll off ramp. The harbor dredging project completed in 2006 has provided navigable access to the property, and allowed the company full utilization of the site for the first time since 1985.[6] Company representatives were unavailable to discuss current operations, expansion plans, or harbor improvements which might enhance business activity.

Fairhaven Shipyard and Marina at 50 Fort Street services yachts, sail and power boats, commercial and fishing vessels, and offers complete repair of wood, steel, aluminum, and fiberglass craft.[7] The facility's 350-ton marine Travelift can haul boats up to 150 feet, and there is on-site welding and fabrication, sandblasting, as well as propeller and shaft repair, sales and installation capabilities. The facility employs approximately 50 workers in a variety of marine trades, and serves customers primarily from New England and the Atlantic Coast region.[8] The full-service marina has 170 slips for seasonal and transient recreational boats and 26 slips for commercial boats up to 120 feet with up to 18-foot drafts; including slips/moorings for transient vessels, and a fixed pier for docking vessels up to 200 feet; there is a fuel dock, electricity, water, laundry, showers, and wireless Internet service. The facility also offers inside and outside winter storage. The company is seeking an ACOE permit to increase berthing capacity for an additional 6 to 8 commercial fishing boats; however, a plan for constructing a small bulkhead to relocate the Travelift and expand business operations was not allowed.[9]

Commercial Fishing [10]

In the 1980s, fishermen experienced high landings and bought new boats due to a booming fishing industry. In the 1990s, however, due to depleted fish stocks, the fishing industry experienced a dramatic decrease in groundfish catches. This subsequently led to a vessel buyback program and strict federal regulations in attempts to rebuild the depleted fish stocks. A new decade brought more changes for the fishing industry. [12] By 2000 and 2001 New Bedford was the highest value fishing port in the U.S. (generating $150.5 million in dockside revenue). [13]

[6] Fort Point Associates Team interview with Dick Searles, Linberg Marine, Inc. (February 2008)
[7] Fairhaven Shipyard and Marina website at www.fairhavenshipyard.com
[8] FXM Associates interview with Kevin McLaughlin, Owner, Fairhaven Shipyard & Marina (May 2008)
[9] Fort Point Associates Team interview with Kevin McLaughlin, Owner, Fairhaven Shipyard & Marina (February 2008)
[10] From Rich Canastra (June 2008)
[12] *http://www.fishresearch.org/Articles/2001/07/New_Bedford.asp* (accessed December 2006)
[13] *http://www.fishresearch.org/Articles/2002/09/landings.asp* (accessed December 22, 2006)

The range of species landed in New Bedford is quite diverse and can be separated by State and Federal permits. According to State permits, the largest landings were of cod, haddock, and lobster, and with impressive representation by a number of different species. According to the federal commercial landings data, New Bedford's most successful fishery in the past ten years has been scallops, followed by groundfish. Scallops were worth significantly more in 2006 than the 1997-2006 average values, and the total value of landings for New Bedford generally increased over the same time period. The value of groundfish in 2006, however, was considerably less than the ten-year average value. The number of vessels whose home port was New Bedford increased somewhat between 1997 and 2006, while the value of fishing for home port vessels more than doubled from $80 million to $184 million over the same time period. The number of vessels whose owner's city was New Bedford fluctuated between 137 and 199 vessels, while the value of landings in New Bedford tripled from $94 million in 1998 and $281 million in 2006 (see Table 4.3).

New Bedford has approximately 44 fish wholesale companies, [14] 75 seafood processors, and some 200 shore side industries. [15] Maritime International has one of the largest U.S. Department of Agriculture-approved cold treatment centers on the East Coast. Its terminal receives approximately 25 merchant vessels a year, most carrying about 1,000 tons of fish each. [16]

Table 4.3 Annual Fishing Vessel Statistics

(All columns represent vessel permits or landings value combined between 1997-2006.)

Year	# Vessels (home ported)	# Vessels (owner's city)	Level of fishing home port ($)	Level of fishing landed port ($)
1997	244	162	80,472,279	103,723,261
1998	213	137	74,686,581	94,880,103
1999	204	140	89,092,544	129,880,525
2000	211	148	101,633,975	148,806,074
2001	226	153	111,508,249	151,382,187
2002	237	164	120,426,514	176,200,566
2003	245	181	129,670,762	176,200,566
2004	257	185	159,815,443	206,273,974
2005	271	195	200,399,633	282,510,202
2006	273	199	184,415,796	281,326,486

 # Vessels home ported = No. of permitted vessels with location as homeport
 # Vessels (owner's city) = No. of permitted vessels with location as owner residence[17]
Level of fishing home port ($) = Landed value of fisheries associated with home ported vessels
Level of fishing landed port ($) = Landed value of fisheries landed in location

The Fairhaven waterfront provides dock space for more than 45 commercial and charter fishing boats. There are 16 large draggers and scallopers berthed at Union Wharf, and 10 small lobster boats docked at the finger pier in the basin; other fishing boats are docked at the Fairhaven Shipyard, seven at Harbor Blue Seafood, and 14 large boats at Fairhaven Shipyard.[11] On a seasonal basis, there are ten charter fishing boats (25 to 32 feet) operating from Fairhaven and berthed at Fairhaven Shipyard and Fairhaven Shipyard North. The largest charter fishing business is *Mac-Atac Sport Fishing* which typically conducts 50 to 70 trips per season to fishing grounds in Buzzards Bay, the Elizabeth Islands, Martha's Vineyard, Cuttyhunk, and offshore waters in Massachusetts for customers from New England and as far away as Chicago and Moscow.[12] The charter fishing businesses and the Fairhaven harbormaster propose establishing a centralized dock location at Union Wharf for all charter boats, with shed space for gear, coolers, etc. in conjunction with town plans to repair the piles and bulkhead and redevelop the building formerly occupied by MacLean Seafood Company.

Harbor Blue Seafood at 4 Washington Street provides docking for seven 100-foot fishing vessels, and uses the building to hold fish for sale or distribution, which the owner describes as an "in and out" operation employing about two workers. Since purchasing the property about four years ago, the owners have invested more than $1 million in waterside capital improvements in anticipation of harbor maintenance dredging which will provide the business more flexibility for its berthing vessels.[13] Once the harbor dredging is complete, plans to expand or redevelop the 8,000 square-foot building would improve operational efficiency, and might include limited processing of seafood product; this additional investment is estimated at $1.5 million and could increase current employment by 2 to 3 more workers.

[14] *http://www.ci.new-bedford.ma.us/ECONOMIC/HDC/Directory2.asp* (accessed December 2006)
[15] Hall-Arber et al. 2001. New England Fishing Communities. Available at: *http://web.mit.edu/seagrant/aqua/cmss/marfin/index.html* (accessed December 2006)
[16] *http://www.ci.new-bedford.ma.us/ECONOMIC/HDC/wtrgeneral.htm* (accessed December 22, 2006)
[11] FXM Associates interview with Dave Damorfal, Town of Fairhaven Harbormaster (May 2008)
[12] FXM Associates interview with Todd MacGregor, owner, MacAtac Sport Fishing (April 2008)
[13] FXM Associates interview with Sal Ingrande, Harbor Blue Seafood (May 2008)

Recreational Boating

Marinas

Six marinas in New Bedford Harbor are located in Fairhaven, and there are more than 580 boat slips for recreational vessels on the Fairhaven waterfront:[14]

- Acushnet River Safe Boating/US Coast Guard Auxiliary Flotilla - 150 slips
- Cozy Cove Marina (formerly Brightman's) - 90 slips
- Seaport Inn Marina - 105 slips
- Moby Dick Marina - 54 slips
- Fairhaven Shipyard - 170 slips plus transient moorings
- Fairhaven Shipyard North (formerly D.N. Kelly) - 12 slips.

These marinas accommodate various types of sail and power boats ranging from 23 to 120 feet; the Fairhaven Harbormaster and marina owners report increasing demand from larger boats (50+ feet) but access is restricted by limited water depths of less than six feet at low tide in some areas due to harbor silting. The majority of marina slips are rented on a seasonal basis with 5% to 6% of Fairhaven marina slips used by transient boaters. Most marinas are full-service, providing electricity, water, ice, shower, and laundry facilities; some have fuel docks but none have a shore-side pump-out facility. Marina slips average $70 to $80 per foot plus the cost of other available services. The Moby Dick Marina also offers indoor rack storage (summer and winter) for small boats (less than 33 feet) at the same price as slip rental ($80 LOA); Fairhaven Shipyard, Fairhaven Shipyard North, and Moby Dick Marina have winter storage both inside and outside. The majority of marina clientele are repeat customers, primarily from southeastern Massachusetts; there are waiting lists for slips at several of these marinas, particularly for larger vessels.

Moorings

The Fairhaven Harbormaster estimates there are more than 70 public and private moorings in Fairhaven waters of the harbor; the actual number is unknown because the town does not register moorings and some private property owners rent or sell moorings based on presumed riparian rights.[15] The town has 36 moorings near Crows Island which accommodate boats up to 38 feet with shallow draft (water depth is only 4.5 feet) for which there is no fee charged. All town moorings are used on a seasonal basis; however, if the number of public moorings is expanded in the future, there may also be moorings designated for transient boaters. The Harbormaster implemented mooring registration for public as well as private moorings during the 2009 season with a fee schedule possibly ranging from $75 to

[14] FXM Associates interview with David Darmofal, Fairhaven Harbormaster (April 2008)
[15] FXM Associates interview with Dave Darmofal, Fairhaven Harbormaster (May 2008)

$100 per mooring and differentiated for commercial moorings. The Fairhaven Shipyard has about 24 moorings and dinghy docks on the north and south sides of its facility that are seldom used by transient boaters.[16]

Acushnet River Safe Boating Club at 80 Middle Street provides a marina facility and volunteers for the U.S. Coast Guard Auxiliary Flotilla 605. The more than 300 members and their boats are USCG certified, and provide harbor patrols, safety and security functions, as well as assistance with special events held in Buzzards Bay. The 150-slip marina and fuel dock is for members only, but offers safe haven for transient boaters in need of a berth when slips are available. The Club also has one of the three fuel docks in New Bedford Harbor for members as well as other recreational boaters; more than 100,000 gallons of fuel are pumped at the club's dock during a typical summer season. Members are concerned that achieving compliance with new regulations for piping encapsulation and new underground tanks at fuel docks may be cost prohibitive for the non-profit organization, and the club will need grant or other capital funding assistance (e.g. Seaport Advisory Council) to continue operation of this public service for harbor boaters.

New Bedford Marine Rescue

This company under contract to TowBoat US provides towing service for recreational boaters from Sakonnet River to Mattapoisett Harbor, and is the primary rescue operation for recreational boaters in Buzzards Bay. The service is similar to AAA for automobile drivers; boaters buy an annual membership ($135) to TowBoat US, receive free towing from certified contractors, and the contractors are paid on an hourly basis by TowBoat US. Two of their rescue boats are docked at the Acushnet River Safe Boating Club, one at Fairhaven Shipyard, and one in Westport. The company tows smaller vessels averaging 25 feet and occasionally larger craft up to 65 feet; typically there are 300 tows per season (April to November), and there are eight part-time employees.[17] Since most of the harbor marinas shut down after 7 pm (dockmasters are unavailable), the company also responds to calls from transient boaters arriving after hours and unable to reach a harbormaster. Over the past eight years, this experience has indicated there is an increasing need for at least six additional transient moorings or slips in the harbor.

[16] Kevin McLaughlin, Fairhaven Shipyard at Recreational Boating Workshop (April 20, 2008)
[17] FXM Associates interview with Captain Clint Allen, Owner, New Bedford Marine Rescue (May 2008)

Public Boat Ramps and Dinghy Docks

The town built a boat ramp at Pease Park for trailer boats of less than 20 feet suitable for shallow water. This ramp was significantly upgraded during a 2009 construction project with also added a short pier for dingy tie up. The Harbormaster reports that the boat ramp is heavily used during weekends, when there are typically more than 100 vehicles in the parking lot and along side streets. This is the only public boat ramp in Fairhaven, although there have been proposals to build another at Marsh Island. There is a dinghy dock at Pease Park, and recreational boating representatives interviewed by FXM for this study stated there is a need for another public dinghy dock with a rack on the Fairhaven waterfront, or another floating dock with dinghy tie-ups at Union Wharf.

Tourism and Hospitality

The Fairhaven Tourism and Visitors Center ranks the working waterfront as one of the primary attractions for visitors, along with Henry Huttleson Rogers buildings, Poverty Point historic sites, and Fort Phoenix State Beach.[18] The central waterfront and marinas are within walking distance of numerous shops, inns, and restaurants located in the commercial district along Main Street. The primary market area for Fairhaven tourism includes Rhode Island, Cape Cod, New York, and New Jersey, and a significant number of visitors to the New Bedford Whaling National Park and Whaling Museum also incorporate key Fairhaven destinations in their travel plans. Union Wharf is a key site for tourists because it offers the only public access to the working waterfront as well as the harbor tour and water taxi (boat launch) dock. Based on comments received by the visitor's center, increasing the number of landings and transient moorings in Fairhaven for recreational boaters would enhance overall accessibility, and possibly increase the duration of visits by waterborne tourists.

Former Holiday Inn Express and Harbor Front Marina at 110 Middle Street is a mid-priced hotel, with function space and a marina. Property and business owners were unavailable for interviews during the preparation of this economic analysis study. The new owners of this property have changed the business name to Seaport Marina and Holiday Hotel and have begun renovation of the facilities including both the buildings and waterfront.

Whaling City Harbor Tours and Launch Service has become an established part of the harbor's hospitality industry, as the original Harbor Plan (2002) recommended, with harbor tour ridership from 'walk-on' patrons increasing 33% from 2006 to 2007, over the 18% increase from 2005 to 2006.[19] Customers of the water

[18] FXM Associates interview with Chris Richards, Director, Fairhaven Tourism & Visitors Center (may 2008)
[19] FXM Associates interview with Jeff Pontiff, Owner, Whaling City Harbor Tours and Launch Service (May 2008)

taxi/launch service are primarily from the owners' moorings near Captain Leroy's, the Fairhaven Shipyard, and Pope's Island marinas. The Union Wharf floating dock is the only suitable landing in Fairhaven, and provides public access for New Bedford tourists to shops and restaurants in downtown; most harbor tours from Fairhaven are arranged by schools and membership organizations. The 2002 Harbor Plan envisioned a harbor-wide route, but a schedule for water taxi service has not materialized. The operators believe this will be feasible with increased patronage, dredging of harbor sites such as Palmer's Island, and installation of signage and possibly two-way communication at selected locations similar to the system used in Boston Harbor.

4.1.4 DEVELOPMENT OPPORTUNITIES

Interviews with public officials and waterfront business owners and with selected Fairhaven businesses have identified several economic and real estate development opportunities related to Harbor Plan objectives to develop and sustain traditional water-dependent industries; capture new maritime industrial opportunities; capture new opportunities for tourism, cultural, and recreational uses; rebuild harbor infrastructure; and enhance the harbor environment.

Potential Waterfront Business Expansion

- Linberg Marine has plans to add a pile-supported pier on the north side of their facility, and complete associated dredging.[20]
- Fairhaven Shipyard has identified mega yachts (100+ feet) as a growing industry for repair and services that the company cannot accommodate due to a lack of space, although the essential services and water depths are in place (workshop). The Fairhaven Shipyard owner proposes improvement dredging with a Waterfront Development Shoreline Facility (see Section 6.2.2) or expanded bulkhead to accommodate more and larger vessels.[21]
- Fairhaven Shipyard North would like to reconfigure piers to accommodate at least four 150-foot vessels and five to six 100-foot vessels simultaneously, and increase the size of the facility's marine travel lift for larger luxury vessels which now average 150 feet in length.[22] Potential expansion in servicing mega yachts is based on growth in the luxury boat building industry, the boatyard's proximity to the New York/Long Island/Cape Cod premier cruising ground for large yachts, as well as fishing industry consolidation reducing the

[20] Fort Point Associates interview with Dick Searles, Linberg Marine Service (February 2008)
[21] Chet Myer, APEX Engineering, and Kevin McLaughlin, Fairhaven Shipyard Recreational Boating Workshop (April 28, 2008),
[22] Fort Point Associates Team interview with Andrew Kelley, vice President, D. N. Kelley and Son (February 2008)

size of the fishing fleet. Expansion over the next three to five years will enable the company to haul more boats, service more tugs, ferries, dinner boats, and other vessel types, and increase business sales with a modest increase in employment.[23]

- The Moby Dick Marina is anticipating additional navigational and improvement dredging north of Pope's Island in connection with the EPA harbor cleanup of Marsh Island. Existing water in this area is not navigable, and dredging would allow Moby Dick Marina to add about 25 more slips, based on available parking on-site, and to accommodate larger boats, which would increase sales by $75,000 per year.[24]
- The Fairhaven Harbormaster established registration and fees for public and private moorings in Fairhaven for the 2009 season, and estimated that this initiative would generate approximately $7,000 to $9,000 per season in revenue for the Town. Boat owners would register with the town, and the Harbormaster would assign a mooring location as well as inspect the boat owners' mooring equipment. When the next phase of the harbor dredging project is completed, the town mooring field could expand into the area south of Crow's Island to provide an additional 20 moorings.[25]
- The Seaport Marina and Holiday Hotel is situated at the east-west gateway to Fairhaven, and reportedly the property is being marketed for more intensive commercial or mixed-use (commercial and residential) redevelopment. This location and property were referenced in the original Harbor Plan (2002) as one of the Fairhaven waterfront development opportunities; however, additional information was not available during the course of this study.

Waterfront Area Retail and Restaurant Opportunities

There are eight eating and drinking establishments within the Fairhaven waterfront area with total annual sales of $4,300,000, and employing 84 workers.[26] While retail and most restaurant uses are limited in the Designated Port Area (DPA), a preliminary examination of existing retail and restaurant sales compared to expected demand within the local area indicates market-driven opportunities for additional retail and restaurant uses outside the DPA and within the waterfront area of Fairhaven.

[23] FXM Associates interview with D. N. Kelley, President, D. N. Kelley and Son (May 2008)
[24] FXM Associates interview with John Zolatas, Moby Dick Marina (May 2008)
[25] FXM Associates interview with Dave Darmofal, Fairhaven Harbormaster (May 2008)
[26] Claritas *SiteReports* (2007)

Harbor Environment Improvements

- Currently, the only shoreside pump-out facility in the harbor is at the Pope's Island Marina in New Bedford servicing only recreational vessels. Installing a public pump-out facility at Pease Park or at Union Wharf has been proposed. The Division of Marine Fisheries approved the Pease Park location and an $18,000 grant has been offered for the pump-out facility plan. The grant would require a $4,500 match but these funds are not currently available in the Town's budget. Although funds may be available through the Seaport Advisory Council and the Harbor Trustees Council[27] for the capital improvement, the Town does not have the funds available to cover the cost of operating the facility, thus, adding pump-out facilities in Fairhaven is currently on hold. [28]

- Gateway and Streetscapes improvements were recommended in the 2002 Harbor Plan for the waterfront and downtown areas. The Town Planner reports that portions of Green Street and Main Street have been rebuilt; Middle Street from Huttleston Avenue to Pease Park will be reconstructed during the summer of 2008.[28]

4.1.5 Union Wharf Redevelopment Potential

Town officials consider the Fairhaven waterfront a valuable public resource and economic asset, and envision a range of Union Wharf improvements to enhance public access to the central waterfront, support the commercial fishing industry, and generate additional municipal revenue. Union Wharf has a prominent and important central waterfront location, and provides the primary means of public access by water and land; it is also within a short walking distance to Main Street shops, restaurants, and historic sites in the village area, as well as the Cushman Park neighborhood. For these reasons, Union Wharf reuse and redevelopment remains a town priority for waterfront investment and capital projects over the next 3 to 5 years. Preliminary plans for infrastructure repairs and interim uses are underway, although formulating a cost-effective redevelopment program will require more detailed analysis of proposed waterside and landside uses, appropriate buildout and related parking requirements, as well as market support, financing options, and overall economic feasibility. The proposed Union Wharf redevelopment concepts for the building, docks, and parking lot are based on information provided by town officials, site inspection, and review of available pertinent documents. In the context of refining and updating the Harbor Plan, this examination considers

[27] Recreational Boating Workshop (April 30, 2008)
[28] FXM Associates e-mail message from William D. Roth, Fairhaven Town Planner (April 30, 2008)

proposed Union Wharf reuse/redevelopment consistent with regulatory guidelines and economic development objectives.

Existing Conditions

Union Wharf is located at the end of Union Street within the Designated Port Area (DPA), and is owned by the Town of Fairhaven. The two-story 13,136-square-foot wood and masonry building situated on the northern side of the wharf is now substantially publicly-owned by the town and is unoccupied due to structural and safety deficiencies. The Harbormaster manages the wharf property, and dock space is rented to 16 large commercial fishing boats (scallopers, draggers) and 10 smaller lobster boats. The wharf has finger piers on the south side, and a floating dock on the Northeast corner for public use (including the harbormaster) and the harbor water taxi service. There are 25 to 30 unstriped parking spaces on portions of the wharf. Eleven are designated for use by commercial fishermen with boats using rented dock space, and the paved area adjacent to the building and along the south side near the basin is used by lobster boat owners to air their pots. The wharf is accessible from Water Street where there are active business uses on the west side adjacent to the wharf parking lot, and mostly residential uses along the east side.

The town has received a grant from the Seaport Advisory Council to prepare engineering design plans for a sheet pile wall to repair and replace the piling system under the building and to configure a new parking lot.[29] The grant application states these infrastructure improvements will allow the town to expand berthing options, facilitate future dredging in the Union Wharf vicinity, and stabilize the building for rehabilitation and future use. The preliminary construction cost for pier repair is estimated at $300,000-$350,000, and final reconstruction costs could total $1.5 to $2 million, according to town officials.[30] The town is undertaking engineering design for the wharf repair/reconstruction project concurrent with pre-development planning and stabilization of the building, and interim reuse of the site. The town is addressing public safety issues posed by the structurally deficient east section of the building (2,969 square feet); demolition, stabilization, and security/fire alarm system costs have been estimated at $140,000.[31] This project will likely include using some clean fill generated from the harbor dredging initiatives to fill in under sections of the wharf that are currently pile-supported.

[29] Town of Fairhaven Union Wharf Engineering Design Project, Seaport Advisory Council Grant Application Approval, April 1, 2008
[30] FXM Associates e-mail message from Scott Moreau, Dyer Brown Southcoast, Architects (May 14, 2008), and William D. Roth, Town Planner (May 23, 2008)
[31] FXM Associates interview with Joe Booth, Dyer Brown Southcoast, Architects (May 2008)

Union Wharf Preliminary Redevelopment Schedule

Over the next 3 to 5 years (2010 to 2014), the Town of Fairhaven expects to accomplish components of Union Wharf redevelopment, based on work in progress, preliminary phasing milestones, and target completion dates. Once the wharf infrastructure is stabilized and upgraded to facilitate proposed dredging, the building rehabilitation would begin. The sequencing would be:

- Seaport Bond Bill Appropriation
- East Section Building Demolition
- Wharf Construction Engineering RFP/Bid Process/NTP
- Survey, phasing, refined cost
- Final Design, Permit Applications
- Construction Budget, Bid Documents
- Wharf Construction Funding
- Wharf Repair/Reconstruction (Phase I)
- Building & Site Pre-development Implementation, Funding Plan
- Design, Permits, Contracting
- Wharf Reconstruction Phase II
- Dredging, new piers or docks
- Building and Site Rehabilitation.

Conceptual Redevelopment Uses

The planned Union Wharf infrastructure improvements will allow the Town to expand berthing for commercial fishing boats, both harvesting and charter vessels, as well as facilitate dredging to water depths of up to 15 feet near the wharf (now precluded by instability of the granite block wall and wood pilings built in 1804). New waterside uses could include: (1) secured floating dock for the harbormaster boat (in addition to or in conjunction with the existing public floating dock used by the harbor water taxi; (2) 6 to 8 new slips to establish a centralized location for charter fishing boats; (3) additional berths for 3 to 5 large commercial fishing boats, and (4) new slips for other future excursion vessels. The renovation/rehabilitation of the remaining portion of the two-story building (approximately 8,500 square feet), based on current zoning for commercial use, is currently estimated to cost $260 per square foot, which would address structural and code deficiencies but not necessarily utility upgrades or interior finishes.[32]

[32] Ibid.

Consistent with DPA regulations for water-dependent and supporting uses, redevelopment of the two-story building totaling 8,500 square feet (first floor - 5,300 square feet; second floor - 3,200 square feet) could accommodate a combination of public and private tenants such as: [33]

- Harbormaster and Shellfish Warden offices on upper floor
- Gear lockers/stalls for charter boat and commercial fishing vessel owners on lower floor, with or without space for coolers
- Retail fish market on lower floor
- Seafood restaurant serving local users within the DPA on lower or upper floor
- Marine repair services on lower floor
- Marine-related commercial office space on lower or upper floor.

It is important to note that any portion of the building remaining on Union Wharf that is pile-supported over water can not house supporting commercial uses because they are not allowed under Commonwealth Waterways Regulations.

The specific elements of a building redevelopment program will be determined in part by zoning requirements for parking, the amount of on-site parking resulting from the engineering design layout for the parking lot after the partial building demolition, and availability of parking for new building users. In addition to emergency vehicle access, the Harbormaster has designated at least 12 to 15 parking spaces for owners of commercial fishing vessels docked at Union Wharf as well as a work area within the parking lot along the basin for the 10 to 12 docked lobster boats. Charter fishing boat operations and potential harbor tours or excursions from Fairhaven will be seasonal activities, and many charter fishing tours are conducted at night. These factors will minimize new parking needed at Union Wharf; however, adequate patron parking on the wharf will be necessary to avoid displacing the limited on-street parking available for nearby residential uses. Commercial office or retail uses will require considerably more parking as stipulated by the town's zoning ordinance.

A conceptual mixed-use commercial redevelopment program for the Union Wharf building would require about 55 parking spaces on-site in compliance with the town zoning code.[34] (see Table 4-4)

[33] Town acquisition of approximately 1,800 sq. ft. of the remaining structurally unsound building is part of the Union Wharf project pre-development phase.

[34] FXM Associates interview with William R. D. Roth, Fairhaven Town Planner (May 23, 2008)

Table 4.4 Estimated Parking Requirements under Current Town Zoning

Use Type	Amount	Proposed	Zoning Code	Parking Required
Retail	3,900 sf 1st floor	fish market, gear lockers, marine repair services	1 space/250 sf gla	15 spaces
Restaurant	1,500 sf 1st floor	12 seats/stools	1 space/2.5 seats	5 spaces
Office	3,000-3,800 sf 1st & 2nd floors	harbormaster, marine related services	1 space/300 sf gla	10-12 spaces

Overall redevelopment feasibility will depend on building rehabilitation costs (tailored to specific potential users), market or public-use demand for space, prices for comparable space, timeframe for amortizing construction costs, and sources of capital funds to undertake the redevelopment as well as operate the property. During subsequent pre-development planning and economic impact studies, the town will investigate available funding sources for the Union Wharf capital improvements. The town will consider establishing an enterprise fund to leverage state or federal capital grants and financing based on collection of municipal fees related to water and waterfront usage (e.g. docking, moorings, boat licensing and excise taxes). The Harbormaster estimates that the town collects $300,000 to $350,000 annually from 'water usage' and other related fees throughout the Town of Fairhaven, of which $175,000 to $200,000 is allocated for salary, fringe and operational expenses.[35] Union Wharf docking fees collected in 2008 totaled $52,000 and are projected to increase to approximately $100,000 with the new 2009 rates. Expanded berthing options that will be possible after the planned Union Wharf infrastructure improvements would increase docking revenue to about $125,000. Establishing town mooring fees in 2009 is projected to generate an additional $5,000 to $7,500 in revenue. On this basis, a Fairhaven waterfront enterprise fund could have net projected annual receipts (less current and anticipated Town expenses for waterfront related activities) in the range of $100,000 to $125,000.[36]

While it is premature to develop even a conceptual pro forma of operating and capital expenses and rental income, the following should be noted:

- Programming for building re-use, including identification of potential tenants and their fit-out requirements, should be undertaken as soon as possible to coincide with the engineering and conceptual site plan work for the pier structure. Developing such a small building for speculative uses, especially where the DPA requirements impose use restrictions, is not recommended.

[35] FXM Associates interviews with Town officials
[36] Ibid.

- The current architect's estimate of $260 per square foot for building rehabilitation should be reinvestigated in the context of actual potential users. Should costs actually reach this level, FXM's preliminary pro forma estimates (using current market rates for office and other commercial uses, as well as stalls for gear storage and so forth) indicate that achievable income will fall far short of the costs to amortize construction debt (even at triple net leasing terms). The Town would therefore need to dedicate some portion of net income from other harbor revenue sources or obtain public grant or other financial assistance. Rehabilitation costs should be in line with achievable rental income to more closely approximate debt retirement costs; costs will need to be substantially less than the $260 per square foot currently projected given foreseeable market rates for the uses now being considered and likely to be allowable in a DPA.

4.2 NEW BEDFORD WATERFRONT

4.2.1 INTRODUCTION

A study of the New Bedford waterfront economy was completed in early 2009 by HR&A, an economic research company based in New York. They evaluated the port economy and then identified opportunities for growth in targeted maritime-dependent sectors. This was done by collecting and assessing census and Claritas data, conducting meetings and interviews with industry stakeholders, and analyzing previous relevant studies and industry research. They prepared assessments of the industries currently active in the harbor (fishing, seafood processing, import/export, cruise, excursion harbor tours, ferry, recreational boating, cold storage and ice manufacturing, boat manufacturing and repair, and rail and trucking), as well as reports on growth industries of interest (renewable energy, marine science, short sea shipping). For industries having symbiotic relationships, such as fishing and seafood processing, the interaction was highlighted in the individual analysis sections of opportunities and constraints. They grouped these industries into commercial and recreational uses.

Extracts from the report's executive summary have been included below. The full report is available from the New Bedford Harbor Development Commission. The report evaluates the existing drivers of the harbor's economy and identifies new opportunity and areas for future growth. The main report has individual industry memoranda including a port assessment and business inventory to identify port-related economic activity in New Bedford, evaluate a full range of economic impacts including the multiplier effects of the harbor economy, and identify opportunities for harbor industry growth through an evaluation of each industry's strengths and challenges.

The City of New Bedford and the Harbor Development Commission (HDC), as with all public entities in the current economic climate, have very limited financial resources available to complete core infrastructure improvements and to support business initiatives. Assessments and recommendations were formulated, therefore, to facilitate a prioritization for the use of available resources with the flexibility to allow for inevitable shifts in priorities as new opportunities and mandates emerge. While grounded in reality of extensive market analysis, recommendations are intended to be aspirational, yet achievable. They reflect the understanding that the HDC will continue to be faced with a set of choices as to where to allocate scarce resources to achieve the greatest outcomes that leverage the unique assets of the Port of New Bedford, and align with HDC goals, including the most optimal economic returns on future public investment.

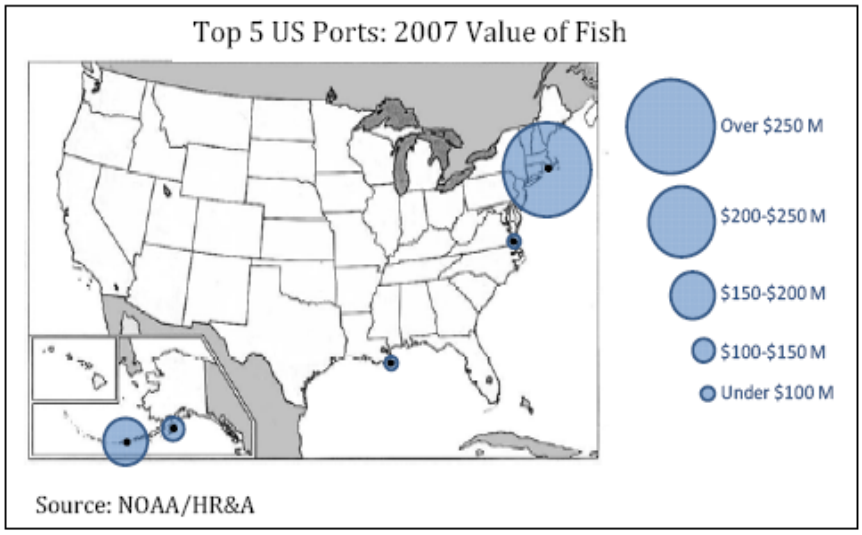
4.2.2 Current Port Economy

The New Bedford port economy today is diverse, with a mix of commercial and recreational uses. Fishing and seafood processing are by far the dominant employers and their presence defines much of the harbor's character.

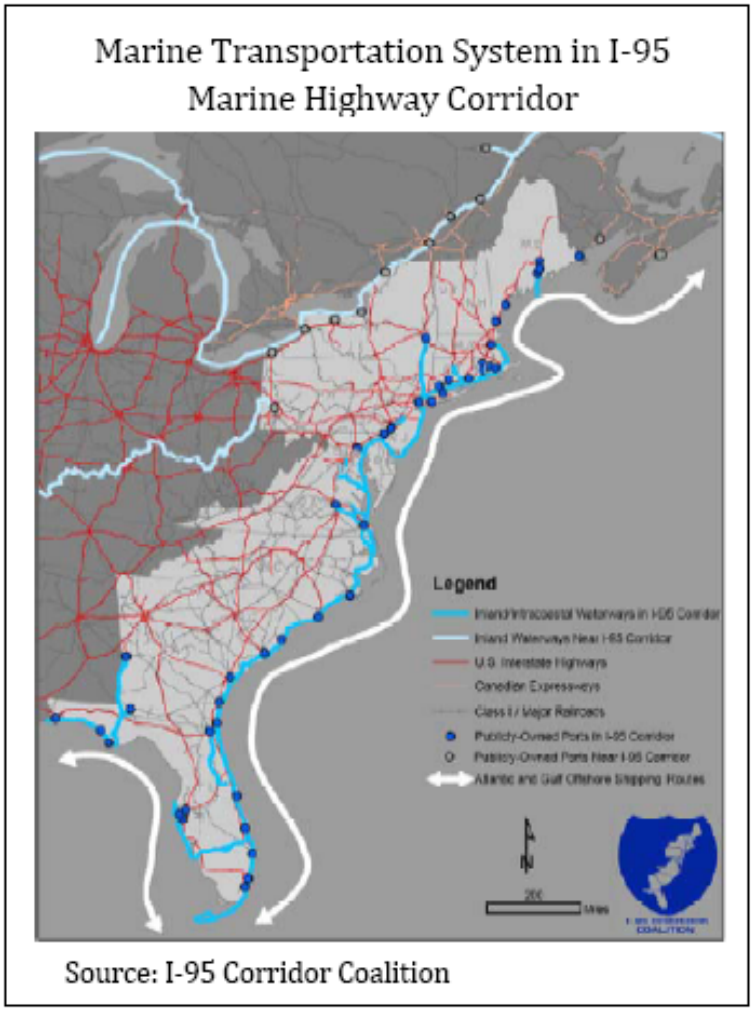
Impacts of the Port of New Bedford *At a Glance*	
Direct Port Economic Output	$579 million
Direct and Multiplier Economic Output	$849 million
Direct Port Employment	2,645
Direct and Multiplier Employment	4,893
Port-Related Economic Output as percentage of City Output	13%
Port-Related Employment as percentage of City Employment	12%

New Bedford port activity contributes to an economic engine in the City of New Bedford that supports over 2,500 direct port-related employees and another 2,200^{+} employees throughout the City through multiplier impacts. Harbor industries include a diverse range of businesses including seafood harvesting vessels and shore-side processing facilities, international cargo operations activities at various terminals, passenger ferry operations serving over 100,000 passengers each year, growing tourism activity as a port of call for American Cruise Lines and locally owned harbor tours, and many other businesses that support the many harbor operations. This direct port activity represents nearly 10% of the total economic output of the City of New Bedford; its impact is even larger, 13%, when multiplier impacts are considered. The New Bedford port economy, which defines the traditional identity of the City of New Bedford, is an important employer and economic generator in the City today and should be positioned for continued growth.

New Bedford's position as the highest value fishing port in the United States is an impressive distinguishing characteristic around which a diverse array of related businesses can be expected to continue to cluster. Seafood processing is the industry most closely tied with fishing, as seafood processors continue to rely on local catch for their product.



While traditional uses such as fishing and seafood processing define the identity of the Port, New Bedford's current trade agreements and prospects for the future are growing. In the 2008-2009 season, New Bedford's Maritime Terminal landed fifteen vessels from North Africa as part of a citrus trade. This trade was made possible because of the terminal's refrigeration capabilities to protect the perishable goods and an efficient customs process to facilitate the complicated transition from the ocean vessel to sealed trucks for delivery in Canada.



While not an international cargo port, New Bedford is working to position itself for domestic trade possibilities through the emerging Short Sea Shipping network. The U.S. Maritime Administration has been investigating the potential to relieve congestion on roadways and make better use of port infrastructure and the system of more than 25,000 miles of coastal, inland and intercoastal waterways by developing a reliable and sustainable marine highway program. New Bedford's location along the congested eastern seaboard with direct access to the marine highway could position the port as a vital hub in this network.

Other emerging industries may also find New Bedford uniquely well suited to their success. Marine science, a small, but growing sector in New Bedford, should continue to develop in a synergistic way to support a range of innovations from new alternative energy technologies and best practices in fishing, while contributing to the refinement of regulations which currently industry growth potential. The concentration of fishing industry operations at the City's central waterfront, and the collective knowledge of all aspects of the sea, could well become the nexus for greater collaboration and innovation with SMAST, Woods Hole and other leaders in research, development and technological advancement in marine science.

While the seafood related industries support much of the economic activity of the port, their future is threatened by economic and regulatory conditions. Uncertain fishing regulations threaten the long-term sustainability and profitability of New England fishing operations and worsening economic conditions could affect seafood sales.

4.2.3 OPPORTUNITIES AND RECOMMENDATIONS

The depth the numerous industry sectors identified by the HDC have been analyzed and opportunities have been found for further collaboration and growth, but potential challenges to success have also been identified. The Harbor has the potential to sustain many disparate activities of a diversified economy, as it does today. But the Port does have its physical constraints that limit the extent to which accommodation of expanding sectors can occur without impacting other existing uses. These circumstances will require balancing the economic promise of new uses carefully against the potential strains such change might cause. The following recommendations highlight opportunities for economic growth by in the port economy:

FOSTER GROWTH IN NICHE WATERFRONT USES.

To protect and leverage the inherent value of New Bedford's working waterfront, niche waterfront industrial and commercial uses of an appropriate scale for the Port and the City should be fostered. Opportunities include:

- *Refrigerated Cargo Operations:* New Bedford and the Harbor Development Commission should seek to maintain their competitive advantage in the refrigerated cargo industry. While the Port has had recent successes in trade with Northern Africa, growth of this niche market is constrained by the barrier caused by the Route 6 Bridge. To allow for growth of this trade through accommodation of larger vessels, New Bedford could invest in refrigeration facilities in a location between the Hurricane Barrier and the Route 6 Bridge.

- *Short Sea Shipping/American Marine Highways:* Short Sea Shipping is an emerging industry that could be an important growth sector for New Bedford. As the federal government continues to prioritize sustainable policies and federal stimulus funding provides for investments in transportation and green innovations, this new mode of domestic freight transportation via marine highways could see significant growth. As this industry emerges, New Bedford should continue to position itself as a Short Sea candidate, including port capacity for Roll-on/Roll-off goods movement, through ongoing advocacy, marketing and cultivation of partnering ports and transport companies. These efforts require a relatively limited amount of financial investment to sustain, but can be expected to build greater awareness of New Bedford's assets, and strengthen the port's competitive position.

Facilitate collaboration between harbor industries.

There are significant opportunities for increased collaboration among waterfront industries to enhance the productivity, profitability, and local economic impacts of the port. Leveraging the fishing industry as the organizer of port activity and economic impact can benefit not only other port uses, but the fishing industry itself. The HDC should continue to strengthen communication and collaboration between the following industries:

- *Fishing Industry and Marine Science:* Cooperative research can facilitate data collection for marine researchers and aid in the development of innovative fishing techniques that are less disruptive to existing and protected ecosystems. New research could potentially lessen or refine government regulations regarding days at sea and maximum catch regulations.

- *Fishing Industry and Seafood Processing*: Seafood processing representatives suggest that it would be feasible and beneficial to have direct relationships with local fishing vessels. Fostering these relationships while simultaneously rewarding high quality local fish product will incentivize seafood processing firms to source more of their product locally and develop

a New Bedford seafood brand. The City's and HDC's efforts to market and support this branding campaign will increase profitability of these industries and further establish New Bedford's identity.

o *Fishing Industry/ Seafood Processing and Tourism industries:* With the success of the working waterfront festival and other public events as a guide, New Bedford should seek to leverage the unique and authentic fishing culture to benefit increased year-round tourism along the harbor. While locational decisions regarding recreation and commercial uses are critical to maximize benefits and limit potential conflicts, increased collaboration of the fishing industry with harbor tours and the cruise industry through scheduled lectures, tours of fishing boats and processing facilities, and more restaurant options, and markets with local fish available for purchase will increase the economic impact of these tourism uses.

DRAW DOWNTOWN ASSETS TO THE WATERFRONT.

It has been widely noted that New Bedford would strengthen its economic base were there greater connectivity between Downtown and the waterfront. Around the world, improved public access to formerly industrial urban waterfronts has been the catalyst for sustained and diversified economic growth. And yet, in New Bedford, the connectivity of downtown assets to the harbor remains quite limited. To improve the economic impact of waterfront tourism and leverage New Bedford's inherent strengths to attract emerging industries and provide amenities to city residents and workers, downtown assets should establish a presence at the waterfront.

o *Emerging Industries:* The marine science and renewable energy industries are important growth sector opportunities for New Bedford. SMAST, NOAA and the New Bedford Economic Development Council's Quest Center are all important assets in the growth of these industries but perhaps New Bedford's strongest assets are its port location, proximity to Buzzards Bay, and resident fishing fleet. New Bedford should leverage their strongest asset, the port, by creating incubator space or a satellite facility for the Quest Center on the waterfront. This type of investment will help attract new firms by facilitating collaboration with the fishing industry and providing easier access to testing facilities. An expanded facility could also serve as a vocational opportunity for the youth of New Bedford and an organizer for a sustainable waterfront.

o *Waterfront Tourism:* New Bedford Harbor and the City's downtown have many engaging tourism destinations attracting visitors each year and yet at present there are few opportunities to capture discretionary spending by

these visitors at the waterfront. Water-dependent recreational uses such as harbor tours and cruise ships as well as passenger ferry operations bring over 100,000 people to the waterfront each year. Island-bound passenger ferries bring a particularly captive, high-income market to the waterfront seasonally but the economic spin-off from this activity is minimal. Drawing downtown establishments to the waterfront in the form of food and beverage carts, retail vendors, and satellite exhibits from popular museums such as the whaling museum can significantly enhance the value of this market to the City of New Bedford and transform the experience of waterfront tourism in New Bedford.

5.0 WATERSHEET MANAGEMENT PLAN

5.1 ISSUE

New Bedford Harbor is an active commercial working port, inter-modal transportation node, and a playground supporting a range of recreational activities as well as a tourist destination largely centered around the region's rich maritime heritage and active working port ethic. The Port supports a diverse mix of water-dependent industries, which adds to the vitality of the waterfront and offers opportunities for broad-based economic growth. Not all these activities are always compatible, thus port development plans need to consider separating or buffering conflicting uses where appropriate.

The present and expected future demand for safe and easily accessible dock/wharf and mooring space exceeds what the Port can currently meet without significant new investment in both shore-side infrastructure and dredging. Expansion of these facilities needs to be balanced by retaining sufficient open watersheet for the safe navigation of vessels moving through or maneuvering within the Harbor. This open watersheet includes turning basins, safety buffer zones, and navigational channels of adequate width and water depth. As larger sizes and an increasing number of vessels compete for use of the finite amount open navigable water, it will be necessary to carefully consider the impact of any initiatives to enlarge shore-side and/or overwater facilities, mooring fields and other waterfront infrastructure that may inhibit movement of waterborne traffic. If the density of marine traffic significantly increases, in addition to retaining an adequate amount of navigable water, it may prove necessary to implement various traffic management practices to ensure that vessels can continue to operate safely, efficiently, and with minimal impact on the environment.

The following key principles have been considered in developing this watersheet management plan:

- safety of all Harbor users;
- sustainable and equitable use of the Harbor;
- support for economic growth of appropriate water-dependent industries;
- protection of historic and natural resources, including aquatic flora and fauna;
- optimal use of public investments.

5.2 RESPONSIBILITIES AND JURISDICTIONS

Several different governmental agencies and organizations have jurisdiction within New Bedford/Fairhaven Harbor. Waterfront development, infrastructure upgrades, dredging and other construction and repair projects on or over the watersheet typically are reviewed by State Executive Office of Energy and Environmental Affairs (Coastal Zone Management, Department of Environmental Protection), State Department of Marine Fisheries, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, the Harbor Development Commission, local municipal conservation commissions, zoning and waterways management boards, and a variety of other federal, state and city officials. In addition to addressing issues from these entities, the public process used in developing this Plan sought and considered input from waterfront property and business owners and other port stakeholders including the general public. Laws, regulations and mandates that impact port operations or other uses of the watersheet are enforced by many different agencies including the Harbor Development Commission, U.S. Coast Guard, Massachusetts Environmental Police, police marine units (state and local), local harbormasters, MassHighway (bridge operations), U.S. Army Corps of Engineers (hurricane barrier) and other city/town, state and federal enforcement officials.

Although there is much overlap in responsibilities, those entities involved in law enforcement and daily port operations work together very closely in employing their limited resources. Their cooperative efforts have generally been effective in overseeing waterfront and port activities in the Harbor and ensuring that the port is operated in the best interest of the public to support economic growth, to promote public safety and enjoyment of the harbor, and to protect the environment. Additional law enforcement and port operations resources will likely be needed as both the Port's commercial and recreational activity continues to grow.

Following is a summary of some of the responsibilities of the law enforcement organizations that are routinely present in the Harbor:

Harbor Development Commission (HDC)

The HDC is the governing body for New Bedford's harbor jurisdictions and municipal waterfront properties. It was created by the general court in 1957 and is chaired by the Mayor of New Bedford with 7 other members. The New Bedford enabling legislation gave the HDC the authorities of the harbormaster and the responsibility to manage commercial and recreational vessel activities over all the waters within the New Bedford city limits, including the City's entire coastline, harbor, and north along the Acushnet River to the City's boundaries. The HDC manages city property on the waterfront, including

Homer's, Leonard's, Steamship, Coal Pocket and Fisherman's Wharves and a 198-slip recreational marina at Pope's Island. The Commission also assigns moorings within City waters, enforces rules regarding use of piers, wharves and parking areas under its jurisdiction, and issues permits for harbor events and for use of city-owned waterfront facilities.

Harbormasters

Both Fairhaven and New Bedford have harbormasters who enforce local laws relating to marine environmental protection, negligent boat operation and general use of the watersheet. They also manage the city/town's mooring fields and operate boat waste pump-out facilities. The New Bedford Harbormaster acts as an agent of the HDC. The Fairhaven Harbormaster office is operated under the Town's Board of Selectmen.

New Bedford Police Marine Unit

New Bedford Police Department has a marine detachment with an office and dock space located at the southwest corner of Fisherman's Wharf. This detachment maintains an active daily presence on the waterfront and, in addition to law enforcement and responding to marine emergencies, assists with watersheet management and other duties promoting the efficient and safe operation of local maritime activities. This detachment coordinates the use/deployment of the City's dive team.

United States Coast Guard

The Coast Guard has jurisdiction for the enforcement of federal laws over all U.S. navigable waters including all of the New Bedford/Fairhaven Harbor. Responsibilities range from port security and response to marine emergencies to the permitting of marine events and licensing of commercial ship operators.

New Bedford/Fairhaven Harbor is within the area of responsibility for Coast Guard Sector Southeastern New England, headquartered in Woods Hole, Mass. The Harbor is primarily served by Coast Guard boats from Station Menemsha located on the SW corner of Martha's Vineyard. This is one of the Sector's eight small boat stations. A boat crew from this Station is normally assigned to patrol New Bedford/Fairhaven Harbor several times per week, more frequently during special events or high-use periods. Coast Guard Air Station Cape Cod is about 20 miles away by air and is also available to respond to emergencies in or conduct surveillance of the Harbor.

Two Coast Guard 270-foot medium endurance cutters had been homeported in New Bedford and moored at the State Pier but were moved to Kittery, Maine in 2003. The only remaining full-time Coast Guard presence in the Harbor is limited to a small Marine Safety Field Office (CG MSFO) located in a building next to Fort Rodman in New Bedford. They conduct marine casualty investigations and commercial vessel inspections and respond to marine pollution incidents. A Coast Guard commercial fishing vessel safety coordinator is assigned to this office. Relocation of this activity to the proposed new Centralized Port Operations Center (see below and Section 7.3.4.3) should be discussion with the Coast Guard as part of the preliminary planning for this new waterfront facility.

A Coast Guard Auxiliary unit (Flotilla 1N-65) is operated out of facilities located on the Fairhaven waterfront, just south of the Route 6 causeway connecting New Bedford and Fairhaven. Although not directly involved in law enforcement, the members of the Coast Guard Auxiliary (all non-paid volunteers) assist with marine events, performs boat safety inspections, offer classes in safe boating, and conduct safety and general harbor patrols. The Auxiliary also occasionally completes air patrols over the Harbor looking for pollution sheens or boating/vessel safety issues.

Coast Guard responsibilities relating to this Harbor's operation include:

- Regulating vessel traffic within federal navigable waters
- Licensing and inspecting commercial vessels
- Responding to marine emergencies and significant marine events
- Placing & maintaining aids to navigation (e.g. buoys, lighthouse, beacons)
- Providing port security
- Responding to spills and protecting the marine environment
- Approving marine event permits and when needed providing safety patrols
- Breaking ice when it impacts commercial vessel operations
- Operating Buzzards Bay Vessel Movement Reporting System[1.]

[1] The Buzzards Bay Vessel Movement Reporting System is operated under the direction of Coast Guard Sector SE New England (Woods Hole) with vessel reports passed through the USACOE Control at the Cape Cod Canal. Reports are required from all vessels passing through Buzzards Bay carrying more than 5000 gals of fuel/oil, power-driven vessels over 65 feet (20m) or any vessel displacing over 100 gross tons carrying passenger(s) for hire, or any vessel over 25 feet in length while engaged in towing. This would include all vessels of this type moving in and out of New Bedford Harbor.

Army Corps of Engineers (USACE)

The USACE is responsible for the operation and maintenance of the New Bedford Hurricane Barrier including the opening and closing of the two hurricane doors that guard the main shipping channel leading into the harbor. Corps officials decide when the gates will be closed and reopened. The Corps also is directly involved in the oversight and approval of dredging activities and other shoreline or in-water (i.e. flowed tidelands) infrastructure projects.

Massachusetts Environmental Police (MEP)

MEP duties primarily involve enforcing state laws relating to boating safety and marine fisheries but also frequently support search and rescue and homeland security missions. There are at least two Environmental Police Officers (EPOs) working in or around New Bedford Harbor on most days. Two MEP boats are assigned to the Harbor: a 41-foor utility boat and a 27-foot SAFE boat. When not in use, both are normally docked at the Pope's Island Marina.

5.3 HARBOR DESCRIPTION

New Bedford/Fairhaven Harbor is located at the mouth of the Acushnet River, slightly more than 7 nautical miles north of the main Buzzards Bay shipping channel. The channel leading into the Harbor is marked by the Butler Flats Lighthouse and a system of federally maintained buoys. The channel has a project width of 350 feet and a controlling depth of between 28 and 30 feet at mean low water. The mean tidal range in the Harbor is approximately 4 feet. This is an excellent deep-water harbor, capable of safely accommodating merchant vessels serving a variety of important marine industries.

The inner harbor's south entrance is defined by a hurricane barrier constructed in the 1960s that runs east-west from the Town of Fairhaven ¾ mile across the Harbor to the City of New Bedford and protects the inner harbor during exceptionally high tides or severe storms. The Barrier's 150-foot-wide opening through which ships navigate into the Harbor is closed (employing two 440-ton gates) during these meteorological and/or astronomical events.

The main inner harbor or working port extends north from the Hurricane Barrier to a fixed highway bridge (I-195). This well-protected historic port is up to ¾ mile wide and 2 ¼ miles long, divided approximately in half by a causeway (Route 6). In the lower half of the inner harbor, there is a federally defined turning basin and anchorage area located on either side of the 350-foot-wide main shipping channel

running roughly north-south down the Harbor's center. The channel, turning basin (approximately 1,000 feet wide) and anchorage area (an additional 500 feet in width) have controlling depths of approximately 30 feet and collectively form a large deep navigational area that covers much of the water sheet adjacent to the DPA(s).

The Route 6 causeway running across the Harbor has three bridges, two of which are fixed with vertical clearances of only 6 feet. The third is a swing bridge crossing over the main shipping channel. When in the open position, this swing bridge allows access to the northern half of the inner harbor through two openings, each slightly less than 95 feet in width. These openings restrict the size of vessels that can reach the Harbor's northern-most terminals.

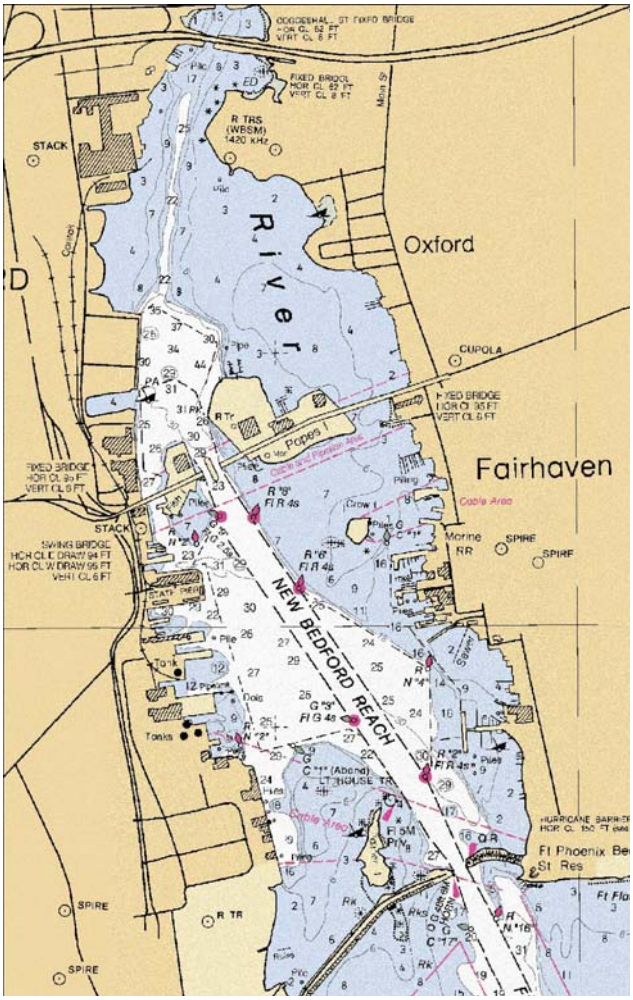


Figure 5.1 Nautical Chart

Large commercial and merchant vessels moving through the Harbor can encounter some unusual navigational challenges:

- The watersheet in the vicinity of the Hurricane Barrier gates can, at times, be congested with small boat traffic, most notably on fair weather summer Sunday afternoons when recreational boating activity peaks. Navigating through the restricted opening requires extra caution particularly when there are less than ideal environmental conditions (strong tidal currents, fog/reduced visibility, wind). Local harbor pilots, required to be on most large ships entering the Port, are very familiar with these hazards and are experienced in safely moving ships through the Barrier. An anemometer on the barrier is maintained by the Army Corps of Engineers and proves very useful to ship operators/pilots.

- The number of small private pleasure boats operating in this working port continues to grow. These boats do on occasion inadvertently interfered with the operation of larger, navigationally-restricted vessels. These situations can result from the carelessness of an inexperienced private boat operator and/or the impatience of an experienced commercial boat captain. Although accidents have been rare, these encounters can be frustrating for the commercial operator and/or present a dangerous situation for both vessels.
- The local harbor pilots will generally not take ships longer than 475 feet through the Route 6 swing bridge. Ships over 400 feet in length or with beams greater than 60 feet will normally only be moved through the bridge during daylight hours and while escorted by at least one tug. Merchant ships generally will not be taken through the bridge opening when winds are over 25 knots. Large ships without a bow thruster may be further restricted (i.e. have lower wind thresholds).

For smaller commercial and recreational boats, several areas of the Harbor require special alertness and patience. In addition to the Hurricane Barrier opening and the Route 6 swing bridge, these include:

- In the immediate vicinity of the active working waterfront including most of the New Bedford side of the harbor and the channel running between Fairhaven and Crow Island.
- On the west side of Fish Island, particularly when this channel is congested with boats taking on ice or fuel at the docks immediately south of the Route 6 causeway.

5.4 WATERSHEET USES

The inner harbor waterfront south of the I-195 Bridge is filled with a large commercial fishing fleet, piers, processing plants, and wharves serving various marine industries, particularly on the New Bedford side. The Fairhaven waterfront has a mixture of commercial, fishing, and recreational boat yards and marinas in addition to some sections of private residential waterfront property. All of the recreational boat marinas in the inner harbor are located on the Fairhaven waterfront or on Pope's Island. A few recreational boat marinas are located north of the Route 6 causeway, the northern most (i.e. Moby Dick's Marina) is located adjacent to the I-195 bridge. Boat ramps used for both commercial and recreational boats are located off Gifford Street in the extreme southwest corner of the inner harbor (on the New Bedford side) and at the end of Pease Street (on the Fairhaven side).

The predominant uses of the New Bedford/Fairhaven watersheet and waterfront are:

- Homeport for fishing boats, a variety of other commercial boats and a growing number of recreational boats,
- Port of call for cruise ships, mega yachts, historic vessels/tall ships, seagoing freighters, tugs and barges, and transient recreational and fishing vessels,
- Operating area for government law enforcement and emergency response boats, water shuttles/taxis and excursion vessels, and various floating platforms conducting activities including harbor cleanup, dredging, marine construction, research and education,
- Transportation node for passenger ferries and for ships and barges carrying cargo in and out of the port,
- Port of refuge for boats and ships during severe storms, extreme tidal conditions or other significant marine events,
- Base for a full range water-dependent services for boats and ships,
- Large variety of recreational, educational and other public activities.

Figure 5.2 depicts the predominant uses within specific areas of the inner harbor. This figure is not included for regulatory purposes nor to indicate restricted uses, but rather as a guide for general planning preferences.

Commercial Fishing Boats

As one of the few remaining full service hub ports for the commercial fishing fleet based in the Northeast U.S., New Bedford/Fairhaven Harbor is expected to continue supporting several hundred fishing boats, both homeported here or transient vessels seeking services and/or temporary berthing in the Port. As off-shore fishing stocks continue to return to sustainably levels, there is a reasonable expectation that the commercial fishing vessel fleet will become more active, moving in and out of the Port more frequently.

Recreational Boats

During the summer months (Memorial Day through late September), recreational boats are a significant presence on the Harbor's watersheet. As the Harbor continue to become cleaner and the Port's reputation for outstanding marine service/facilities and attractions (restaurants, museums, walkways) becomes better appreciated, more recreational boats are finding their way here. These include both transient boats and a growing number of boats that have made the Harbor their homeport. Over the past several years new moorings have been added and existing marinas expanded. The future

impact of rising fuel costs on the use of power boats is not clear, but it appears likely that growth in the number of power boats may at least level off for the next several years. Sail boats and human-powered craft such as kayaks, rowing shells and canoes may become more common in the Harbor.

Support service for large pleasure boats and mega yachts (i.e. over 80 feet in length) is anticipated to be a very rapidly growing industry for the Port. The demand for conveniently located services for mega yachts continues to exceed the capacity of existing providers, both regionally and internationally. Fairhaven and New Bedford, with their existing inventory of quality ship repair facilities and marine equipment/supply retailers, are in an excellent position to realize significant economic benefit from this opportunity.

The Port will need a comprehensive plan outlining infrastructure improvements, regulatory changes, fee schedules, support services and marketing strategy if it is to realize the full economic potential of recreational boating activities. A mooring field study including required permitting, fee structure and definitions of regulatory terms has been initiated by the City and was completed in Spring 2009. This was considered the first step in developing a complete recreational boating plan for the Port.

Tourism

There is a realistic expectation that ferry, cruise ship and excursion/shuttle boat traffic in the Harbor will continue to grow over the next several years, attracted to the harbor by its rich history, active waterfront, a clean environment, and a growing inventory of attractions and amenities on or within easy walking distance of the waterfront. Two ferries currently operate from State Pier carrying passengers between New Bedford and both Cuttyhunk and Martha's Vineyard islands with other routes periodically tested (e.g. Woods Hole). Small cruise ships make regular port calls during late spring, through the summer and into early fall accounting for about 30 visits per year.

Merchant Marine Traffic

Ocean-going freighters carrying fruit, fish and dry cargo regularly visit the Port. The Sprague facility (previous power plant site), State Pier and Maritime International have been the primary destinations for cargo coming into the Port in recent years. Bridge Terminal was not had much activity recently but continues to have the ability to efficiently handle commercial traffic. The new Harbor Terminal proposed for the northwest side of Popes Island will likely attract more merchant traffic to the Port. Short Sea Shipping, support for off-shore marine construction (wind generators, oil/gas exploration), and

expanded bulk cargo operations are all possible growth industries for the Harbor and likely to add to the amount of vessel traffic.

5.5 ECOLOGICALLY SENSITIVE AREAS

Vessel activities positively contribute to the economic vitality and the quality of life in the coastal region but can also play a role in stressing shoreline and aquatic environments. While the effect of a single boat on a body of water may be insignificant, multiplied by the hundreds or even thousands of boats moving through the Harbor, such effects can have a noticeable negative impact. Wakes can cause shore erosion and damage to other boats, discharges can degrade the water quality and extensive use of anchors or negligent operation of boats in shallow water can scar the harbor's bottom and damage the flora and fauna that live there.

Commendable efforts have been made by the City and Town and by organizations such as the Coalition for Buzzard Bay. The Harbor, for example, lies entirely within the limits of the larger regional Buzzards Bay No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a NDZ are completely prohibited from discharging any sewage, treated or untreated, into the Harbor's waters.

Although improving and sustaining the general ecological health of the entire harbor continues to be a priority, three areas are particularly noteworthy and deserving of special attention (See figure A-2).

The **Upper Harbor** above the Coggeshall Street (I195) Bridge does not efficiently support any marine industries because of its shallow water depth and vessel access restrictions created by the fixed bridges with their low-vertical clearances at its southern end. Land on the New Bedford side is being used less to support industry as old mill buildings are converted for office, retail, and other commercial and residential uses. As this mixed-use neighborhood continues to evolve, amenities along the waterfront should include more walkways, bike paths, docks for small recreational boats, parks and other infrastructure supporting a variety of recreational uses and improved public access to the water's edge. As part of a major BrownPort's (CERCLA) initiative, the EPA's ongoing project to remove contaminated sediments from this portion of the Harbor will make it more attractive and safer for public use and enjoyment. Fairhaven's shoreline is largely covered with trees and other vegetation north of the bridges and supports what is anticipated to be a natural setting for quiet recreational use of this section of watersheet.

Use of non-motorized vessels (e.g. row boats, kayaks, canoes, crew shells, small shallow-draft sail boats) appears to be the best fit for the upper harbor, along boats

supporting these activities and low-powered boats used for fishing and other relatively passive recreational pursuits. Use of jet skis, high-powered pleasure boats or other platforms that create significant noise, wake or other adverse disturbances should be restricted or prohibited. A competitive crew rowing course is being design for this section of the Acushnet River. A boat house and docks to support this new activity will be added over the next few years.

Marsh Island located on the Fairhaven side of the Harbor just south of the I-195 Bridge was an area that was significantly modified several decades ago while being used as the primary disposal site for a large volume of sediment dredged from the Harbor. The Coalition of Buzzards Bay is currently leading a project to reestablish some of the salt marsh around the Island and restore other parts of the ecosystem. This is an area that should be protected and restored to its natural condition while also offering public access to the water's edge.

Palmer Island is located in mid-harbor immediately north of the Hurricane Barrier. It is undeveloped with the exception of a small automated lighthouse on its northeast corner. The Island had been covered by cedar trees in the distant past but is now vegetated by low plant growth including a large amount of poison ivy. There is general consensus that the natural ecosystems on and around Palmer Island are important to both the aesthetics and health of the Harbor and should be protected. There is less agreement on the extent of work that should be done to enhance the public's use and enjoyment of the Island. Opinions range from (1) leaving it as it is, just promoting the return of natural vegetation on the land and in the water areas immediately around it to (2) building a pedestrian bridge (connecting the Island and the Hurricane Barrier) and/or a water shuttle dock to allow easier access and creating walking paths and/or board walks around and across the Island.

5.6 WATERSHEET MANAGEMENT

5.6.1 VESSEL MOVEMENT AND OPERATIONS

Operational conflict between watersheet users has been infrequent in New Bedford/Fairhaven Harbor, limited normally to a small handful of major public marine events and a few peak-use periods on summer weekends. Unless vessel traffic increases significantly in the Harbor, these incidents should be controllable by existing law enforcement officials, continued boater education program, and possibly by the addition of some warning or cautionary signs in the Harbor. As is often done now, this would mean having a law enforcement presence at known congestion points during peak use periods and providing

escorts for larger, navigationally restricted vessels transiting the Harbor when there is a significant amount of other harbor traffic.

The Coast Guard Auxiliary has been very effective at educating boaters on the safe operation of their boats and on local dangers that they may encounter. These education initiatives should be encouraged and promoted.

The City of New Bedford has plans to created coded mooring areas with colored/numbered markers that would separate potential conflicting uses (recreational, commercial, heavy commercial) of these open water areas.

Additional signs may be useful around the Harbor to mark no-wake zones, the need for caution when operating a vessel within the working port, and the presence of and dangers associated with the movement of large merchant vessels. Additional seasonal markers delineating mooring areas should also be considered.

As the Harbor becomes more active with marine traffic, it will be necessary at some point during peak activity periods to employ additional law enforcement resources to monitor and, when needed, control traffic movement into and out of the Harbor and to and from some commercial docks and wharves. These additional resources may need to come from local harbormaster or marine police units or from the Coast Guard. At some point, with a significant increase in boating and commercial traffic in the Harbor, the merits for establishing a seasonal Coast Guard small boat detachment in the Harbor or increasing the local and/or State law enforcement presence will need to be evaluated. It is clear that continued close cooperation will be needed between all local, state and federal entities that have law enforcement responsibilities within New Bedford/Fairhaven Harbor.

5.6.2 OPEN WATERSHEET

For New Bedford/Fairhaven Harbor, one of the major issues relating to watersheet management is the continued availability of sufficient open water for safe vessel navigation. This includes maintaining channels, turning basins and anchorages of an adequate size and water depth to support existing and appropriate future marine industries and other public uses. Local harbor pilots have expressed concern that any significant future expansion of mooring fields and fixed structures over the water in the inner harbor is likely to impact their ability to safely and/or efficiently maneuver large merchant vessels through the Port. Close monitoring and control of all waterfront or over-water

development is essential to prevent any loss of critical open watersheet. Port security, operational flexibility and navigational safety all need to be considered in evaluating a proposed development's potential impacts on port operations. The State Harbor Line and federal and state channel boundaries should continue to be primary regulatory tools for limiting expansion of infrastructure into navigable waters.

On the other hand, to take full advantage of new opportunities or even to continue to adequately support existing water-dependent activities, the Port will need to add new and/or upgrade existing docks, moorings, piers and other waterfront structures. This obviously will require a careful balance between the Port's need for marine infrastructure and for open navigable water.

Water depth naturally defines what uses are appropriate for different parts of the Port. Obviously deep-draft vessels require sufficient water depths to allow them to be safely moved to commercial terminals or port facilities while smaller pleasure craft can access remote and much shallower sections of the Harbor. Thus, the location of support facilities needs to be matched with the water depths required for the customers they serve (i.e. recreational boat marinas and mooring areas should not be located in deep water part of the working port).

5.7 ACTIONS

Deep-Water Facilities. In order for New Bedford to retain its options for future expansion of marine industry terminals and commercial shipping, particular emphasis will be placed, where ever practical/feasible, on reserving the City's remaining DPA waterfront immediately adjacent to deep water (i.e. in excess of 15 feet at mean low water) for appropriate uses requiring deep-water access. This would include use by coastal and ocean-going freighters, industrial barges, commercial passenger vessels, large support/research vessels, government ships, and other deep-draft vessels important to the continued and future viability of the Harbor as a modern working port.

Harbor Line. The Massachusetts State Harbor Line defines the seaward allowable limit of waterfront development or build-out and is intended to preserve the Port's open watersheet for vessel navigation. The precise location of this regulatory line is currently neither well defined nor easily determinable in many parts of the Harbor. Its location has been adjusted several times over the 150^{+} years of its existence in response to changing harbor uses. The HDC will likely be requesting a change to the line to accommodate a proposed expansion of fishing vessel berthing facilities in the central harbor area. This

Line needs to be resurveyed. Some additional adjustments are likely appropriate and should be carefully considered, balancing the needs of the Port today with anticipated future uses.

Separation of Conflicting Uses. The working and 24/7 nature of commercial vessel operations does not generally mix well with recreational uses of the watersheet. For this reason, it is preferred to separate industrial and recreational uses within a harbor. Creation of buffer zones may be useful in some areas. In recognition of potential conflicts, the State waterways regulations do not currently allow recreational boat marinas to be located within a Designated Port Area (DPA). On the other hand, certain vessel support services (other than providing slips or moorings) located in the DPA remain profitable because they serve the needs of both commercial and pleasure boats. Therefore continued recreational boat access to services in the working port is important as long as it does not conflict with industrial activities or create an unsafe situation. In Fairhaven, recreational boat marinas would best continue to be located on the waterfront north and south of the existing DPA. In New Bedford, further expansion of recreational boat slips and moorings should be limited to the south side of Popes Island and the relatively shallow water areas north and south of the DPA (i.e. Hicks Logan District and in the vicinity of the Gifford Street boat ramp). Commercial fishing vessels should continue to be accommodated at facilities both inside and outside the DPAs, given priority wherever feasible. The Upper Harbor (north of the Coggeshall Street Bridge) should be reserved for more passive recreational uses.

New and Expanded Mooring Fields. In general, there has been pent up demand for vessel moorings. Although this demand for recreational vessel moorings has subsided some in the past year due to the economy, there remains a need to preserve adequate mooring areas for both recreational boaters and commercial operators. The timing for adding new fields should be driven by demand. Several areas for additional mooring fields are being evaluated. The watersheet northeast of Popes Island has potential for accommodating significantly more moorings for recreational boats, once the harbor dredging initiatives are complete and CAD cells have settled sufficiently. In designing and positioning CAD cells in this area, the SER dredging committee should fully consider how to maximize the number of moorings that can be safely created and maintained in this part of the Harbor both in the short term and long term. Commercial fishing vessels should have first priority for the use of any mooring fields located within the DPA.

In the shorter term, the portions of the DMMP permitted CAD Cell area that are as yet un-used can be utilized for the mooring of vessels It will take some

time (tens of years) to build and fill all of the CAD Cells allowed within the permitted DMMP area. Areas between CAD Cells and areas within the DMMP area that do not yet house CAD Cells can be utilized for moorings in the interim. Regular moorings can be used in these areas. Additionally, as part of the Operation and Maintenance Program for the CAD Cells, the HDC, the Town of Fairhaven, and their consultants plan on conducting a pilot test on a handful of moorings placed on top of a filled and capped CAD Cell within the Harbor. The Pilot Test will track the bottom characteristics for several different design moorings placed on the cap under controlled conditions. It is expected that the Pilot Test will result in the identification of the mooring designs that are most likely to successfully be supported by the cap without impinging on the cap. Once identified, it is expected that these mooring types will merit approval for early use after a CAD Cell has been capped. In this manner, it is expected that much of the area currently designated in the DMMP for potential CAD Cells will be able to be utilized for the mooring of recreational and light commercial vessels prior to, during, and after the CAD Cells have been constructed. The plan promotes the concept of utilizing the DMMP CAD Cell area for the mooring of vessels, as long as the moorings do not interfere with the active construction or filling of a CAD Cell that is under construction or in the process of being filled. The Plan recognizes that additional discussion with regulatory agencies, particularly those involved in the SER process, will be required prior to full implementation of the mooring plan in the DMMP area. Additionally, the Plan encourages research into additional mooring opportunities within the DMMP boundary, including exploring other options such as floating slips that would allow more dense placement of recreational boats, in a shorter timeframe, and with less potential impacts to the CADs.

Hazards to Navigation. In addition to the on-going dredging initiatives to increase the Harbor's water depths, wherever practical, other navigational hazards should be removed from the Harbor. Many of these are sunken obstructions (vessels, debris) or abandoned infrastructure which appreciably restricts the use of otherwise safe navigable waterways.

Floating Structures. Any floating structure (i.e. a structure not rigidly attached to land), existing or proposed, within the Harbor should be placed in such a manner so as to allow for the safe and efficient navigation of the Harbor's marine traffic.

Route 6 Swing Bridge. Although the Route 6 swing bridge was extensively renovated in the 1990s, it is now over 100 years old, opens and closes slowly and is considered by many to be unreliable. The bridge was most recently hit by a 330-foot freighter in 2006 causing it to remain in the open position for a couple hours until a damage assessment could be completed. Two options

have been proposed for improving water access through the causeway – (1) relocation the bridge further north or (2) replacement of the swing bridge with a modern bridge. Replacement appears now to be the favored option due to both the higher cost and the potential significant negative environmental impacts of the bridge relocation. The replacement bridge would likely be a double bascule design that would provide at least a 150-foot wide navigable opening to the inner harbor north of Popes and Fish Islands.

Intelligent Technology System. This technology should continue to be evaluated for local use to support port operations. The current on-going initiative would do the following for the Port:

Offer a design for a port-wide camera system
Provide a freight management system
Monitor harbor vessel traffic
Provide highway signage with information on harbor activities (e.g. ferry schedule, parking shuttle)

Port Operations Management. The creation of a formal Port Alliance is discussed in the Port Governance section and is supported by this Municipal Harbor Plan.

Centralized Port Operations Center (New Bedford). Consolidate all municipal and state port operations staff, response resources (including police and fire marine units), and water-dependent government support services at one central waterfront site to accommodate the HDC and other agencies/organizations directly involved in the day-to-day workings and marketing of the Port. The creation of a centralized port command center and collocation of port management, response and law enforcement personnel will further improve their inter-communication and coordination and the ease of public access to the services they provide.

Port of Refuge. An emergency response plan is needed to ensure port facilities, moorings and anchorages are appropriately used during major meteorological or other emergency events to provide the best protection for boat seeking refuge inside the hurricane barrier.

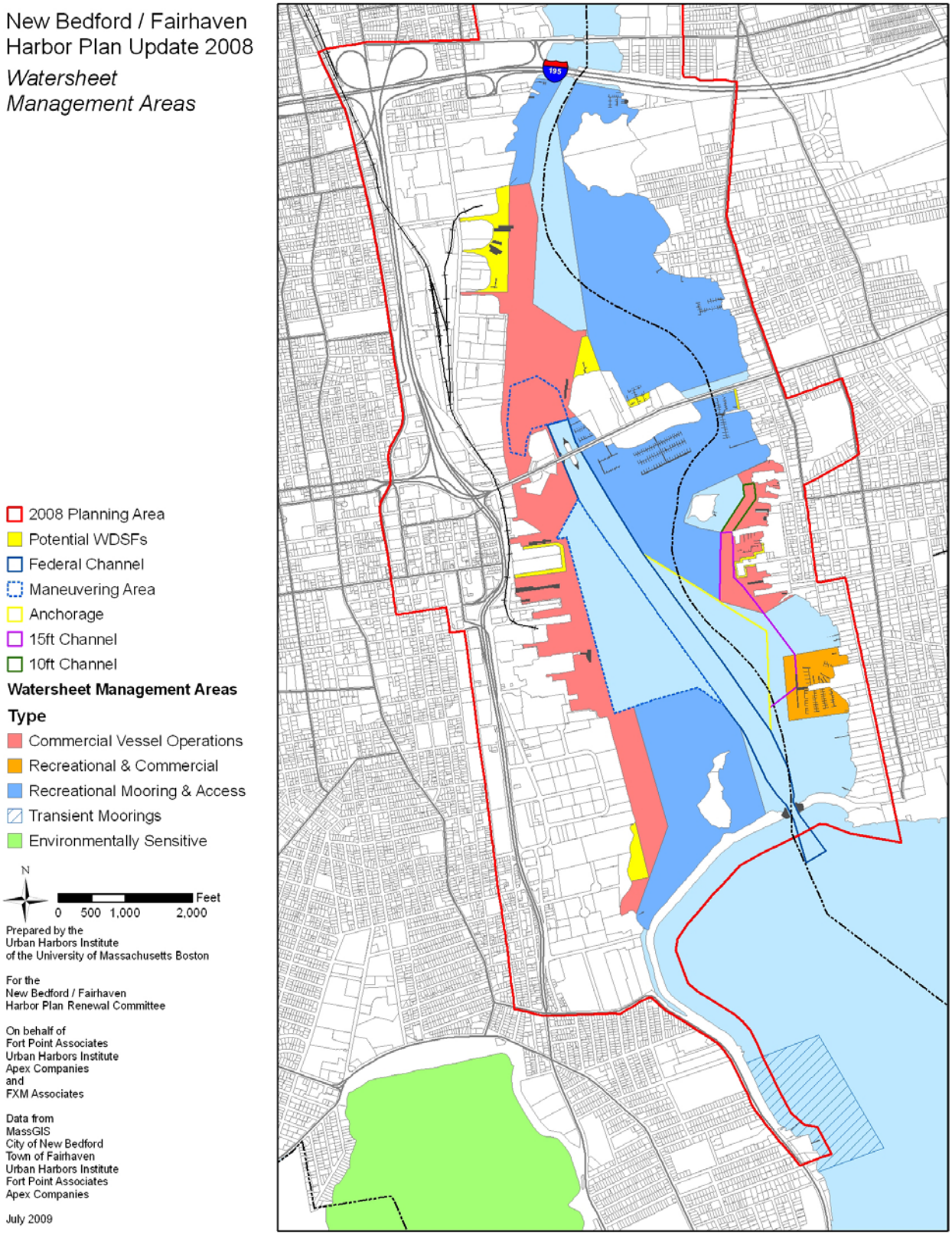
Protect Resources. Carefully review development initiatives, permitted uses and operational restrictions to ensure adequate protection for significant historic, natural, cultural, architectural, archaeological, or public access resources in the Harbor.

Improve Boat Ramps. Upgrade the City's public boat launch ramp access points through construction of improved ramp facilities, including the placement of proper signage, and the addition of parking facilities as appropriate.

Public Access. Coordinate with the Parks Commission and Planning and Zoning Commission to inventory all points of public access to the City/Town's harbor areas and prepare a plan for maintenance and improvements of these access points. In addition, locate and prioritize, as appropriate, locations along the waterfront to be acquired by the City to improve the opportunity for public access to and enjoyment of the Harbor without compromising the critical function of the core working port.

Waterfront Recreation Opportunities. There are several publicly owned parcels adjacent to the Harbor that are currently under-utilized including Marsh Island and Palmer's Island. These sites should be improved and upgraded to provide for additional recreational opportunities and public access. These sites are well suited for launching hand-powered craft, such as kayaks and canoes.

Figure 5.2 Watersheet Management Areas



6.0 ISSUES

6.1 BACKGROUND

6.1.1 COMMUNITY GOALS

The following goals were established during the preliminary scoping sessions for this project and refined by the New Bedford/Fairhaven Harbor Plan Renewal Committee. They have guided development of this Plan.

(A) Support Traditional Harbor Industries - preserve and enhance the Port's traditional strengths in fishing, seafood processing, and their supporting industries.

(B) Rebuild and Add to the Harbor Infrastructure - upgrade port infrastructure essential to the future economic vitality of both the working port and the region and to the public's use and enjoyment of the Harbor.

(C) Capture New Opportunities – take advantage of new opportunities for the expansion of marine industry in the Port and other supporting industries (such as tourism, short sea shipping, import/export, alternative energy, recreational boating) taking care that new activities do not conflict with the traditional working port.

(D) Enhance the Harbor Environment – demonstrate leadership in harbor cleanup, recycling and energy conservation under a "Green Port" initiative with the goal of creating an environmental healthy harbor that will encourage a large variety of compatible uses.

The following amplifying guidance was also offered during the preliminary public process:

1. Establish an overall vision for the Harbor that is flexible, forward looking, realistic, and capable of attracting broad community and agency support.
2. Enhance the strength of the Harbor's marine industrial economy, including commercial fishing, seafood processing, and marine service enterprises.
3. Promote the development of the Harbor's visitor economy through support for expansion of visitor-related uses and amenities, including the National Park, intermodal passenger services (e.g. rail, ferry, cruise ship), and other projects of public accommodation (gateways, hotels, restaurants), while not conflicting with the needs of the industrial port.
4. Facilitate the development of underutilized sites and buildings through coordinated efforts of the public and private sectors.

5. Strengthen the physical and economic relationship between the Harbor and the downtown visitor and retail centers.
6. Enhance the Harbor's attractiveness as a location for recreational boating.
7. Use available public funds through the Energy and Environmental Bond Bill and other public sources to leverage private sector investment within the Harbor.
8. Protect and enhance the harbor environment as a resource for the communities and the region through environmental restoration, open space creation, and improved public access.
9. Facilitate harbor renewal through dredging and identification of environmentally appropriate dredge material disposal options.
10. Identify achievable near-term actions that can support longer-term goals while delivering tangible community benefits.
11. Establish a harbor plan that contains projects that work both independently and in concert with other port initiatives.
12. Identify a strategy and responsibilities for implementing the Harbor Plan.

6.1.2 CHALLENGES AND OPPORTUNITIES

There have been many developments since the turn of the century that impact the Harbor and the viability of some of the recommendations in the 2002 Plan. New opportunities have also surfaced. Among the significant changes are the introduction of new technologies, a shift toward a more global economy, a commercial fishing industry that continues to struggle with the uncertainties of fisheries management and the implementation of increasingly rigid regulations, and the need for increased port security against terrorism.

For New Bedford/Fairhaven Harbor, opportunities have surfaced as a result of consolidation of full-service fishing ports to a handful surviving ports of which this Harbor is the regional leader. New opportunities have developed in other marine industries including cruise ships, Short Sea Shipping, import/export, "Green Ports" and alternative energy systems such as offshore wind, and servicing of recreational boats, mega yachts and commercial work boats.

6.2 NAVIGATIONAL LIMITATIONS / HAZARDS

Commerce within New Bedford/Fairhaven Harbor relies primarily upon the freedom and ease of navigation in the approaches to the Harbor, through the hurricane barrier, federal navigational channel and state and local fairways, and then into the slips and driveways adjacent to waterfront properties. In order to effectively utilize their properties for water-dependent commerce, each property owner also needs the water at their docks, piers and wharves to be deep enough and free of navigational hazards to safely accommodate the vessels they service. For a fully functional port, open water areas designated for use as temporary anchorages, turning basins and mooring fields also need to have sufficient water depth and be free of obstructions and hazards.

The size of vessels able to safely enter the New Bedford/Fairhaven Harbor is limited by two relatively fixed constraints. These are a federal channel with an authorized depth and width of 30 feet and 350 feet respectively and a cross-harbor hurricane barrier with a 150-foot wide opening through which the 30-foot federal channel passes allowing vessel access into the inner harbor. Several other navigational constraints and/or hazards limit operations within the Port or prevent access to some shore-side facilities. Two types of navigational constraints exist within the Harbor: physical objects that represent striking hazards and size-limited structures; and water depth limitations. These are summarized in the sections below:

6.2.1 HAZARDOUS OBJECTS AND SIZE-LIMITED STRUCTURES

Route 6 Bridge – The navigational constraints to water-borne traffic created by the existing Route 6 swing bridge over the Bedford/Fairhaven Harbor's main shipping channel limit the utilization of the deep-water port facilities in the north portion of inner harbor and the movement of local marine traffic. This situation is exacerbated by the inefficiency in operating this 100-year-old functionally obsolete bridge. The channel width through the existing bridge opening has a horizontal width of 95 feet (the effective useable opening is closer to 90 feet) thus preventing access by many merchant vessels of even modest size. These restrictions inhibit further development of properties north of the bridge particularly those that support or could support many modern water-dependent marine industries. Ultimately, the bridge will need to be replaced or relocated to improve port operations and to allow larger ocean-going ships and barges to efficiently and safely access facilities along the northwest side of Popes Island and in the North Terminal.

Old Piles/Pilings/Piers – Many abandoned, functionally obsolete structures exist in the Harbor that are no longer in use and/or are dilapidated. As they fall apart, they produce floating debris that can be a hazard to navigation. In some cases, these structures while still in place can block access to otherwise useable portions of the waterfront. Many are submerged and not visible, thereby representing an even greater danger to safe vessel navigation. These include:

Old timber and/or stone wharves and piers;
Former timber, riprap, or stone bulkheads;
Former intake and outlet structures from old mill buildings;
Old marine railway tracks and bridge structures;
Former pipelines and cables, many running across the Harbor and some unburied thus sitting exposed on the Harbor bottom.

Some of these hazards are the result of incomplete removal of abandoned infrastructure (piers, wharves, bulkheads) that were simply left in place and have deteriorated over time until they represent a partially or fully submerged hazard to navigation. The State Department of Environmental Protection may be able to assist in the removal of these structures through their enforcement authority. Where applicable, specific structures should be identified for enforcement action or other regulatory mechanisms.

Harbor debris – Over the years, a surprising variety of objects has ended up at the bottom of the Harbor. These include fishing nets, anchors, tires, and even automobiles. They often present navigational hazards and limit access to valuable portions of the waterfront. Recent harbor dredging projects have encountered a broad range of debris types.

Sunken Vessels – Numerous vessels or portions of sunken vessels exist on the bottom of the Harbor. Most appear to have gone down at moorings or at anchor in the deeper portions of the Harbor. A few may have broken free from their moorings and then run aground and broken up. While none of these are within the official federal navigational Channel, there are several vessels or portions of sunken vessels that are lying on the bottom near the edges of the deeper parts of the Harbor adjacent to turning basins and anchorage areas. The abandoned sunken vessels range from a ferry-sized ship to smaller fishing vessels and tenders. This debris represents a striking hazard for vessels that need to utilize the full width of the deep Harbor area in order to turn or maneuver. Additionally, several of these vessels lie in areas that are scheduled for improvement or development by the City and Town, and as such represent obstacles to the improvement/development planned, and will need to be removed prior to implementation of the improvement/development.

A comprehensive survey of the harbor will need to be completed to identify and map all significant navigational obstructions/hazards. This should prove very useful in setting priorities for removal of these objects as funding becomes available and/or waterfront development occurs.

6.2.2 WATER DEPTH LIMITATIONS:

The gradual filling of the New Bedford/Fairhaven Harbor with sediment is largely a natural process. Over the course of years, the water depth in many areas can be reduced to a point where many vessels, particularly larger commercial boats/ships, can no longer reach or remain tied up alongside waterfront properties. Old photographs of the Harbor show large fishing, whaling, and trading vessels tied up at piers and wharves that today can accommodate only small commercial or recreational boats. Reclamation of these areas, coupled with the repair and revitalization of bulkheads, piers, and wharves and other shore-side infrastructure would allow many currently underutilized or unused port properties to serve an important role in the expansion of marine industry in the Harbor. Maintenance dredging is routinely needed so that vessels can continue to safely and efficiently navigate through the Port.

In the past, several industries operating on or near the waterfront introduced PCBs and other toxins into the water and contaminated the sediments settling onto the Harbor's bottom. This has severely complicated efforts to dispose of dredged materials, making it not only difficult but very expensive to dredge. Until very recently, these disposal challenges have caused delays and/or the cancellation of critically important navigational dredge projects. Over the last six years, a new approach to deal with the contaminated sediment issue has been developed and implemented. This has allowed the City and Town to begin the gigantic task of working through the backlog of infrastructure and dredging projects that have until recently been essentially impossible to tackle.

Two types of dredging projects are currently being advanced within the Harbor: Superfund Cleanup Dredging being conducted by the USEPA; and Navigational Dredging being conducted by the City of New Bedford, the Town of Fairhaven, the State of Massachusetts, the US Army Corps of Engineers, and by private parties. These two types of dredge projects are summarized in the sections below.

6.2.2.1 Superfund Cleanup Remedy

EPA's Superfund Remedial Action involves the removal by dredging or capping of contaminated harbor sediments. For the New Bedford/Fairhaven Harbor, the cleanup, primarily involving the removal of PCB-contaminated sediments, is being

directed by the U.S. Environmental Protection Agency (USEPA) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, aka Superfund). To date, the method of disposal of the contaminated sediments USEPA removed from the Harbor involved transfer of the contaminated sediments to shoreline facilities where the sediments are desanded and dewatered, and load-out of the sediments into rail cars for shipping to a TSCA landfill in Michigan. Due to the breadth and scope of the PCB impacts and the costs associated with the shipping and disposal of those sediments out-of-state, USEPA is unable to quickly address all areas of contamination in the Harbor. As a result, they have been focused on dredging the area north of the Coggeshall Street Bridge where concentrations of PCB in marine sediment are highest. Both the City of New Bedford and the Town of Fairhaven would like this CERCLA cleanup completed as quickly as possible so this area may be fully used to support a variety of recreational and public access activities and to accommodate a rowing course and support facilities. The USEPA has begun exploring the potential of using Confined Aquatic Disposal (CAD) Cells in the Harbor similar to those used by the Navigational Dredge Program (see below) for disposal of some of the contaminated sediments in order to expedite the Superfund dredge program and shorten the time horizon to complete the cleanup dredging within the Harbor. The USEPA has estimated that it could shorten the Superfund dredge timeline by as much as half through the use of CAD Cells in the Harbor for disposal. Additional information concerning the Superfund dredging is contained in Appendix A.

6.2.2.2 Navigational Dredging

This dredging is required to maintain adequate water depth in the Port for the safe navigation of vessels and the efficient and expanded use of shore-side facilities. It is intended to enhance port operations and/or increase capacity. For this Harbor, maintenance and certain improvement dredging projects are strongly supported by federal, state, municipal, and private sector proponents. In its 2002 *"Dredge Materials Management Plan" (DMMP) for New Bedford/Fairhaven Harbor,* CZM has estimated that a total of up to 2,000,000 cubic yards of material will need to be dredged from the Harbor to return federal channels to authorized depths and to complete several other important state, municipal and private dredging projects outside the federal areas. Most of this dredged material will likely be contaminated aquatic sediments. Appendix A provides an estimate of the dredging needs for individual projects supported by this Harbor Plan along with other details of the City/Town dredging plans.

SER Process for Navigational Dredging

In order to facilitate navigational dredging, the Massachusetts Department of Environmental Protection (MassDEP) requested that EPA include as an Enhancement

of the Remedy, the navigational dredging under the Superfund process. The EPA incorporated this request in the Record of Decision (ROD) allowing this State Enhanced Remedy (SER). The SER oversight committee is chaired by the MassDEP, and involves the participation of multiple state and federal agencies, and works with the City of New Bedford and the Town of Fairhaven to use the permit exemption provisions of CERCLA to implement certain harbor navigational dredging project. This streamlined and dedicated regulatory process is an innovative and unique approach to contaminated sediment disposal. It offers an opportunity to address the backlog of urgently needed dredging projects.

Dredge Materials Disposal

Under the Dredged Material Management Plan (DMMP), the State Office of Coastal Zone Management (CZM) with input from the City of New Bedford and Town of Fairhaven determined that the construction of Confined Aquatic Disposal (CAD) cells would be the most efficient method of isolation and disposal of PCB-impacted sediment within the Harbor. Building on the DMMP) that was prepared by CZM, the City and Town, through the SER process, devised a plan to create a series of CAD cells within the Harbor. The area of proposed CAD Cells lies north of Pope's Island and south of the Coggeshall Street Bridge. A conceptual design for multiple CAD cells with a total storage capacity equaling approximately 2,000,000 cubic yards was prepared. More details about the DMMP are included in Appendix A.

By the end of CY2008, three CAD cells had been constructed (the Borrow Pit CAD Cell, and CAD Cells #1 and #2). Approximately 150,000 cubic yards of maintenance dredging has been conducted under the SER to date. In order to accelerate the PCB cleanup in areas north of the Coggeshall Street Bridge, EPA has recently requested that approximately 300,000 cubic yards of contaminated material from their cleanup dredging to be accommodated in future CAD cells.

The use of Confined Disposal Facilities (CDFs) was one potential option recommended in the 2002 Harbor Plan for disposal of dredged material. CDFs are typically shore-side containment areas constructed to hold contaminated materials within watertight bulkheads and then capped with clean fill or a solid construction material such as concrete. This process encapsulates this dredged sediment and would have created new land areas to support port development in the Harbor. For several reasons including cost and the technical and logistical difficulties associated with the construction of the massive facilities needed to contain all of the contaminated sediment to be dredged from the Harbor, the wide-spread use of CDF disposal options is now generally considered less favorable than use of CAD cells for the bulk of the contaminated sediment generated by the Navigational Dredging program. However, as is noted in the section below, the use of smaller Waterfront Development Shoreline Facilities (WDSFs) in concert with CAD cells is considered

highly advantageous from both an environmental and economic standpoint. *"Beneficial re-use"* of clean material generated from CAD Cell construction would be cost effective (saving the cost of shipping this clean fill to off-shore disposal sites) while also supporting port development. The waterfront represents a critical component of the City and Town economic recovery plan, and the new land and improved shoreline facilities that would be created though the development of the select WDSF areas noted in this plan would benefit the City and Town through job creation from new waterfront businesses in the Port.

Beneficial Re-use of Clean CAD Material

In the course of construction of CAD Cells within the Harbor, non-contaminated fine to course grained sediments are excavated. Currently, a large proportion of these sediments are shipped off-shore for placement at licensed ocean disposal sites. All stakeholders involved in dredging projects within the Port recognize that significant benefit could be derived, both from an environmental perspective as well as from a Port logistic perspective, if consistent beneficial re-use of the non-contaminated material derived from the CAD Cell construction could be employed. Numerous potential re-use opportunities for the material have been identified, including re-use of the material in on-shore construction projects such as road construction and site development as well as in WDSFs. The following paragraphs describe several potential re-use scenarios supported by the City and Town.

WDSF/Waterfront Development Opportunity Re-use

Clean aquatic sediments dredged during construction of future CAD cells can be used, where possible, as fill within the City of New Bedford and the Town of Fairhaven including use as fill behind new waterfront bulkheads proposed in this Plan. PCB impacts to sediment within the Harbor are generally contained within the top few feet of fine grained, organic sediment. In order to construct a CAD cell, this fine grained material is removed and disposed, and the cell is created within the deeper more densely packed "parent" sands and silts. This clean material was deposited here long before the area was settled, and therefore generally does not contain anthropogenic impacts.

Despite the absence of man-made contaminants, it remains difficult to dispose of this clean material due to its salt content. Upland disposal is constrained due to the potential negative impact of the material's salt upon potable aquifers. Along the shoreline of coastal communities, the salt content is not a problem since these areas are already impacted by saltwater intrusion. Creation of WDSFs noted in this Plan along the Harbor's waterfront will not only allow for more economic construction of CAD cells in the Harbor, but will also allow for the repair, improvement and

expansion of several key bulkhead areas, primarily within the DPA, that have been proposed in this Harbor Plan.

In 2005, EPA requested that clean material dredged during construction of CAD Cell #1 be used to cap PCB-impacted sediment located outside of the Hurricane Barrier (OUs-1 and 3), thereby isolating the PCB impacts from biota and from direct contact by humans, while simultaneously facilitating construction of the CAD cell by utilizing the clean sediment generated during its construction. This Harbor Plan supports the use of clean sediment generated during CAD cell construction by EPA during future capping projects, as necessary.

Other Beneficial Re-use

In addition to WDSF use, the non-contaminated material generated from CAD Cell construction could be incorporated into a variety of other re-use scenarios. Asphalt batch plants require materials similar to some of the material generated during the construction of the CAD Cells. Beach nourishments projects throughout the region have been stalled because of difficulties in obtaining appropriate nourishment sediment. The non-contaminated materials generated through CAD cell construction represent ideal materials for use in beach nourishment projects. Likewise, land-side development projects in the area regularly import fill from gravel pits outside the area. Portions of the CAD material generated could be utilized in land-side construction, both as fill material for landscape grading, and as sub-grade material.

Use of the Beneficial Material

The steps required to utilize the CAD cell derived beneficial material include the following:

Characterization of the sediments to be removed to construct the CAD Cells (grain-size and salt content of paramount importance);
Matching the grain-size of the materials to be removed with the materials that are required by the land-side, shore-side or beach nourishment re-use;
Creating a re-use plan that marries the removal of material from the CAD Cells with the projects that could utilize the material, synchronizing schedules and volumes;
Obtaining any necessary permits or approvals necessary for the land-side, shore-side development or beach nourishment to allow the re-use of the CAD Cell generated material.

While all of these steps are required prior to re-use occurring, the most critical element is the synchronization of the CAD construction with the potential re-use needs. The critical path elements in synchronizing these events involve: 1) the

identification of potential re-use projects; 2) determination of the volume of material those projects require; and 3) the determination of the timing of permits that might be required for the shore-side or beach nourishment project. The time horizon to complete these activities for the shore-side or beach nourishment project in some cases may exceed the time required to design and build the CAD Cell from which the beneficial re-use material would come. In the past, this timing issue has prevented the re-use of CAD generated material. Moving forward, the City, Town and the SER stakeholders have made instigating the re-use potential assessment for CAD generated material as an early action-item in the process of developing new CAD cells. As a result, in order to meet the required time-line for the next CAD cell to be constructed in the Harbor (CAD Cell #3 – see Appendix A for more information), the process of identifying and synchronizing land-side, shore-side and/or beach nourishment projects with the CAD cell construction, work must begin in Summer 2009. .

Proposed Beneficial Re-Use WDSF

One interesting potential re-use scenario utilizing the clean materials that will be generated from CAD Cells built in the Harbor has been proposed by Massachusetts DEP. Taking the concept of the Waterfront Development Shoreline Facility (WDSF) one step further, the DEP has suggested that the City and Town look into creating a WDSF to use as a material recycling cell for clean material dredged from the CAD Cells to be built in the Harbor. The concept involves the bulk-heading of a shoreline area in the general form of a WDSF, however instead of simply filling the facility up with clean material from CAD Cells and then capping and finishing the grade as soon as possible, the cell would be left open and clean sand material would be placed into the cell and allowed to dewater and (eventually) de-salt (from the process of rainwater dissolution). The material could then be re-used in a broad variety of upland construction projects that needed granular fill. Material could be "mined" from the cell to be used for upland construction, for road-grade, to be mixed with asphalt, or in concrete. This would increase the number of potential re-use scenarios available for the clean CAD Cell material. In order to maximize the use of material while at the same time promoting the Ports overall goals for bulk-headed WDSFs, the bulkheads could be constructed in large individual cells, which could then be used in sequence for the staging of material from the CAD Cells prior to its re-use in upland or beach nourishment projects. This Plan supports the concept of Beneficial Re-Use WDSFs in the future as a way to maximize the utility of clean CAD Cell material. Additionally, DEP has pointed out that once constructed, such a Beneficial Reuse Facility would also provide a location for the USEPA to place material that may be generated from future Superfund Site CAD Cell creation. Such a facility could accept the sands and silts generated by the USEPA during the construction of their CAD Cells upriver. If the USEPA, the USACE, and its contractors can pump the material to this shoreline site, they can avoid the use of trucks to move the material to the shoreline facility.

6.3 6.3 COMMERCIAL FISHING INDUSTRY

The commercial fishing fleet and the maritime industries associated with it are the backbone of the City of New Bedford and Town of Fairhaven economies. The Port of New Bedford has ranked # 1 in the United States in terms of value of catch since 2000, landing stock valued at $268 million in 2007 alone. Sustaining and supporting the commercial fishing fleet are primary goals for this Plan. New Bedford/Fairhaven Harbor prides itself on being a full-service port that is able to supply the needs of commercial fishermen. The following is a list of important resources that help to serve the fleet and are therefore crucial to retain within the Harbor:

- Berthing space
- Open Space for Working on Gear and Loading/Offloading
- Facilities for Vessel Maintenance and Repair
- Fueling Services
- Bilge Water and Waste Oil Collection System
- Ice Plants
- Bait Suppliers
- Gear and Supply Shops
- Markets for Fish including Buyers/Seafood Display Auction
- Fish Processors
- Transportation for Fish and Fish Products
- Port Security and Emergency Response
- Skilled Tradesmen (Welders, Electricians, Electronics Specialists, Diesel Engine Mechanics, Woodworkers, Refrigeration Specialists, Commercial Divers/ Underwater Welders)
- Available Financing for Operations
- Fishing Industry Organizations
- Community Support for Commercial Fisheries
- Settlement Agents, Maritime Attorneys
- Available Labor for Fishing Vessels and for Dock Operations.

Not only the availability of these resources, but also their affordability and ease of access are important to the continued existence of the fishing fleet within New

Bedford/Fairhaven Harbor. The following expands on specific issues in which specific enhancements to existing infrastructure are needed:

Berthing Space

Adequate, safe and affordable berthing space is a serious issue for the Port's commercial fishing fleet. Approximately 350 fishing vessels are homeported in the Harbor with an average of another 120 transient boats that regularly use the services the Port has to offer. Due to current fishing restrictions, these commercial fishing vessels have typically been spending about 226 days in port each year. Although the total size of the fleet may not equal its historic highs, the number of vessels in port at any time today can equal or exceed past numbers. The New Bedford Harbor Development Commission (HDC) controls New Bedford's five public berthing facilities. These wharves and docks can accommodate, at their maximum capacity, a total of approximately 160 vessels. This includes many berths where from two to four vessels can raft outboard of the boat tied up dockside. This can grow to as many as six boats during major off-shore storms. Unfortunately, the infrequently used or abandoned vessels often end up located at the inside berth with other vessels rafted outboard of them. Since these older vessels are typically poorly maintained and unmanned, they represent a weak link to the dock and impact the safety of all those boats rafted outboard of them. The HDC is taking actions to remove abandoned, unused, or poorly maintained vessels from the docks in an effort to improve this situation.

Overcrowding of the berthing facilities poses obvious threats to the safety of vessels, crew and the associated facilities and limits further growth of the Port as a commercial fishing center. The HDC commissioned a study of Fishing Fleet Berthing to investigate the alternatives for increasing the number of commercial fishing vessel berths in New Bedford. This Plan was completed in March 2008 and presented several options for expanding berthing capacity. These primarily involved extensions of Leonard's and Homer's Wharves using either steel barges or concrete floats. Fishing vessels owners have indicated that they need docks onto which they can drive vehicles for vessel resupply and off-loading. The HDC is currently completing a comprehensive survey of the wharves'/piers' conditions to determine the best build-out option. The HDC has also initiated the process for obtaining necessary approval and possible legislative action to adjust the Harbor Line and boundary for the Federal turning basin to provide enough buildable watersheet for the new piers and/or floats. The HDC plans to implement one or more of these options at an approximate total cost of $5-7 million which would increase the total berthing space by approximately 40-45 slips. Funding necessary to fully complete this project has not yet been obtained. Although additions proposed in the

Berthing Plan will clearly ease the berthing problems in the Harbor, more will be needed to fully meet the current and expected future demand for berthing space. Use of waterfront areas in other parts of the DPA should be further explored.

Port Security and Emergency Response

In part because of the berthing issue, and due to the amount of time that commercial fishing vessels spend at port, port security and emergency response services to commercial fishing vessels is an issue of ever growing importance. The potential for vessel fires, hull leaks, and break-ins require all active vigilance on the part of vessel owners and operators and by local law enforcement and emergency response personnel. Confined spaces, fires and hazardous substances (e.g. fuel oil, refrigerants) on vessels all present dangers requiring special training for crews and response personnel. This is not true for just fishing boats but all vessels in the Port. Some emergency shipboard events could cause a vessel to sink resulting in environmental damage and navigational restrictions. Although most commercial vessels have alarm systems for high bilge water, break-ins and fires, these systems are not currently remotely accessible. Most commercial fishing vessels are already outfitted with the GPS location systems, the Plan supports linking the GPS systems with alarm systems on the vessels in order to create a centralized emergency notification system that can be linked with the City of New Bedford and Town of Fairhaven emergency alarm system. This proposal can also be implemented utilizing a Wi-Fi system for the central waterfront berthing areas. Additionally, this Plan supports specialized training of emergency services personnel in order to more easily handle emergencies on marine vessels.

Shore-Side Power

As stated earlier in this section, a typical fishing vessel in New Bedford/Fairhaven Harbor spends about 226 days in port. During this in-port time, most of these vessels have to run on-board generators, often part of the main power plant, in order to operate most electrical equipment, heat, or other types of mechanical devices. As a result, an enormous quantity of fuel is expended by the fishing fleet for activities other than propulsion. The operation of so many engines within the Harbor results in a large increase in air pollution. Provisions for shore-side power would alleviate environmental issues and much of the expense in operating shipboard electrical generator equipment while in port. The HDC has received a$150k grant from DOT for designing shore-side power ("cold ironing") for the entire port. This project is expected to begin by early spring 2009.

Bilge Water and Oil Collection System

The HDC is exploring options to build a system on a barge for use in the Port

Commercial Fishing Fueling Operations

Obviously commercial fishing vessels need fuel to operate. In New Bedford/Fairhaven Harbor, barges are used to bring fuel to the vessels at their berths. There are not sufficient facilities in the Harbor to accommodate these vessels when not in use. Permanent mooring space is needed and should be created.

Scientific Research

With commercial fishing vessels normally at sea for only slightly more than a third of the year, opportunities should be explored to employ these valuable resources for other appropriate activities such as supporting marine research or off-shore exploration or supply operations. These activities may provide additional income that could help some of the struggling fishing vessels to stay commercially viable despite the fishing restrictions and could offer affordable platform for important scientific research on the open ocean.

6.4 INTERMODAL TRANSPORTATION

Transportation infrastructure interacts with port infrastructure intimately and continuously. It is essential that, when proposing improvements to and dealing with the maintenance of port infrastructure, that the shore-side transportation systems and facilities be considered and that they be capable of handling both the freight/cargo and people moving through the Port. Following is a summary of some of the anticipated transportation or inter-modal infrastructure issues that should be addressed.

- Rail (connections to the Port)
- Trucking (staging)
- Short Sea Shipping (facilities and staging areas)
- Bulk Cargo (terminal and land-side storage)
- International Import/Export
- Bus, Shuttle and Ferry services (connections)
- Cruise Ships (services and facilities)

- Freight service to the local islands
- Intermodal Transportation Center (for both people and freight)
- Marine Freight Operations

Short Sea Shipping

Short sea shipping (SSS) refers to the movement of freight along coasts and inland waterways. In the context of this document, short sea shipping refers to the shipments of bulk cargo in wheeled or containerized boxes along the United States East Coast. Feeder service is a short sea operation that involves the transport of international container boxes out of large international container ports to smaller less congested ports. Typical SSS ship sizes range from 1,000 tons to 15,000 tons. In Europe, SSS is at the forefront of the European Union's transportation policy. It currently accounts for roughly 40% of all freight moved in Europe. In the US, SSS is not utilized at anywhere near this level.

One example of a beneficial use of SSS would involve transportation of international cargo from New Jersey or New York to New Bedford. The New Bedford State Pier is not well suited to receive mega-shipments from international sources (the international shipments described above are smaller, and more targeted to New England deliveries). A larger port generally receives mega-shipments, loads them into trucks, and the containers are driven up I95 to distribution centers in major NE metropolitan areas such as Providence, Boston, or Portland. With short sea shipping, the shipments received at major ports would be re-loaded onto smaller local ships designed for coastal use, and transported by sea to a regional port, such as New Bedford. New Bedford could receive these shipments from ports as far away as Florida. These containers would then be transported by truck to their final destination.

The start up of a water-borne container feeder service operation is being considered by Columbia Coastal while the transport of 53-foot Ro-Ro (Roll-On/Roll-Off) containers from 18-wheel trucks has been proposed by Google Coast Connect. Coastal Connect is building vessels with a ¼-ramp that could be accommodated at the New Bedford State Pier with little or no infrastructure modification. Although the container feeder service is closely related to SSS or included under the SSS umbrella, the vessels that are used tend to be different and may require slightly different or at least adaptable waterfront infrastructure. A local firm is one of several companies that have indicated a serious interested in SSS. Both feeder service and SSS are new, developing markets which the Port of New Bedford appears to be well positioned to support. (The New Bedford port economic study that is not yet completed is addressing the potential of SSS for the Port.)

The main advantages promoted for this type of shipping are the alleviation of congestion on highways, decrease of air pollution, and overall cost savings. Shipping goods by water (one 4,000 ton vessel is equivalent to between 100-200 trucks) is far more efficient and cost-effective than road transport.

Types of Shipping

Anticipated types of shipping vessels include break-bulk cargo and containerized shipping (roll-on roll-off and grab-and-go) shipping. These forms of shipping could support both International Import/Export trade and movement of domestic cargo:

Break Bulk Cargo

Break bulk is a term for extraction of a portion of the cargo of a ship or the beginning of the unloading process from the ship's holds. Break bulk cargo is any loose material that must be loaded individually, and not in containers nor in bulk as with oil or grain. Most often the material stacked on wooden pallets and lifted into and out of the hold of a vessel by gantry cranes on the dock or aboard the ship itself. Break bulk was the most common form of cargo for most of the history of shipping. Since the 1950s the volume of break bulk cargo has declined dramatically worldwide as containerization has grown. Moving cargo on and off ship in containers is much more efficient, allowing ships to spend less time in port. Break bulk cargo also suffers from greater theft and damage. The New Bedford State pier was constructed to accommodate break bulk cargo, but its current design is outdated, as the movement in the shipping industry has been away from break bulk cargo.

Containerized Shipping

Containerization is a system of intermodal freight transport cargo using standard ISO containers (known as shipping containers or isotainers) that can be loaded and sealed intact onto container ships, railroad cars, and trucks. Containerization has revolutionized cargo shipping. Today, approximately 90% of non-bulk cargo worldwide moves by containers stacked on transport ships. The two main types of containerized shipping anticipated in the future at the New Bedford State Pier are grab-and-go shipping and roll-on roll-off shipping.

Grab-and-Go

With grab-and-go shipping, shipping containers are stacked onto the ship, and need to be unloaded by a crane on the dock. The containers are unloaded by the crane, and then lowered onto a truck that contains a specially-constructed trailer that

allows the container to immediately attach so the truck can leave the pier. Thus, the container is "grabbed" and loaded onto the trailer, so the truck can then "go".

Roll-On/Roll-Off

Roll-on/roll-off includes the shipment of the truck trailer with the container. This is a variation of or category of Short Sea Shipping (see discussion above). Trucks move ("roll-on") the trailers onto the vessel, and simply disconnect their cabs. Once the ship is full, it can move to another port, where cabs are waiting to connect to the trailers, and "roll-off" the vessel and off of the pier to deliver their cargo. Typically, a roll-on roll-off type vessel will have a ramp at the stern of the vessel, by which the trailers can roll off of the vessel.

Waterborne freight uses are as follows:

- Ro-Ro Operations/Container Operations: The State Pier Ferry Terminal is may be a suitable facility for Ro-Ro Operations/Container operations as in interim facility until more permanent, larger locations can be developed. The North Terminal is also potentially suitable in the longer term as a facility for Ro-Ro operations, container operations, and waterborne passenger service.

- Breakbulk Operations/Container Operations: These activities are likely to occur at Maritime Terminal, Bridge Terminal, and the State Pier.

- Bulk Commodity Shipments/Marine Contractor Shipments: The South Side of Fish Island (south of Route 6), the North Side of Pope's Island (north of Route 6) are appropriate locations for facilities for Bulk Commodity Shipments/Marine Contractor Shipments. Additionally, until the proposed expansion of the North Terminal Bulkhead is completed, the site of the former Herman Melville Shipyard (approximately a three-acre site) should be available for use in handling bulk commodity shipments. The southeast corner of the NSTAR site and adjacent berthing areas, together with the existing fuel terminal located on the west side of Fish Island to the north of Route 6, should be made available for fuel shipment operations along with other marine industrial activities. Anticipating the potential for wind turbine transshipment in the near future, the South Terminal area may also be suitable for specialized cargo shipments.

Foreign Trade Zone

The City of New Bedford has a Foreign Trade Zone (FTZ # 28) which offers unique "tax abatement" opportunity for companies that import or plan to import, directly or indirectly, through purchases from importers. The City is a designated Foreign Trade Zone grantee, meaning that it can sponsor applicable companies and developers to realize unique financial benefits specifically offered to Foreign Trade Zones. In a Foreign Trade Zone, for example, merchandise may be assembled, relabeled, manipulated, manufactured, mixed, stored, salvaged, processed, tested, cleaned and/or sampled with import/export duty on these products deferred, reduced or, in some cases, even eliminated. The existence of this Foreign Trade Zone offers many opportunities for new port development and these opportunities should be pursued.

Roadway Maintenance Improvements/E*n*hancements

Route 18/JFK highway connects the downtown New Bedford waterfront with the interstate highway system (I195). The connections between this highway and individual port facilities/terminals will need attention, particularly as the concept of an intermodal transportation center is more fully developed. The 2002 Harbor Plan recommended that a haul road be developed through the Hicks Logan area as part of the New Bedford/Fairhaven Bridge relocation. Although this 2009 Plan favors that the bridge be replaced in its current location, access to the bridge will need to be improved to fully benefit from development on Popes Island and the Fairhaven waterfront.

Planned improvements to Route 18 in downtown New Bedford are currently in the final design stage and funds have been identified for much of the construction. This initiative addresses not only vehicular traffic issues but also pedestrian connections between the Harbor and the downtown retail center and main tourist attractions.

6.5 PASSENGER VESSELS

Cruise Ship / Ferry Operations

Since the arrival of the Regal Empress at State Pier in July 2002, cruise ships have been regularly making port calls to New Bedford during the summer and early fall months. The City and the HDC have been actively marketing the Port as a full service port of call for appropriate sized cruise ships. For 2009, the City signed a contract with American Cruise Lines for up to 25 visits by that line's ships during the year. This activity is expected to increase as the cruise industry continues to grow and helped by a state wide initiative (Historic Ports of Massachusetts) to attract more cruise ships to Massachusetts ports. In response to this opportunity, the HDC has suggested making modifications to the State Pier, possibly including a new terminal facility that would make this site better suited to serve the needs of the ships and their passengers.

Mega Yachts

The number of these super sized pleasure boats had been growing rapidly over the past decade with more of them homeported or visiting destinations in the northwest Atlantic. The impact of the recent global recession on this growth is yet to be determined. What has been clear for the past few years is that owners/operators of these vessels have been experiencing challenges finding ports that can provide the services required to maintain and provision their boats. Some of these vessels have begun to visit the Harbor attracted by the broad mix of quality marine services that both Fairhaven and New Bedford have to offer. It appears that the Port is uniquely well positioned to take advantage of the opportunities that this developing market has to offer.

Passenger Ferries

Ferry operations have long been a part of the Port's working waterfront. Ferry service to Cuttyhunk and Martha's Vineyard are expected to continue operating out of the Port for the foreseeable future. A new ferry terminal, parking lot with a trolley connection to the terminal, and the introduction of fast ferry service to Martha's Vineyard have all helped to grow water-based passenger services since the 2002 Harbor Plan was approved. A pilot program offering ferry service to Woods Hole was tried during the Fall of 2007 with mixed results but encouraging enough to continue to explore opportunities to add more destinations for ferries operating from the Harbor.

Intra-Harbor Shuttles, Excursion Vessels and Bare-boat charters

As more public amenities are added to the waterfront, as the Harbor's water quality continues to improve, and as access to and along the water's edge becomes more available, it is realistic to expect that more people (both residents and visitors) will be attracted to the waterfront for their recreation, education and relaxation. This should stimulate continued growth of the local tourist industry including businesses that will bring people out onto the water such as excursion and charter boats, and bare-boat rentals. Seasonal water shuttle service carrying people between the port gateways, marinas, mooring fields, visitor service centers and other harbor destinations will help further activate the waterfront. All these activities should be encouraged and when feasible supported through the permitting process and facility improvements as long as they do not interfere with the working port.

6.6 OPPORTUNITIES NORTH OF ROUTE 6 BRIDGE

The Fairhaven Bridge in its current configuration presents a significant constriction for marine traffic moving to and from port facilities north of Route 6. This limits full utilization and further development of the Bridge, Maritime and North Terminals, and a proposed terminal on the northwest corner of Popes Island. With better access, all these areas could significant contribute to the economic growth of the Port. In addition to expanding current freight operations, the area could support short sea shipping, new import/export trade and/or other water-dependent heavy industry. With better access and new/improved docks, the area could offer more useful berthing for the commercial fishing fleet and, at the northern end outside the DPA near the I-195 Bridge, support more recreational boats including mega yachts, complimenting the services that are currently offered along the central Fairhaven waterfront.

North Terminal Development

The potential of North Terminal is particularly noteworthy. The City's long-term goal is to create a flat bulkhead extending northward from the existing USEPA dewatering site to the former Revere Copper property (see Figure 6.2). The rounded "lobe" land formations that currently define this portion of the water's edge in North Terminal are limiting use of this valuable waterfront land. The northern extension of the bulkhead would create new useable land area for water-dependent and supporting uses while at the same time benefiting the Harbor cleanup process by providing a viable dredged sediment re-use option. The area behind the bulkhead could be filled with non-contaminated sands and silts collected during construction of CAD cells and/or clean dredged materials from other areas of the Harbor.

A short-term expansion opportunity also exists. The USEPA is currently evaluating modifications to its planned dredging strategy for their Superfund harbor cleanup project. If they choose to begin using CAD cells for disposal of dredging materials, their North Terminal dewatering facility in its current form would no longer be needed and the site would revert back to City of New Bedford. A freight rail spur was recently constructed connecting the CSX terminal adjacent to Bellville Avenue to this USEPA facility. This has allowed the use of rail cars to haul away contaminated materials dredged during the cleanup project. The spur runs to the water's edge. This rail connection and the site's deep-water access make it ideal for supporting development of new and/or expanding marine industry in the Port. The existing bulkhead was constructed with a strengthened coffer-dam to support heavy loads. With relatively little modification, the property could be used as an intermodal transportation facility, allowing direct ship-to-rail transfer of cargo (as well as ship-to-truck loading and unloading). The conversion of this site to an intermodal transportation hub would set the stage for future expansion of North Terminal to a fully functioning modern marine terminal. With the bridge replacement, New Bedford's waterfront north of the bridge could become an outstanding portside facility capable of efficiently handling the larger ships that are more typically used by today's merchant fleet. This initial step could occur in as soon as a few years if the USEPA moves to a modified strategy for handling dredged materials.

6.7 WATERFRONT INFRASTRUCTURE

Although maintenance dredging of the federal navigational channel, of the state and local fairways and of the waters in front of waterfront properties will allow vessels to travel into New Bedford/Fairhaven Harbor and dock, existing marine structures will need to be upgraded, repaired and replaced over time as they meet their anticipated useful design life or as new opportunities arise that require different infrastructure. Many of the existing facilities including bulkheads, docks, wharves and piers need attention today.

Without maintenance, marine structures will become unusable and potentially unsafe and, as discussed earlier in this Plan, debris from degrading marine structures can float into existing waterways, presenting hazards to navigation. Although regular maintenance is essential and will extend the useful life of these structures, age, storm damage, accidents and changes of use will periodically require replacement of structures. These include functionally obsolete facilities that can no longer safely and efficiently meet the need of modern marine commerce or other new water-dependent uses. To retain its (or obtain a) position as a fully functioning modern port, New Bedford/Fairhaven Harbor will need to continually evaluate its

waterfront facilities and infrastructure and make appropriate adjustments as necessary.

Pier/Wharf/Bulkhead

Although some work has been completed on the port infrastructure along the water's edge, more is needed including the expansion of some port facilities. This includes extension of the wharves in the North and South Terminals, creation of a new Harbor terminal on Popes Island, adding more berths for the commercial fishing fleet, converting the perimeter of State Pier from a pile-supported apron to a solid-fill wharf, and improvements to the former power plant waterfront facilities so that it can support new marine industrial uses. Upgrades are also needed at several facilities to allow the Port to support new industries such as short sea shipping, mage yacht services, off-shore renewable energy and exploration projects, and cruise ships. Specifically, improvements to many or most of the DPA's old stone gravity walls are necessary in order to effectively support traditional and attract new marine industries. In addition, the following potential improvements are noted and considered important:

Centralized Port Operations Center (New Bedford)

Municipal, state and federal agencies and organizations involved in the day to day operation of the Port are scattered throughout the Harbor. Consolidating many of these port services and resources at one central location would benefit all port users and improve both the efficiency and effectiveness of port operations and management, and communication between and coordination of the activities of agencies having jurisdiction in the Harbor (see the Watersheet Management Plan in Chapter 5)for more about these entities and their responsibilities). For New Bedford, this would include the offices of the HDC, harbormaster and police marine unit with their various resources such as the recently acquired fire boat, port security equipment and water emergency response assets. The Massachusetts Environmental Police, State Police Marine and visiting Coast Guard boats and crews could also use this center. Pump out facilities and other public marine services might also be located here. This concept is supported in other sections of this Plan (see Section 5.7 and 7.3.4.3) discussed in other section of this Plan. A specific location for this facility has not yet been identified, although ideally excellent landside and water access would be needed and the site should have unobstructed views of much of the working port.

South Terminal

Repairs - The sheet pile walls that support the bulkhead at South Terminal needs rehabilitation. Recent improvements have been made to the terminal's fendering system; in particular, the efforts made by the HDC in completing this initiative are noteworthy. The use of tires to provide horizontal protection to the concrete bulkhead was both effective and economical as a short-term solution. As additional funding becomes available work on the existing bulkhead including its extension further to the south should be completed. This would include a more permanent fendering system.

Expansion - The South Terminal represents another area of potential significant growth on the waterfront. The Terminal currently services fishing vessels that directly unload into fish processing facilities located along the edge of the bulkhead that define the northern portions of the terminal. However the southern approximately 100-feet of bulkhead abuts an open terminal area that is used for loading and unloading of equipment onto or off of vessels. An expansion of the South Terminal bulkhead to the south would allow for the berthing of more and/or larger vessels, allowing for expanded use of South Terminal. As has been a stated goal for the last several years, the City wishes to create an alternative energy and educational hub on the southern portion of the South Terminal. With direct access to one of the most protected deep-water areas on the south coast of New England, abundant land-side area for manufacturing and assembly facilities, and the close proximity of major highways, the Terminal is an ideal location for the manufacture, assembly, testing, and shipping of alternative energy equipment such as wind turbines and blades, solar panels, and wave energy conversion systems. While the facility can be utilized in its current state, expansion of the Terminal to the south could create an additional 200 feet or more of bulkhead area (see Figure 6.2) and significant improve opportunities for economic expansion.

Boat Ramp Enhancements (New Bedford and Fairhaven)

Numerous boat ramp enhancements and repairs are planned for the Harbor. The public boat ramps at Gifford Street (New Bedford) and Pease Park (Fairhaven) have recently undergone repairs, and require additional improvements in order to be fully functional for a full spectrum of potential users. This includes re-paving, addition and repair of floats, and dredging.

An Upper Harbor Boat Ramp is currently being planned for the Upper Portion of the Harbor off of Sawyer Street in New Bedford (north of the Rt. I-195 Bridge). This boat ramp facility would support the Upper Harbor Crew Course the City is constructing on the Acushnet River between the I-195 and Coggeshall Street bridges. New Bedford's Public Access Board is currently evaluating the boat ramp

full potential and has begun work on engineering West and East Rodney French Boulevard improvements that would support the facility.

Palmers Island (New Bedford)

A nature and maritime history trail is currently being planned for Palmer's Island. This will increase public access to and awareness of the broad diversity of flora and fauna supported by the Achusnet River estuary and offer opportunities to observe the working port. The trail, starting connection to the Island, will wind its way across the Island to the lighthouse at its northern point. The walkway will pass tidal wetland and salt marsh ecological habitats, providing for a trek rich in the Harbor's biodiversity while at the same time providing excellent views of the passing boats and other Port activity.

Upper Harbor Crew Course

The centerpiece of the City's plans for the revitalization of the Upper Harbor water sheet (the area between the Coggeshall and Wood Street Bridges) is the development of a Crew Rowing Course, with attendant community boathouse, docks, launching basin, and river walk. The initial phases of this project are being developed with the dredging of a boat basin off the end of Sawyer Street in New Bedford and the placement of docks to allow for crew race events and practice meets on the River beginning in Spring 2009. Over the next ten years, the City plans to dredge a full 2,300-meter course from the launching basin near the Coggeshall Street Bridge to a turning basin just south of the Wood Street Bridge, and the various support infrastructure. A river walk would extend along the New Bedford for the entire length of the crew boat to encourage viewing of rowing events and offer public access to the riverfront.

Union Wharf (Fairhaven)

The existing gravity walls around Union Wharf restrict the ability of the Town of Fairhaven to dredge along the northern and western sides of the Wharf, and therefore limits the types and sizes of vessels that can dock along the north and west sides. This Plan supports planned engineering enhancements to repair the existing gravity stone walls on the Wharf's north and west sides with metal sheet bulkheads. Additionally, the Plan supports the concept of utilizing a WDSF (see further discussion in Section 6.2.2) to augment the existing filled pier structure. This concept would involve enlarging Union Wharf by a marginal amount in order to allow for the installation of the new sheeted retaining wall around the perimeter of the Wharf, and then filling in behind this wall with clean fill generated during the construction of CAD Cells. This would allow for the beneficial re-use of CAD Cell

material within the Port, thereby benefitting both the navigational dredge projects and the Union Wharf rehabilitation project.

HDC Commercial Fishing Wharves (New Bedford)

The urgent need to add more commercial fishing vessel berthing and to upgrade existing facilities at Homer's, Leonard's, Steamship and Fisherman's Wharves and at Coal Pocket Pier is discussed in Section 5.3 of this Plan. Projects have been initiated by the HDC to complete this work. Additional funding will be needed. The HDC has received a $15k grant for use in designing a storm water system for the commercial fishing piers and for State Pier. They have applied for an additional $15k grant to design a system for Gifford Street.

Hicks Logan Marina (New Bedford)

Beginning at the north end of the Designated Port Area (North Terminal) along the Hicks Logan waterfront this Plan supports the creation of a marina(s) to support recreational boats including mega-yachts. This will require dredging to improve access and to accommodate even modest-size pleasure craft.

Fairhaven Shipyard properties (Fairhaven)

Improvements are being considered by the owners of Fairhaven Shipyard to increase the size of their travel lift. This may require the re-alignment of the pile supported piers or re-installation or replacement of bulkhead walls.

Old North Wharf (Fairhaven)

The owners of the Old North Wharf property have express a desire to extend the bulkhead on their property as necessary in order to more easily accommodate commercial fishing vessels at their docks.

Seaport Marina and Holiday Hotel (Fairhaven)

This property was formerly called the Holiday Inn Express and has recently been acquired by a developer who intends to complete extensive renovation of the hotel and waterfront marina. Part of this project will require work on the existing bulkhead, improvements to encourage more public access along the water's edge, and some infrastructure additions that will help define this area as a public gateway to the Fairhaven waterfront. Planned expansion and improvement of both the land-side and water-side infrastructure at this property will significantly improve the visual appearance of this section of harbor and create a welcoming "Gateway" to the Fairhaven waterfront for those approaching the town over the Route 6 causeway.

This Plan generally supports redevelopment and expansion efforts aimed at improving this gateway property and increasing public access along this section of shoreline. Proposed improvements include:

- Upgrading the shore-side infrastructure including buildings and parking areas
- Replacing the failing bulkhead
- Completing beach nourishment in the area immediately west of the north parking area
- Reconfiguring docks and completing dredging to accommodate larger/deeper-draft vessels
- Adding docks to expand use of the existing watersheet
- Creating a public walkway or harborwalk along the properties shoreline that would tie into future walkways on adjacent properties eventually allowing public access from the causeway south to the Pease Park boat ramp.

The details of the design and use of these proposed improvements will require public review and approval and licensing by both the Town and State but the concept of creating an inviting, attractive waterfront area with improved public access to the water's edge and watersheet is strongly supported by this Harbor Plan.

6.8 TOURISM

As discussed in Chapter 3, most the New Bedford waterfront south of the I195 Bridge and much of Fairhaven central waterfront are devoted to supporting marine industry. This area is also near the downtown business and tourism center and next to residential areas. Improved public access to these areas could have a significant positive impact on the local tourism industry and the quality of life for local residents. This could be done without any significant negative impact on the existing or anticipated future water-dependent industry in the working port. In fact with careful planning, these uses can be very compatible or even complementary. The day-to-day functioning of the working waterfront can be of great interest to the general public and can draw people down to the Port.

In order to stimulate interest in the commercial fishing fleet, to add additional revenue streams to fishermen, fish processing facilities and fish auctions, this Plan supports methodologies employed by the City of New Bedford and the Town of Fairhaven to generate tourism activities surrounding the commercial fishing fleet. These activities may involve tours of fishing vessels, processing facilities and the seafood auction, creation of open-air fish markets where fresh fish harvested by the fishing fleet can be sold directly to tourists, or simply viewing areas where tourists can observe the port's activities.

6.9 RECREATION AND PUBLIC ACCESS

RECREATIONAL BOATING

The City of New Bedford and the Town of Fairhaven recognize the potential economic benefits of recreational boating to their communities. Expansion in the number of recreational boating slips and moorings and the additions of more services and amenities serving boaters is anticipated to have a significant positive economic impact to the area. Care is needed to ensure that the growth of recreational boating activity does not interfere with the functioning of the traditional working port or limit new opportunities for expanding other appropriate marine industries in the Port. These new or expanded recreational slips and/or moorings will be located outside of the Designated Port Area.

New Bedford received a $95,000 grant in 2008 which is being used to add dinghy docks and an additional 20 moorings to more fully support the needs of boaters. New signs will be placed at the entrance to the Harbor (in the vicinity of the hurricane barrier) both welcoming visitors and providing safety instructions (e.g. existence of a no-wake zone). Additional funding is needed to further develop facilities and services to support transient recreational boats. These would include shuttle services, dinghy docks, improved access for physically disabled boaters (ADA compliance), and shore-side support services such as boat repair, resupply and visitor amenities. Funding for this initiative would likely be available through the National Fish and Wildlife Service's Boating Infrastructure Grant (aka BIG) program but will require 25% matching local funds. This program focuses on the needs of non-trailerable (i.e. greater than 26 feet in length) transient boats. Transient refers to visits up to 10 days and non-trailerable is defined as a boat greater than 26 feet in length many of which require water depths (at mean low water) of 6 feet or more. The existence of these services and infrastructure will encourage port calls by boaters travelling along the coast off New Bedford/Fairhaven and allow them to enjoy the many local recreational, cultural, historic and natural assets of the region – benefiting both the transient boaters and the local economy.

Since the availability of transient moorings and slips presents the opportunity to draw tourists to the area by sea, this Plan supports setting aside a portion of the new slips and mooring fields for use by transient boaters. A centralized system for providing information regarding the location and availability of slips and moorings to transient boaters is recommended to facilitate the docking process. Additionally, identification of new short-term and long-term parking locations that will allow ease of access to moorings and slips would be helpful. This system can be utilized to ensure that transient boaters can be tracked to ensure that they do not stay longer than is acceptable to the New Bedford Harbor Development Commission or the Town of Fairhaven. Further discussion of managing the

opportunities offered by a robust recreational boating support industry is included in Chapter 5 – Watersheet Management Plan. There is a need for the Port to have a comprehensive recreational boating plan.

EXPANSION OF RECREATIONAL PIERS/SLIPS

The following areas have been identified as locations in which the expansion of existing recreational piers or the creation of new recreational piers would be appropriate:

- Hicks-Logan Area north of the DPA
- Gifford Street Boat Ramp or adjacent to the proposed South Terminal Expansion.
- Moby Dick Marina
- Fairhaven Shipyards
- Seaport Marina and Holiday Hotel (former Holiday Inn Express)
- Pope's Island Marina

MOORING AREA EXPANSION

The Town of Fairhaven, under the auspices of the Harbormaster and the Marine Resources Department, has expressed an interest in developing or expanding mooring fields in several areas within the Harbor. These include areas around Crow Island, north of the New Bedford/Fairhaven Bridge, and immediately north of the Hurricane Barrier. One possibility is for the Town to install moorings in these areas and then rent them on an annual basis. Another is to have individual owners own the moorings and to pay annual fees to the Town for their maintenance, inspection and operation. Access to these moorings could be from existing marinas and public docks.

The City of New Bedford, through the HDC, has recently completed a study of their mooring field to eliminate permitting discrepancies and identify opportunities for expansion.

BOAT RAMP ENHANCEMENTS

Pease Park Boat Ramp

In addition to recent repairs, the Pease Park boat ramp in Fairhaven will be substantially improved with the addition of a floating dock providing a central landing for a cross-harbor water taxi and berths for transient recreational vessels. The ramp will also continue to provide public water access for recreational use.

Gifford Street Boat Ramp

The Gifford Street boat ramp in New Bedford will continue to be used for the launching and hauling of both trailerable recreational and commercial boats. This area needs to be rehabilitated and dredged in order to allow full access to the Harbor from this location. Dredging of this area is currently (Summer 2009) underway.

Marsh Island Street Boat Ramp

In support of future recreational boating north of the Route 6 Bridge, as well as supporting future rowing events and activity within the area north of the Coggeshall Street Bridge, the creation of a launch area has been proposed on the northern portion of Marsh Island.

POSTING AND ENFORCEMENT OF SPEED LIMITS

Citizens and businesses of the City of New Bedford and the Town of Fairhaven have expressed concern that high-speed boat traffic creates wakes that interfere with vessel traffic, and that it has and could continue to cause damage to private boats and marine structures. The Plan recommends the posting of speed limit signs and enforcement of a “slow-zone” for vessels where appropriate to abate the problem. In addition the use of watersheet north of the I195 Bridge should limited to non-powered or very low powered craft, favoring uses such as rowing, canoeing and kayaking rather than jet skis or power boats generating wakes and/or high noise.

PUBLIC ACCESS

Walkways, Bike Paths, Crosswalks

In many parts of the Harbor, the general public is unable to access the water's edge and realize the many benefits of living or visiting a waterfront community. These include quiet enjoyment of the more remote areas of Harbor to observation of the robust variety of activities in the working port. There is a general lack of safe and easy access route connecting the downtown retail centers and tourist attraction to the Port and once at the water's edge there are few opportunities for the public to walk along the perimeter of the Harbor for any extended distances.

Conservation Lands / Waterfront Parks

Some waterfront parks exist but more could be created. Conservation lands including both Marsh Island and Palmer Island offer excellent opportunities for public access and enjoyment of the Harbor.

6.10 ENVIRONMENTAL ISSUES

The Plan supports addressing specific issues related to the quality of the environment of New Bedford/Fairhaven Harbor. The goal of addressing these issues is to have the New Bedford/Fairhaven Harbor become the first "Green Port" in New England. One of the largest environmental issues needing to be addressed is the presence of high levels of toxins in the sediments covering the floor of the Harbor. Since initiatives being taken to remove these contaminants are discussed in detail in other sections of this Plan, they are not repeated here. Suffice it to say that initiatives are underway to clean up the Harbor's bottom. This section will instead focuses on water quality and marine debris issues.

6.10.1 DISCHARGES FROM SHORE-SIDE SOURCES

COMBINED SEWER OVERFLOWS

Completing the separation of the combined sewers in the City of New Bedford and the Town of Fairhaven will be a major step to improving the water quality in the Harbor. The City of New Bedford has been working diligently to complete this project, but is facing a very large budget shortfall to fully fund these separation projects located north of the Coggeshall Street Bridge. This area of the City of New Bedford is situated within an area that has very shallow bedrock; therefore, these

projects involve the blasting in order to install new piping. The process is time consuming and costly, but slow, steady progress is being made. This Plan supports seeking alternate funding sources in order expedite completion of this important project.

OUTFALL STUDY

In order to further improve the water quality within the Harbor, this Plan recommends the commissioning of a study to locate and evaluate the existing outfalls along the shore within the Harbor. The outfalls should be traced and categorized (e.g. stormwater, combined sewer overflow (CSO), industrial, etc.). Each stormwater and CSO should be checked with records maintained by the City of New Bedford Department of Public Infrastructure or the Town of Fairhaven Department of Public Works. Each industrial outfall should be researched with MassDEP to determine whether a valid permit exists. Outfalls should be sampled and analyzed for pollutants as appropriate. Any unpermitted or unauthorized outfalls should be shut down and removed.

NON-POINT SOURCE POLLUTION

Since nearly all stormwater in the City of New Bedford and the Town of Fairhaven is ultimately discharged to the New Bedford/Fairhaven Harbor, implementation of Stormwater Best Management Practices (BMPs) is likely to have a significant impact on the water quality in the Harbor. The following is a list of actions would address non-point source pollution that is impacting water quality in the Harbor:

- Apply Stormwater BMPs to Route 18, Route 6 and I-195 Stormwater Runoff

  This project involves implementing BMPs for stormwater runoff collected from Route 6, Route 18, and Interstate 195. There is a significant quantity of daily automobile and truck traffic on all of these roadways. Hydrocarbons, trash, and impacted sediments are primary components of stormwater runoff from the highway. Thus, BMPs are necessary to prevent these contaminants from reaching the New Bedford/Fairhaven Harbor.

- Apply Stormwater BMPs to Properties Adjacent to Harbor

  This project involves implementing BMPs for stormwater runoff collected from properties located adjacent to the Harbor, prior to discharge. Implementation of BMPs on individual properties adjacent to the Harbor will eliminate a large source of non-point source pollution to the Harbor.

- Apply Stormwater BMPs to City of New Bedford and Town of Fairhaven

  This project involves implementing BMPs for stormwater runoff collected from properties located throughout the City of New Bedford and the Town of Fairhaven. Implementation of BMPs on individual properties in the City will eliminate the majority of non-point source pollution to the Harbor.

DISCHARGES FROM WASTE WATER TREATMENT FACILITIES

The Coalition for Buzzards Bay has indicated that there top priorities for improving water quality are eliminations of CSOs, collection of boat discharges (septic and oil), and further reduction of nutrient (particularly nitrogen) discharges into the harbor from non-point sources and shore-side facilities, including Fairhaven's waste water treatment plant.

IMPROVEMENTS TO CITY CSOS

The City of New Bedford is actively completing upgrades to its stormwater systems. Significant progress has been made in disassociating numerous storm and sanitary overflow pipe systems. Most of the sewer discharge points in the lower and outer portions of the Harbor have been upgraded and separated. Additional upgrades are planned for the middle and upper portions of the Harbor as funding becomes available. A thorough clean-out of the main interceptor line running roughly north-south through the City paralleling the Harbor is currently underway by the New Bedford Department of Public Infrastructure. Removal of sediments and grit from the interceptor line will improve the flows through the system, particularly during peak flow times, ameliorating the potential for CSO discharges.

6.10.2 BOAT DISCHARGES

New Bedford Harbor lies entirely within the limits of the Buzzards Bay No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a NDZ are completely prohibited from discharging any sewage, treated or untreated, into the Harbor's waters. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked with the NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank.

The success of an NDA is in part dependent on having an adequate number of vessel pump-out facilities. This Plan supports the creation of commercial pump-out

facilities for the commercial fishing fleet as well as additional pump-out facilities for recreational boaters in the Harbor. Fairhaven currently has a pump out boat and New Bedford has a pump out facility at the Popes Island Marina. More recreational pump-out facilities or dump stations are needed. An additional pump out stations at a centrally located HDC Operations Center should be considered. Funds for recreational pump-out facilities are available through grants via the Massachusetts Department of Marine Fisheries. Similarly, grants for commercial pump-out facilities are available through the Massachusetts Department of Coastal Zone Management.

When traveling in NDA waters, boaters with Type I or Type II MSDs will be required to do one of the following:

- Close the seacock and remove the handle.
- Fix the seacock in the closed position with a padlock or non-releasable wire-tie.
- Lock the door to the space enclosing the toilet with a padlock or door handle key lock.

When traveling in NDA waters, a Type III MSD (holding tank) must be secured in one of the following ways:

- Close each valve leading to an overboard discharge.
- Padlock each valve in the closed position.
- Use a non-releasable wire-tie to hold each valve leading to an overboard discharge in the closed position.

This Plan recommends that any vessel with a Type III MSD be fitted in such a way that a "Y" valve is connected to a holding tank and a through-the-hull fitting.

Bilge Water/Waste Oil Collection

Bilge water discharged into the Harbor often contains a range of contaminants including waste oil. The Coast Guard Marine Safety Field Office in New Bedford frequently (at least several times per week) responds to reports of oil sheens on the water apparently the result of discharges from commercial boats at docks and piers around the Harbor. Offering a service that would routinely collect these fluids would be one useful step in efforts to improve the quality of the Harbor's marine environment. The HDC is currently in negotiations with potential vendors to set up locations to collect and process bilge water or waste oil.

6.10.3 TRASH AND DEBRIS

Derelict Fishing Gear Collection and Disposal

Derelict Fishing Gear (DFG) is any gear that is no longer being used because it has been lost, discarded or abandoned in the marine environment. Even though it is no longer being actively used by a fisherman, DFG continues to collect various marine life in its path, impacting the environment and wasting many precious resources. DFG abandonment results in direct impact to essential fish habitat within the Harbor, as well as Buzzard's Bay and the open ocean. Additionally, DFG is a navigational hazard and can be damaging to other vessels as well as active fishing gear. Collection of DFG will result in a reduction in the quantity of tackle and gear that will be discharged in the future. This Plan supports the HDCs Fishing for Energy plan to collect DFG and utilize the equipment in future energy production. This Plan also encourages the HDC and the Town of Fairhaven to work with the commercial fishing fleet to identify and collect DFG that is found in the ocean in order to bring it back for disposal.

Trash

Trash, building material and other light debris are often blown or thrown into the Harbor. It is not uncommon to see this material drifting on the water surface or accumulating in pier areas or along exposed shoreline. At least some of this comes from overflowing trash containers and careless littering. Unsightly "rafts" of this material obviously degrade the attractiveness of the Harbor and the appeal of its use for recreation or many other activities.

To address such problems, the HDC is implementing a robust trash and recycling program which will include solar-powered compacting trash cans. They are also constructing a trash shed and initiating projects for oil collection, bilge water transfer, and commercial pump-out infrastructure/services. The EPA is using New Bedford's efforts as a model for how to develop a green port plan and achieve green port designation.

6.10.4 REMEDIATION

Several older industrial sites along waterfront, mostly on the New Bedford side, are contaminated with a variety of toxins produced during past industrial operations. These properties, such as the former Aerovox and NStar sites, have the potential of or have been adding contaminants to the Harbor through runoff, leakage and/or natural erosion processes. Although most of these sites are not believed to currently

having a significant negative impact on the quality of the Harbor's water, some remediation will be needed to clean these properties or encapsulate contaminated materials. Much of this can be accomplished when the properties are redeveloped.

6.10.5 CAPPING OF LATENT SEDIMENT CONTAMINATION

Despite the best efforts from both the Superfund Dredging Project and the Navigational Dredge Program, not all contaminated sediment will be removed from the Harbor. All stakeholders agree that some latent contaminated sediment is likely to remain in the Harbor even after cleanup efforts have been completed. The latent remaining contaminated sediment will be left over from three (3) likely operations:

- Residual contaminated sediments left over after the EPA Superfund Project completes the dredging of an area;
- Residual contaminated sediments left over after the Navigational Dredge Program completes its dredging of an area;
- Latent contaminated sediments left over in areas where no dredging is scheduled.

In order to isolate those remaining residual contaminated sediments from direct contact with the environment, the Plan supports the concept of capping these areas. The DEP considers such capping as an extension to the enhancement of the Remedy, as it would result in cleaner bottom conditions, and it would entomb additional contaminated sediments. Since significant quantities of clean material are expected to be generated through the construction of CAD Cells in the Harbor, the Plan supports the concept of utilizing clean CAD material as capping material for these residual sediment contamination areas. Capped areas would need to be designed in such a way as to minimize disturbance of any latent contaminated sediment and also not preclude navigation or the natural flowage of the River/Harbor waters. Additionally, the capping process would need to meet the Standards and ARARs for water quality set for the Superfund and SER processes. Protection of existing wetland areas is an expected standard that any capping would have to meet, and potential creation of additional wetlands is a potential additional environmental benefit that could come from a capping program. Existing bottom sediment in areas proposed for WDSFs (see Figure 6.2 and discussion in section 6.2.2) currently contain varying levels of contamination. Use of clean CAD material in the creation of these facilities will serve to cap these contaminated sediments.

Figure 6.1 Harbor Bathymetry

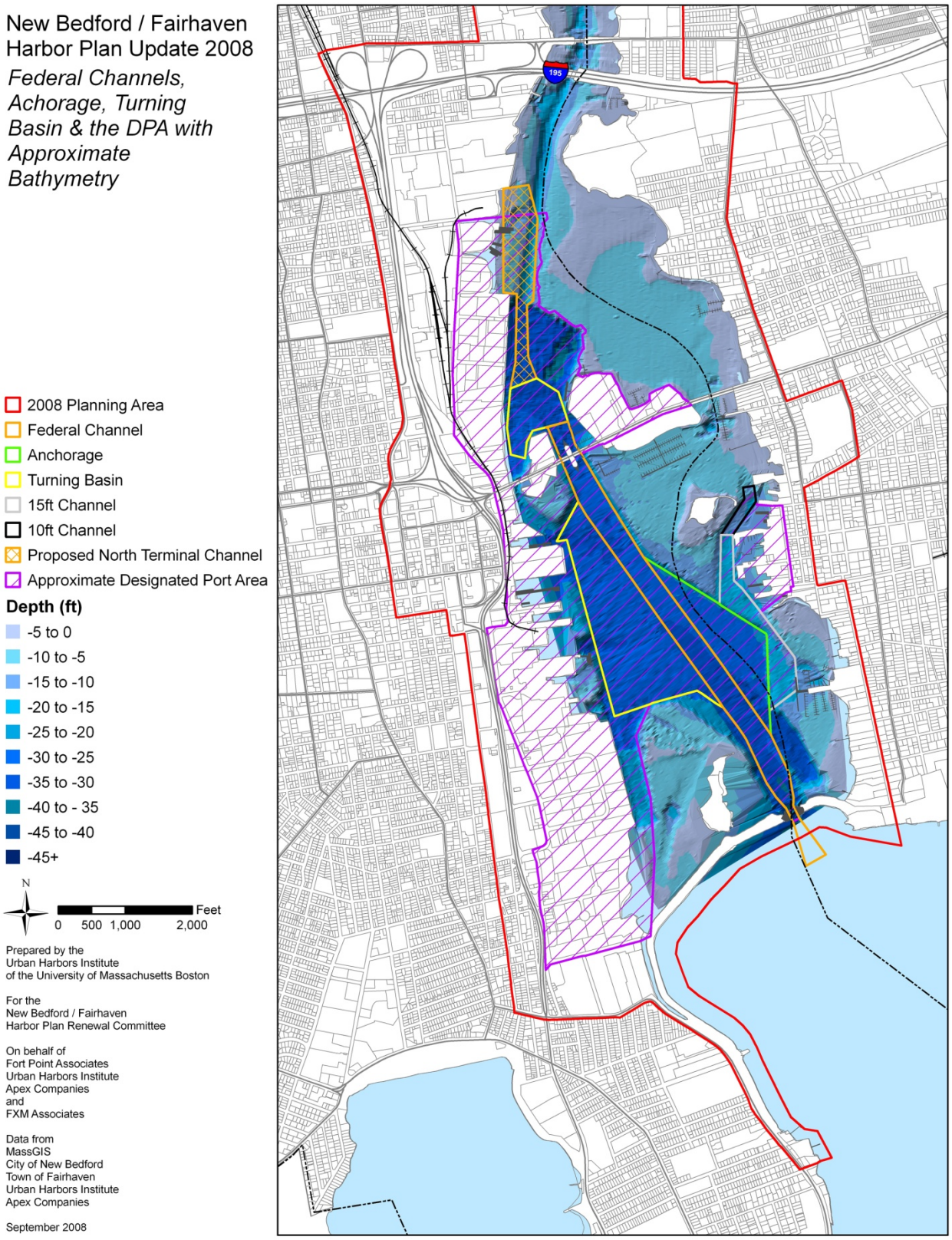
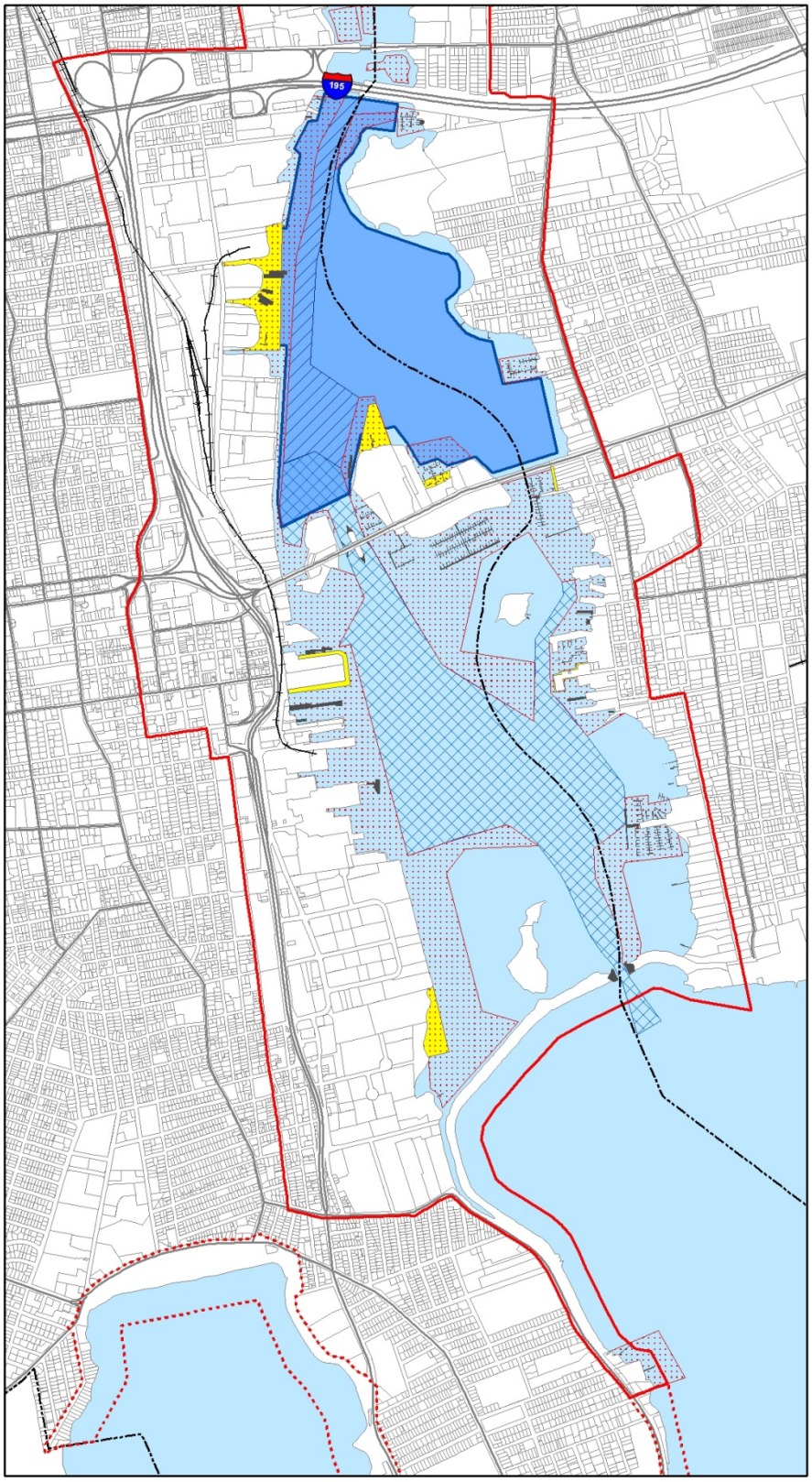


Figure 6.2 Dredging Projects

New Bedford / Fairhaven Harbor Plan Update 2008

Potential Waterfront Development Shoreline Facilities (WDSFs) and Dredge Areas



Secondary Planning Area
2008 Planning Area
TOWNS_POLY
Potential Dredge Area*
State/Other Channel
Army Corps Dredge Project Areas
Potential WDSFs
Boundary for CAD Cells (2008)

* Based on individual properties scheduled for dredging

N

0 500 1,000 2,000 Feet

Prepared by the
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For the
New Bedford / Fairhaven
Harbor Plan Renewal Committee

On behalf of
Fort Point Associates
Urban Harbors Institute
Apex Companies
and
FXM Associates

Data from
MassGIS
City of New Bedford
Town of Fairhaven
Urban Harbors Institute
Apex Companies

December 2009

7.0 RECOMMENDATIONS

7.1 INTRODUCTION

The Harbor Plan establishes a framework for advancing public and private sector initiatives within the Harbor area that respond to community goals and to near and longer-term market potentials identified through the Economic Analysis. This section of the Harbor Plan describes the projects that are needed to implement the Plan's vision and additional planning efforts that need to be undertaken. Chapter 8 — Implementation, identifies the port management structure needed to successfully implement the Plan and outlines a strategy for funding plan elements, including potential funding sources.

New Bedford/Fairhaven Harbor has limited land resources useable by marine industry. The Harbor Plan process has focused on achieving consensus among diverse harbor constituencies on the use of this scarce land resource and improvements to its supporting infrastructure. Over the next five years, under initiatives anticipated in this Harbor Plan, land south of the Route 6 New Bedford-Fairhaven Bridge will approach full development. As these development activities move forward, concentrated planning efforts will need to be directed to lands north of the bridge. The Harbor's ability to grow and develop is directly linked to capturing the potential of the North Harbor area—the "new frontier" of harbor development in the 21st century. Realizing the full potential of the North Harbor area will require replacement of the New Bedford-Fairhaven Bridge, dredging of the federal channel, and making creative use of the new North Harbor lands that will be created in support of the harbor dredge projects. The restoration of passenger and freight rail service to the North Harbor creates the landside conditions essential for successful development of expanded port terminal facilities in this area.

In the near term, this Harbor Plan calls for substantial investments in facilities and programs that will address the needs of the fishing industry, allocation of land for expansion of the seafood industry, establishment of a new freight terminal at State Pier, enhancement of the waterfront as an attractive public space linked by water transportation, and expansion of open space and recreational boating. These important initiatives will be complemented by major projects, including the development of a new Intermodal Transportation Center, redevelopment of Route 18, and reuse of the former NStar power plant site

The Plan also identifies additional studies and analyses that will need to be undertaken to advance specific projects or initiatives.

Figure 1.1 shows the basic Harbor-wide Concept Plan. While this figure itself is not intended to be prescriptive for purposes of any state or local permitting within the harbor planning area, various elements of the Harbor Plan text contained in the following chapter do contain provisions that offer some guidance to both developers and regulators that should prove useful in the licensing process under M.G.L. Chapter 91 and/or municipal regulations. In addition to this chapter, both Chapter 8 and 9 provide additional guidance to regulators. Key points in this guidance are summarized in Table 9-1. Other than a change to the minimum required width of waterfront public accessways, this Plan does not include any regulatory substitutions, amplifications, or other substantive guidance intended to be binding for Chapter 91 licensing purposes.

The Harbor Plan is guided by the four over-riding principles defined in Section 5.1.1 and the following recommendations presented in this Chapter were developed from these:

- Develop Traditional Harbor Industries
- Capture New Opportunities
- Rebuild and Add to the Harbor Infrastructure
- Enhance the Harbor Environment.

The Harbor Plan includes nine geographic sub-areas (shown in Figure 6.1), each with its own unique characteristics and issues. Plans for each of these sub-areas are described separately in this document and specific planning goals and projects for each area are discussed in more detail. Several proposed projects and initiatives have harbor-wide significance and these projects are described first to provide a context for the discussion of individual sub-areas.

7.2 HARBORWIDE INITIATIVES

The following initiatives will have impacts throughout the much of the Harbor:

7.2.1 HARBOR DREDGING

The Plan supports dredging to meet the needs of the commercial and recreational users of the Harbor; to restore federal channels to authorized depths; to undertake additional dredging outside of the federal areas to meet the needs of state, municipal, and private sector facilities; and to advance harbor cleanup efforts. Two types of dredging projects are currently being advanced and continued coordination and cooperation between the entities advancing these projects is imperative:

- *Cleanup Dredging* involving removal of contaminated harbor sediments is being advanced under the auspices of the US Environmental Protection Agency and is now fully into the implementation stage
- *Navigational Maintenance/Improvement Dredging* are initiatives that will enhance port operations and harbor capacity. These projects involve federal, state, municipal, and private sector proponents. Navigational Dredging is being conducted under the auspices of the State Enhance Remedy (SER), an Enhancement to the Superfund Remedy (see below for additional information concerning the SER).

Because nearly all of the sediments that exist within the Harbor contain various levels of contaminants, including PCBs and metals, the Plan strongly supports the dredging and confinement of those sediments (whether the purpose is for navigational dredging or for superfund cleanup). The Plan strongly supports these efforts because the result of dredging for either reason will be to remove contaminated sediments from direct contact with the Harbor environment, resulting in a cleaner, healthier Harbor.

For the purposes of this Plan, estimations of quantities to be dredged have been divided into two categories:

- Dredging to be completed for navigational reasons (that also in many cases results in an environmental cleanup benefit), and
- Dredging to be completed principally for environmental cleanup reasons.

7.2.1.1 DREDGE QUANTITIES FOR NAVIGATIONAL AND CLEANUP DREDGING:

To date, dredging needs have been identified that support maintenance and improvement dredging of the Port to facilitate the safe passage and berthing of vessels, and dredging needs have been identified that support cleanup efforts to remove contaminated sediments from direct contact with the Harbor environment. The dredge volumes associated with dredging the federal channels to authorized depths; implementing previously identified city, town, state and private projects; and for USEPA/MassDEP-backed cleanup of contaminated sediments has been estimated by the City, the Town, CZM, the SER Committee, the US Army Corps of Engineers, and the USEPA as up to 2,600,000 cubic yards. Most (if not all) of this is comprised of polluted aquatic sediments. The total supported by this Plan can be broken down as follows:

Identified Volumes for Navigational and Cleanup Dredging [1]

Location	Cubic yards
Federal Channel Area and Basins	850,000
Fairways, Turning/Mooring Basins, Side Channels, Driveways, Slips, Berthing Areas[2]	850,000
USEPA Cleanup Dredging – South	300,000
Subtotal	*2,000,000*
USEPA Cleanup Dredging – North	600,000
Total	*2,600,000*

A plan map showing the aerial extent of the potential dredge locations in the Harbor is included as Figure 6.2. The locations of specific areas identified in the Plan for navigational dredging are included in Appendix A (The Dredge Management Plan for New Bedford/Fairhaven Harbor). For the specific areas that the USEPA plans to dredge for Superfund Cleanup purposes, see the USEPA website: http://www.epa.gov/boston/nbh/.

7.2.1.2 REGULATORY PROCESS FOR DREDGING

Dredging activities in the Harbor fall under three main regulatory processes: 1) the EPA's Superfund remediation; 2) the State Enhanced Remedy (SER) under the Superfund process (MassDEP is the State lead for this portion of the Superfund Site), which allow for expedited permitting of navigational projects in the upper and lower portions of the Harbor; and 3) the normal dredge project permitting process.

[1] These volumes are approximate and are based upon engineer's estimates of quantities from various sources. These do not include any allowance for maintenance or improvement dredging within the North Terminal area associated with potential development of a new intermodal Port Terminal (i.e. in the former USEPA CDF D area now slated for development as the North Terminal Bulkhead CDF). This dredging could amount to an additional 400-500,000 cubic yards or possibly more, depending on facility design and operational needs. As stated in the economic assessment of waterborne cargo opportunities of the original Plan, the North Terminal is the area of the Harbor where land and potential land adjacent to dredgeable channels exists to develop potentially competitive facilities. Additional assessment and design is needed to evaluate potential future markets and associated facility and dredging needs

[2] Final designs for all dredge areas have not been completed, and some USEPA cleanup dredging footprints may overlap for areas south of the I-195 Bridge with the future footprints of some navigational dredging projects

Superfund Process

The *Superfund process* is overseen by the USEPA, and was promulgated through the adoption of the Record of Decision (ROD) for the Superfund Remedy, which was published and adopted in 1998. The Superfund ROD established the cleanup limits for the New Bedford Harbor Superfund Site, as well as the geographic extent of the Site, and the proposed Remedy for addressing the cleanup of the Site. For the New Bedford Harbor Superfund Site, the USEPA has designated its Federal partner, the US Army Corps of Engineers, to conduct actual field implementation of the Remedy. The regulatory framework under which the work is conducted follows the Federal Superfund Cleanup process. The USEPA has decision-making authority concerning all aspects of the cleanup process. The process requires that Applicable or Relevant and Appropriate Regulations (ARARs) be followed during the conduct of the work. The Superfund process also includes the State of Massachusetts partner, the MassDEP (Division of Waste Site Cleanup). MassDEP personnel represent the State's interests in the cleanup action and provide technical assistance and input to the process. MassDEP is responsible for 10% of the Remedial Action costs. The USEPA is remediating Superfund-level PCB impacted sediments at the Site. The USACE is USEPA's contractor for this Superfund Site. For more information concerning the USEPA regulatory process for the Superfund Cleanup of the Harbor, the reader is directed to the USEPA website: http://www.epa.gov/boston/nbh/. The Harbor Plan supports the Superfund regulatory process as it is applied to the cleanup of Superfund material in the Harbor.

State-Enhanced Remedy Process

A State Enhanced Remedy (SER) was requested by the MassDEP to include the navigational dredging under the Superfund process. USEPA included this into the ROD, signed September 1998. The purpose of the SER was to increase the amount of PCB contaminated sediments removed from the New Bedford Harbor Site, and allow for greater coordination between the EPA's Superfund remediation and the navigational dredging.

(From the 1998 ROD, Section XI, page 33): "Such enhancements are envisioned in the implementing regulations of CERCLA at 40 CFR 300.515(f). The enhancement requested by the Commonwealth linked as appropriate the dredging and disposal of sediments dredged from the harbor's navigational channels (located in the lower and outer harbors) with CERCLA and the Superfund program. Although these navigational sediments fall below the 50 ppm lower harbor TCL (and thus do not overlap with sediments slated for remedial dredging), they are nevertheless contaminated with heavy metals and lower levels of PCBs. Thus these navigational sediments, approximately 1.7 million cy in volume, are most likely unsuitable for open water disposal (Maguire Group, 1997), and alternative disposal approaches

are required if shipping channels are to be maintained to their federally-approved depths. As discussed further below, and provided consistency with 40 CFR 300.515 (f) (1) (ii) as well as other dredging-related regulations is maintained, EPA accepts the Commonwealth's request to include navigational dredging as an enhancement of the selected remedy."

The SER allows for an alternative regulatory process for navigational dredging in the upper and lower portions of the Harbor. The MassDEP is the lead State agency and the HDC administers the navigational dredging projects. MassDEP conducts regulatory and engineering oversight and the SER working group, consisting of the key regulatory agencies active in the Port, establishes the performance standards for dredging.

In 2004, an SER committee was formed to oversee the navigational dredging. The committee includes members from all stakeholder regulatory agencies (including USEPA, MassDEP, MACZM, MA DMF, NOAA and USACE), as well as representatives of the City of New Bedford HDC and the Fairhaven Planning Department as the primary proponents of navigational dredging and infrastructure projects. The committee chair is the MassDEP Project Manager. Memoranda of Agreement (MOAs) between the USEPA, MassDEP, and the New Bedford HDC establish the formal lines of authority for work under the SER process. The Town of Fairhaven is also actively involved but was not a signer of the MOAs.

The SER committee meets monthly (or as needed) in New Bedford to receive updates of dredging projects being undertaken by the City of New Bedford and the Town of Fairhaven. The committee makes decisions regarding the navigational dredge projects. It has adopted Performance Standards to be applied to work conducted under the SER process.

Projects that wish to take advantage of the SER process petition the SER committee for inclusion. The EPA has allowed the SER committee to use the New Bedford/Fairhaven Harbor Plan as a guide in deciding if a particular dredge project should be included into the SER process.

Projects that may be included under the regulatory process authority can include:

1. Navigational dredging that will result in the dredging of contaminated sediments from:

    a. The Federal Channels and Turning Basins;
    b. Channels, fairways, basins, and driveways that lead to the Federal Channel;
    c. Navigational areas around docking and berthing areas in the Harbor such as the areas in front of bulkheads and the slips

adjacent to and between piers, docks, pilings, and wharves for commercial and industrial properties (including marinas, boat repair facilities, ferry and water taxi docking and maintenance facilities, and commercial piers, wharfs, and bulkheads and piers, wharfs, and bulkheads that are used by commercial vessels). This includes all properties within the Designated Port Area (DPA) on both sides of the Harbor; and

d. Public facilities and those private facilities that provide for (official) public access (including, but not limited to, boat ramps, boat launching facilities, public piers, wharves, bulkheads, docks, etc.), and

e. Private marina, dock and wharf facilities used for the berthing or dockage of vessels that lie within the boundaries of the overall Superfund Site as laid out in the 1998 ROD.

2. Navigational or cleanup dredging in areas that are otherwise included as USEPA Superfund cleanup areas for the Superfund project (i.e., areas that USEPA has indicated will be dredged as part of the Superfund cleanup); and

3. Other areas related to the navigational dredging outlined above, such as:
   a. CAD Cells,
   b. The channels and basins and other infrastructure required to construct CAD Cells, and
   c. Dredging necessary to build Confined Disposal Facilities (CDF) and/or Waterfront Development Shoreline Facility (WDSF)s.

This Plan supports the use of the SER process for dredging and infrastructure projects that lie within the boundaries of the overall Superfund Site and that involve the removal and/or disposal of contaminated sediment from the navigable waterway. It should be noted that the SER process currently does not include soils or sediments from upland sites around the Harbor that were otherwise not intended to be included in the SER or for disposal in the CADs. A map summarizing the location of areas that this Plan currently recommends be included under the SER process is included as Figure 6.2. A table listing the properties by name currently recommended by this Plan update for inclusion under the SER process is included as Table A-4 in Appendix A. While the above noted table and map list the existing proprieties for inclusion, the Harbor Plan supports the application of the SER process for all areas within the Superfund Site boundaries in the Harbor. Application of the SER process to the overall "Site" portion of the Harbor will encourage the beneficial removal of contaminants from large portions of the Harbor bottom, resulting in an overall improved environment.

Normal Permitting Process

For projects on properties that are not included either under the Superfund Process or the SER Process, normal dredging permitting requirements apply. Projects that follow the normal permitting process may request authorization from the City and the SER committee to dispose of dredge materials into the CAD Cells ((and/or dispose of *suitable* dredge materials in a WDSF or CDF that may be built in the Harbor), under the authority of the SER process. In such case, the disposal portion of the project would be regulated by the SER process, but the dredging portion of the project would be conducted under the normal permitting process (see the Sections below for more information on disposal options).

7.2.1.3 SEDIMENT DISPOSAL OPTIONS FOR DREDGING

Because of a mix of highly contaminated sediments, moderately contaminated sediments, and non-contaminated sediments exist within New Bedford/Fairhaven Harbor, a mixture of sediment disposal options has developed for dredge projects over time. The following dredge material disposal options have been successfully implemented thus far for the disposal of dredge spoils from the Harbor:

- Upland Beneficial Re-Use – was utilized during the New Bedford/Fairhaven Harbor Dredge Program - Phase I (State Pier Dredge Project). Material dredged from the Harbor was blended with cement and lime and placed as a cap over contaminated soils at a railyard Brownfields Site located adjacent to the Harbor;
- Confined Disposal Facility (CDF) – was constructed by the USEPA at Sawyer Street for the placement and dewatering of contaminated dredge spoils dredged from the Acushnet River;
- Confined Aquatic Disposal (CAD) Facility – two CAD Cells have been constructed within the permitted DMMP area north of Popes Island;
- Offsite Upland Disposal – the USEPA is currently dredging, processing, dewatering and shipping to an out-of-State landfill dredge spoils generated from the Superfund dredging activities in the Acushnet River. While this method has been successful, it is also the most expensive of the methods utilized thus far in New Bedford/Fairhaven Harbor; and
- Offsite In-Water Disposal – clean dredge material generated from the construction of the CAD Cells has successfully been removed and disposed of at the Cape Cod Disposal Area, one of the allowable offshore dredge material disposal sites.

These disposal options were developed by proponents for their specific dredging projects. A number of the disposal options have evolved over time after much research and study - including the USEPA offsite disposal at an upland landfill of the most highly contaminate sediments, and the City/Town use of CAD Cells for navigational dredging within the Harbor. These options have represented viable disposal scenarios for the specific project needs experienced to date.

However the Harbor Plan Committee, as well as nearly all of the dredging stakeholder proponents interviewed as part of this Plan update preparation, have noted that there are tremendous opportunities for synergy between the various dredge project interests within the Harbor regarding the disposal issue. The Harbor Plan strongly supports efforts to coordinate Harbor dredge material disposal schemes in order to: 1) maximize the protection of the environment and human health; 2) facilitate faster and less expensive harbor navigational and cleanup dredging activities; and 3) maximize the potential for use and re-use of dredged materials to benefit dredge initiatives as well as other infrastructure and resource projects, both within the Harbor area and the surrounding region. Examples of how synergistic approaches to dredging might be utilized by the various dredge projects include:

- USEPA's use of City CAD Cells for disposal of some portion of the Superfund dredged material being removed from the Harbor. This use of a City CAD cell would both speed Superfund cleanup efforts in the short term, and facilitate the development of Superfund CAD cells as a longer-term disposal option for these sediments. This would allow the Superfund dredging period to be shortened from the current 40 more years to approximately 15 - 20 more years of dredging.
- Re-use of "suitable" material dredged from CAD cells in the Harbor as backfill behind WDSF bulkhead sites identified in the Plan. The large proportion of the "suitable" material dredged to date has been going to offshore disposal sites; however the City and Town have joined the other SER regulatory partners in supporting identification of beneficial reuse options for this material within the Port. One excellent reuse option is for backfill in the construction of new bulkheads identified in this Plan as needed port improvement initiatives. Since use of CAD material in the construction of bulkheads would both help expedite the overall cleanup of the Harbor by providing a local disposal alternative for CAD Cell construction material and possibly some contaminated sediments, the Plan supports the use of WDSF bulkhead structures for areas noted in this Plan.
- US Army Corps of Engineers use of City CAD Cells for disposal of "unsuitable" material dredged from the Federal channel in the Harbor as part of future Federal Navigational Channel dredging efforts. With very few

viable options for cost effective disposal of contaminated material that will be dredged as part of any Federal navigational dredging, the Army Corps, the City/Town, and the State, can all benefit from the use of City CAD Cells for "unsuitable" Federal channel material.

- Reuse of "suitable" material from CAD Cell construction as capping material for contaminated portions of the Harbor that would not otherwise be dredged either through navigational dredging or cleanup dredging.
- Reuse of "suitable" material removed during the construction of CAD Cells in the Harbor as beach nourishment, slope stabilization, and/or capping material for coastal projects both in the Harbor and throughout the region. It is expected that such beneficial reuse, through synergy with other projects, would help expedite and provide cost savings for both dredging projects within the Harbor and the (receiving) beach nourishment, slope stabilization, and/or capping projects.
- Dredge contaminated sediments that fall under the purview of the SER committee using the SER process.

Because all of the efforts noted above will result in cleanup of Harbor sediments as either a direct or indirect benefit, the Plan supports the inclusion of (at least the portion of) such projects that lie within the boundaries of the overall New Bedford Harbor Superfund Site under the SER regulatory process. Additionally, the Plan encourages SER stakeholder agencies and groups to assist (in any manner appropriate and/or allowable) in the permitting of the "receiving" projects (be they in the Harbor or outside of the Harbor), to increase the likelihood that the timing of "receiving" projects can be synchronized with Harbor dredging activities.

Recommended Disposal Options for Unsuitable Materials Generated from Navigational Dredge Projects

In 2000, Massachusetts Coastal Zone Management (CZM) initiated an effort to permit CAD Cells in New Bedford Harbor, resulting in a *Dredge Material Management Plan* (DMMP) *FEIR* (Maguire, 2003). After its approval by the Secretary of the Environmental Affairs, CZM turned over the responsibility for the construction, management, and maintenance of the Harbor's CAD facilities to the City of New Bedford through the New Bedford HDC. Since then, the City has constructed and utilized three (3) CAD cells that are located north of Popes Island which were used by the SER process for disposal of contaminated sediments:

- The "Borrow Pit CAD Cell", an existing deep hole in the bottom of the Harbor that had been created many years ago during a sand mining operation;

- CAD Cell #1, constructed by the HDC in 2004 and utilized from 2004 to 2008 for the disposal of contaminated materials removed from the Harbor during navigational dredging projects; and
- CAD Cell #2, the newest CAD Cell in the Harbor, constructed by the HDC during the summer of 2008, which will be utilized, until full, for the disposal of dredged materials from projects planned from 2008 and beyond.

The original (2003) *DMMP FEIR* for the Harbor included a conceptual layout for approximately six CAD cells, all to be located within the DMMP boundary. This boundary was modified in 2004/2005 so that the existing "Borrow Pit CAD Cell" would be included under the DMMP disposal umbrella, as well as CAD Cell #1, which follow-on engineering studies indicated would be best located just outside the original DMMP boundary. In 2007 and 2008, the boundary was again adjusted to better accommodate future proposed cells, all still to be located in the Harbor area immediately north of Popes Island. These modifications were made largely based on the experiences gained during the construction and operation of the Harbor's first CAD cells which demonstrated that the project's timing, engineering and budget considerations would best be accommodated with the construction of a larger number of smaller CAD cells (up to as many as 27). The State approved the expanded DMMP area in 2008. A Plan Map showing the location of the revised DMMP CAD Cell area is included as Figure 6.2.

Since 2004, over 150,000 cubic yards of contaminated sediment have been removed from the Harbor during navigational dredging projects and entombed within CAD cells in the DMMP area. The use of CAD cell technology has brought the composite (total) cost of the navigational dredging (including the cost to build the CAD Cell disposal facility) in the Harbor to under $100 per cubic yard. This is significantly less than disposal at available upland site (all of which are out of state) which would cost over $400 per cubic yard. The use of CAD Cells for disposal of navigational dredge material has energized the dredging efforts within the Harbor, allowing projects that had here-to-fore been unfeasible to be completed in record time at a reasonable cost. The Plan strongly supports the continued use of CAD cells for the disposal of unsuitable material generated via navigational dredging within the Harbor. Additional information concerning the use of CAD cells for navigational dredging, including the management of the construction, operation, and maintenance of CAD cells, is contained in Appendix A to this Plan.

The CAD cells developed in the Harbor will ultimately be capped, entombing the contaminated sediments discharged into them. Once appropriately capped, as verified by engineering monitoring studies, the area of the CAD cells may be useable once again for typical Harbor activities. This may include the use of the

water-sheet and Harbor bottom over the capped cells for navigation and for potential mooring of vessels. The Plan supports the re-use of the water-sheet and Harbor bottom over the capped CAD cells provided that: 1) engineering studies indicate that the cap can support such activity; and 2) continued monitoring does not indicate that the activity is having a negative impact on the cap(s).

The use of CAD cells in the Harbor for disposal of contaminated dredge material is administered by the HDC and overseen by the MassDEP (Bureau of Waste Site Cleanup). Monitoring of the entire process is required under the provisions set forth by the SER process. Monitoring during disposal to ensure that water quality standards are not exceeded, that improper material is not disposed of in the cells, and that the disposed material is placed in the cells uniformly is conducted by the HDC's resident engineer. Any use of the CAD cells for disposal must be reviewed under the SER process and approved by the SER and the HDC. Any private party use of the CAD cells must be conducted under contract with the HDC (the administering authority). Engineering oversight of all disposal activities, including any private dredge projects that wish to utilize the CAD cells, will be conducted by the HDC's designated engineer. Costs associated with the HDC engineer oversight of private dredge project disposal into the CAD cells will be accrued by the HDC and billed to the private parties utilizing the CAD cell. A "tipping fee" will be charged (on a per cubic yard basis) for any private party use of the CAD cells once approval has been granted. The "tipping fee" covers the costs of building and maintaining the CAD cells. The tipping fee is calculated by the HDC, and may vary depending upon the phase of work being conducted and the cell being utilized,

The overall CAD cell implementation strategy involves the completion of Harbor navigational dredging projects in phases. Phase III is currently underway, and Phase IV is in the planning stages. Because it is impractical to construct a single large CAD cell to hold all of the material that is likely to be dredged from the Harbor over time, several CAD cells will be constructed in sequence. The size and location of the CAD cells (within the allowable DMMP area) will be determined individually for each CAD cell, and will be based upon the volume of expected navigational dredging to be conducted for the current Phase of work and the amount of space that needs to be reserved to accept the contaminated top portion of the next CAD cell in the sequence to be constructed. As part of the overall CAD cell strategy for dredging, the Plan supports re-use of non-contaminated material excavated to construct the CAD cells. Re-use in upland situations such as (but not limited to) fill on construction sites, road grade, sand material for road de-icing, capping material for landfills or appropriate State sites, and asphalt batching are supported. Re-use of the material in the marine environment for beach nourishment and for capping of contaminated bottom areas is also supported. And re-use of the CAD construction material behind bulkheads to create WDSFs is also supported. In particular, the

Plan supports the use of non-contaminated CAD material behind the specific WDSFs outlined in the Plan (see Section 6.2.2).

This Harbor Plan recognizes that additional technologies may exist or may be developed that could either enhance the long-term effectiveness of CAD cells for cleanup, or might provide additional viable disposal options for contaminated sediment generated from dredging or excavation activities within the Port. Technologies that "decontaminate" sediment in-situ could benefit the long-term health of the Harbor by decreasing contaminant levels in sediments placed within CAD cells or in contaminated sediments that have been capped. The Plan supports efforts related to enhancing the long-term stability and viability of disposed and/or capped sediments within the Harbor. Such efforts could include (but are not limited to):

- Continued assessment of existing technologies used at other locations for similar purposes;
- Assessment of new technologies;
- Pilot testing of new and/or existing technologies on capped or entombed sediments; and
- Scaled-up full application of technologies that have been shown to have long-term environmental and/or human health benefits.

While CAD cells have been shown to be the most cost beneficial disposal option presently available for the Harbor, this Plan also supports continued economic assessment of a broad range of disposal alternatives for contaminated sediments. The Plan stakeholders recognize that both technology and the needs of the Harbor evolve, and that disposal options that currently do not look as promising as CAD cells may at some point in the future become a preferred disposal option (CDFs, WDSFs or appropriate State site re-use, for example). The Plan supports efforts to continually assess alternatives, and employ the best disposal options whenever feasible.

Recommended Re-use Options for Suitable Materials Generated from CAD Cell Construction

As noted above, "suitable" material has been, and will continue to be, mined from the Harbor bottom during the construction of the CAD Cells. In the past, material that was suitable for disposal at one or more of off-shore disposal sites has been determined by the SER Committee to be suitable for re-use within the geographic boundaries of the Superfund Site. Since 2002, beneficial re-use of "suitable" CAD Cell material has been employed to cap a portion of the Superfund "OU#1 and 3" area of contaminated sediment located just outside the Hurricane Dike at the mouth

of the Harbor, and for the capping of the "Borrow Pit CAD Cell". CAD Cell construction (including capping) within the area of the larger Superfund site is covered by the SER process, as noted in the Memoranda of Agreement (MOAs) between EPA and MassDEP; and between MassDEP and the HDC (see Appendix A).

This Plan supports the beneficial re-use of suitable material generated during the CAD cell construction for in the interim and final capping of CAD cells considered to be part of the Harbor's larger Superfund site. The Plan also supports the use of this material for the maintenance of caps that have been, or are to be, placed.

Additionally, this Plan supports the use of suitable CAD Cell construction material for the capping of areas of the Harbor bottom that are contaminated but that are either: 1) never going to be dredged as part of navigational or cleanup dredging activities; or 2) will not be dredged for an extended period of time (greater than ten years). Because this capping would represent an "enhancement" to the Superfund Remedy for the Site, the Plan supports this beneficial re-use, and also supports conducting such activities under the expedited SER process. Note that because capping of Superfund targeted sediments is not currently part of the 1998 ROD, the USEPA would need to issue a future decision document as a change to the remedy set out in the 1998 ROD.

While the use of suitable material for CAD cell and contaminated sediment capping represents a significant beneficial re-use of this material, the SER committee stakeholders have indicated that additional uses for such sediment should be evaluated and employed if appropriate. Additional re-use options include:

- As fill behind bulkheads within the Port;
- For beach nourishment projects, both within the Port and outside of the Port;
- For shoreline slope stabilization projects, both within the Port and outside of the Port;
- At upland construction sites in the region that need suitable fill; and
- For other infrastructure needs, such as filler material for mixing into concrete or asphalt, sand for road sanding efforts in the winter months, and fill for sewer and water, and other infrastructure projects.

For re-use of CAD cell construction material that occurs in or adjacent to the Harbor, but outside of the purview of the SER process, the Plan encourages SER stakeholders to assist with the regulatory permitting process to the extent practical and allowable, in order to encourage those potential re-use options.

Recommended Disposal Options for Unsuitable Materials Generated by Other Projects

In addition to the Navigational Dredge Projects (sponsored by the City and Town), other stakeholders within the Port occasionally encounter sediments contaminated with PCBs and other toxins common to the Harbor. The Plan supports the use of the CAD cells constructed in the Harbor as a disposal option for this material. These projects fall into four main categories: 1) City, Town and State sponsored projects; 2) Superfund projects; 3) other public agency projects; and 4) private projects.

City, Town, and State Sponsored Projects within the Port include those projects conducted by the City of New Bedford, the Town of Fairhaven, or the State of Massachusetts in which contaminated sediments may be generated (in addition to those Navigational Dredge Projects noted in the section above). These projects may potentially include (but are not necessarily limited to): removal of contaminated sediment as a result of the replacement of a seawall, revetment, rip-rap shore protection, or other similar shoreline protection structure; removal of contaminated sediment during the conduct of mitigation projects (such as wetland or other mitigation projects) or the construction of beach nourishment projects; or the removal of contaminated materials from the end of pipes that drain to the Harbor.

Superfund Cleanup work includes the efforts currently underway and planned by the USEPA (and their Federal partner, the USACE) to dredge contaminated Superfund materials from the Harbor for environmental cleanup purposes. The principal contaminant of concern is PCBs, and the definition of Superfund material for this Site is 50 parts per million (ppm) or more of PCBs in the sediment for most areas within the Superfund Site. In a few localized areas, the cleanup limits are lower, 25 ppm and 10 ppm, depending upon the potential for human contact with the sediment and/or the presence of sensitive or threatened species in the area. The Superfund Project currently transports the contaminated sediments to an out-of-state hazardous waste disposal facility at great expense when high tipping fees and the cost of long distance transport are included. The transport of these sediments to out-of-state facilities is required because the State of Massachusetts has not licensed any landfills or disposal facilities for the disposal of PCBs greater than 2 ppm. Disposal of (at least the non-highly-contaminated) Superfund materials into CAD cells in the Harbor would reduce the overall cost of dredge and disposal of these sediments, and would constitute a significant savings to the Project. With off-site disposal of all Superfund sediments at an out-of-state hazardous waste landfill, completion of the Superfund Remedy could take up to 40 years or more (from 2008) given current funding streams. However, if CAD cells in the Harbor were utilized for disposal of a portion of the Superfund sediments, the Superfund Remedy completion period could be shortened to between 15 and 25 years. Expediting the cleanup of the Harbor bottom in this manner will improve the overall health of the Harbor, as

contaminants that would otherwise be in contact with the Harbor environment for the next 40^{+} years will be removed in significantly less time. For this reason, this Harbor Plan supports the potential change in the Superfund Remedy to utilize CAD Cells for the disposal of Superfund dredge material as a disposal alternative to out-of-state disposal.

Other Public Projects, such as the dredging of the Federal Channel and the clean-out of other sediments within the geographic bounds of the SER and Superfund processes, may encounter sediments that contain contaminants that are common to the Harbor (namely PCBs and heavy metals). The Plan supports the disposal of such contaminated material into the CAD cells that are being constructed (or are to be constructed) in the Harbor. Additionally, the Plan supports the use of the SER process for these public sector projects, as the removal of these contaminants from the sub-tidal, inter-tidal and supra-tidal areas of the Harbor will significantly enhance the Remedy that the USEPA is conducting in the Harbor.

Private Projects, such as the dredging of private slips, driveways, and/or fairways, are also very likely to encounter sediments with contaminates that are common throughout the Harbor (PCBs and metals). This Plan supports the use of CAD cells in the Harbor for the disposal of contaminated dredge spoils from private dredge projects within the Port... Private projects that wish to use the CAD cell(s) for disposal of contaminated materials will be charged a tipping fee on a per cubic yard basis, to help defray the costs associated with construction, operation, and maintenance of the cells. Private projects will also be required to cover the City/Town engineering costs to provide engineering oversight of dumping operations into the CAD cells. These fees will cover the water quality monitoring, inspections of dredge scows, oversight of scow loading, and post-dump check surveys of the CAD cells that are required by the SER Performance Standards. Additionally, the Plan supports the use of the SER regulatory process for private dredge projects that occur at commercial or industrial piers, wharfs, bulkheads, and/or marinas (and the driveways, fairways, and channels that lead up to them) that exist within the area designated as the overall Superfund Site.

For more information concerning the location of proposed dredge areas, the regulatory processes governing dredging in the Harbor, and the design, construction, management, and maintenance of dredge operations, please see Appendix A.

7.2.2 BULKHEADS AND WATERFRONT DEVELOPMENT SHORELINE FACILITIES (WDSFS)

The water interface infrastructure of the Harbor has evolved over the last 300+ years to a mix of both modern and very old, outdated walls and bulkheads. As a result, the newer portions of the Port are working at or near peak capacity, while the older portions either lie fallow or are significantly underutilized. Historic maps and photographs of the Harbor depict full usage of nearly the entire waterfront. In New Bedford this included the area from what is now the Hurricane Barrier to the Wood Street Bridge. In Fairhaven, this includes the area from the Hurricane Barrier to the Coggeshall Bridge.

A key element of the portions of the Port that have been rehabilitated and are operating close to full capacity has been the replacement and/or installation of modern bulkheads that allow for structures, equipment, transportation infrastructure, and work areas to be butted up to the water's edge, with deep-water access directly adjacent to the bulkhead. Deepwater access to bulk-headed shorelines is critically important for modern maritime industry, allowing shore-side infrastructure such as cranes, roadways, unloading platforms, etc. to be located immediately adjacent to deep draft berthing. Even at locations where piers and docks have been employed, a shorefront bulkhead often headlines the structure, providing insurance against sloughing, erosion, and/or subsidence of the hinge point of the pier or dock to the shoreline. Examples where modern bulkheads are currently employed in New Bedford/Fairhaven Harbor include Maritime Terminal, Norpel Terminal, and South Terminal, in New Bedford and the Linberg Construction Facility, and the Steamship Authority Facility in Fairhaven.

In order to bring the older outdated or dilapidated bulkhead facilities in the Port back into full productive utilization, rehabilitation and, in some cases, construction of new bulkheads will be required. Several bulkhead structure replacement and/or new bulkhead construction projects are proposed for the Port. These include:

- **South Terminal Bulkhead Extension Project**. This project is aimed at extending the existing bulkhead between approximately 500 to 1,000 feet to the south (depending on the anticipated needs at the time of construction), allowing large cargo vessels to berth and unload at the South Terminal Facility. This bulkhead extension is important as it will increase the type of trade that can be accommodated in the southern part of the Port. At one time, cargo used to move in and out of the South Terminal. Today, the trade is generally restricted to the transfer of fish catch to the fish processing plants on the pier. An extension of the pier southward would allow cargo vessels

to tie up to the bulkhead and transfer cargo onto trucks once more. This type of inter-modal transport is both important to the local economy, and to the long-term functionality of the Port. The Port of New Bedford is now competing with numerous other ports to develop inter-modal transport capabilities, and in order for the Port to remain vibrant and competitive, it will need to create these types of facilities.

- **State Pier Rehabilitation Solid-Fill Bulkhead Project**. The State Pier is currently one of the largest cargo transfer facilities in the Port. The Pier, which was constructed in phases over more than three centuries, is in dire need of rehabilitation. Portions of the Pier are of solid fill bulkhead construction which have held up relatively well despite their age. Other portions of the Pier however are not fairing as well. A pile-supported apron surrounds much of the solid-fill core of the Pier, and the pile-supported portions of the Pier are in severe disrepair with aging pilings supporting cracked decking. Portions of the Pier are in such poor condition that they have been condemned. On other portions of the Pier, cargo size and type are being limited since officials fear that the Pier's safety and stability could be compromised if large live loads are transferred onto and off the Pier. The slips surrounding State Pier have some of the deepest water in the Port, and could accommodate several large cargo vessels at a time. The State Pier represents one of the largest underutilized structures in the Port, and, as such, represents one of the best opportunities within the Port for future growth and development. In order for the Pier to meet its full potential, the pile-supported portion of the Pier needs to be replaced with a bulkhead supported solid-fill apron.

- **North Terminal Bulkhead Project.** The North Terminal in New Bedford is another significantly underutilized facility. The current configuration of the North Terminal includes a few recently installed small sections of steel bulkheads. The rest of the North Terminal waterfront is characterized by either older bulkheads in need of rehabilitation or by older rip-rap slopes. The shape of the land within the Terminal area (roughly three "lobes" that are bifurcated by two drainage ditches allowing water to drain into the Harbor from two large outfall pipes) severely limits the use of the waterfront for vessel dockage. Additionally, only portions of the North Terminal area have been dredged to accommodate deep-draft vessels. What the North Terminal area does have is deep water channels leading up to it, relatively good road access to nearby major highways, a large amount of under-utilized land, and direct rail connections to the water's edge. Cargo and bulk materials are currently shipped from the Terminal, however only a small fraction of the total potential waterfront area within the Terminal has the infrastructure to support such activity. The North Terminal has the potential to become a major inter-modal transfer

facility, potentially serving the future "Short Sea Shipping" industry. Recognizing the incredible opportunity for future commerce that the North Terminal represents to the City of New Bedford, a series of proposals have been made over the years focused on creating one solid bulkhead line in front of the North Terminal properties with dredging at the bulkhead to allow deep water for the full extend of the terminal's waterfront. The bulkhead line would connect the southern-most (current USEPA dewatering facility) and northern-most (current MarLee Seafood) properties at the Terminal. The new bulkhead would allow for direct load-out of vessels tied up here with land-side transport potentials including road and rail. This would make this site one of the few truly multi-faceted inter-modal transfer facilities on the region with its full potential hindered only by the restriction of a swing bridge which is overdue for replacement.

- **Popes Island Terminal Bulkhead Project**. Until recently, the property on the northwest corner of Popes Island used to serve as a bulk materials transfer facility that, among other things, handled much of the road salt used in southeastern Massachusetts. Shipments of bulk commodities to this facility have ceased in recent years because the bulkhead that lines the shore in this area is in disrepair and the water depth adjacent to the facility has silted in. The current property owner plans to restore the facility so that it can once again accept bulk commodities, particularly the salt boats. In order for the facility to handle vessels of the size and draft used today to transport salt and other bulk commodities, the facility must have an adequately sized bulkhead and with sufficient water depth next to it. This facility would also be more attractive as an efficient port facility if the Route 6 swing bridge were replaced.

- **Union Wharf Bulkhead**. Union Wharf is the Town of Fairhaven's public commercial wharf and is located in the center of the Town's Designated Port Area. While once the busy port facility and a centerpiece for the Town's active industrial waterfront, today Union Wharf sees very sporadic light usage. Originally built in the 18th century, the Wharf still contains some elements of the original structure. Through the years, additions of various configurations were made to the Wharf. As with New Bedford's State Pier, portions of the Wharf were constructed using solid-fill bulkheads and other sections are pile supported. The pile-supported portions have fallen into disrepair and are now considered unsafe. While the solid fill portions of the Wharf have held up better, the granite block sections of the Wharf have also deteriorated and need to be replaced before any dredging is done next to them which is necessary to allow larger vessels to tie-up here. Like the State Pier, South Terminal, and North Terminal in New Bedford, the Union Wharf is currently significantly underutilized, but has the potential to become a very large asset to the Fairhaven waterfront if rehabilitated. The Town of Fairhaven intends to rehabilitate

the Wharf in phases, allowing it to return to full productive service over time. (See Chapter 4, Paragraph 4.1.5, for a more detailed discussion of the Town's plans.)

Because of the importance of the infrastructure features described above, this Harbor Plan supports efforts to rehabilitate and expand the bulkheads within the New Bedford and Fairhaven DPAs.

Proposed Bulkhead Areas Constructed as Waterfront Development Shoreline Facilities (WDSFs)

This Plan proposes the construction of Waterfront Development Shoreline Facilities (WDSFs) at the following locations:

- South Terminal Bulkhead Extension
- State Pier Solid Fill Perimeter Bulkhead
- North Terminal Bulkhead
- Popes Island Marine Terminal
- Union Wharf Bulkhead.

With the creation of these WDSFs, the Port has a unique opportunity to combine the infrastructure needs of the Port with the need to clean up contamination that blankets the floor of the Harbor. A concept that was originally planned by the USEPA as part of their contaminated sediment cleanup effort was to create shoreline disposal facilities to entomb contaminated sediment removed from the floor of the Harbor. Known as "Confined Disposal Facilities" or "CDF's", these shoreline facilities can incorporate the use of bulkheads (among other types of structures) built out into the Harbor to create a disposal cell that, once filled, can be capped over and brought into productive use as a Terminal or other facility. The 1998 "Record of Decision" or "ROD" for the New Bedford Harbor Superfund Site (signed by the USEPA) included the option to build a series of CDFs in the Harbor to allow for the on-site disposal of contaminated sediment. One of the CDFs (CDF "D") was located at the New Bedford North Terminal, and the original plan for CDF "D" involved the bulkheading of the area in front of North Terminal and then disposing contaminated sediment behind it. This would have created new land and "square-off" the waterfront form of the Terminal in a manner very similar to that currently proposed by the City. The USEPA did build a small portion of the CDF "D" to accommodate their dewatering facility. The plans for the remainder of the USEPA bulkheading at CDF "D" were abandoned when USEPA decided to modify (through an Explanation of Significant Difference) its disposal approach to Harbor sediments.

While USEPA is currently not disposing of sediments on-site, the Massachusetts CZM, the City of New Bedford, and the Town of Fairhaven created their own method for disposing (through the DMMP) of contaminated sediment removed from

the Harbor during maintenance dredging activities. They began building "Confined Aquatic Disposal" (otherwise known as "CAD") cells in the Harbor for the entombment of contaminated sediments. CAD cells are depressions that are dug into the bottom of the Harbor into which contaminated sediment from dredging activities can be place and then capped. This type of contaminated sediment disposal is similar to CDFs, however the cell is dug into the bottom of the Harbor and it is filled only to the level of the surrounding Harbor bottom (including the cap), so there is little or no visible sign of the cell once completed. This method of sediment disposal (as discussed in and consistent with previous section of this Harbor Plan) has proven to be very cost effective and successful in the Harbor and is being applied extensively. The only significant challenge in the creation of CAD cells is how best to dispose of the clean sand, silt, and gravel removed in the process of creating the cells. Traditionally, this clean material has been shipped off-shore for open-ocean dumping. Recently however, both the regulatory community and dredging proponents have expressed a strong preference for reuse this clean material within the Port. One potential reuse for this material would be to place it behind bulkheads constructed in the Port, thereby forming a clean version of the CDFs originally planned. These are referred to in this Plan as Waterfront Development Shoreline Facilities (WDSFs). The CAD material is ideal for this use, as much of it fits the general requirements for "fill" in such construction. The benefits of using CAD cell construction material to create expanded port terminals behind new bulkheads include:

- Useful infrastructure would be added to the Port in the form of new bulkheaded marine terminal areas.
- Contaminated sediment on the Harbor's bottom in the areas where these new bulkhead facilities are created would be cover and thus contained, i.e. no longer exposed to the marine environment;
- Local disposal of this clean CAD cell material be economically and also allow for accelerated dredging operations and cleanup.

7.2.3 COMMERCIAL FISHING

Berthing Space

The City and Town both have on-going initiatives aimed at trying to alleviate the problem. Studies are currently being conducted to determine if additional berthing and/or mooring can be accommodated in both the short and long term, and several initiatives are being taken to provide some temporary relief. Among the initiatives recently completed or currently underway are the:

By the New Bedford HDC:

- Commercial Fishing Vessel Berthing Plan (completed 3/2008);
- Acquisition and installation of floating piers (planned);
- Study of Potential Additional Moorings (in process);
- Dredging at several existing piers to allow more berthing (in process);
- Conditions survey of the existing docks and obtaining authorization to shift the Harbor Line as steps toward expansion of berthing space for the Port's commercial fishing fleet (in process); and
- Creation of commercial vessel mooring field (in process).

By Fairhaven

- Mooring Expansion Assessment (in process); and
- Dredging at several existing piers to allow more berthing (in process).

This Plan recommends that additional actions be taken to identify opportunities to create more suitable and permanent berthing for the commercial fishing fleet. Dredging and creation of new bulkhead space should help.

Seafood Display Auction Seafood Display Auction

The continued success of seafood display auction is very important to New Bedford's regional and national role in the seafood industry. The Whaling City Seafood Display Auction does not own the facility they currently occupy and therefore is vulnerable to eviction. The Plan supports relocation of the Auction to a more permanent location.

Hub Service Port

Section 5.3 of this Plan list the attributes that define a fully functional commercial fishing hub service port. New Bedford/Fairhaven Harbor has the distinction of being one of the few remaining port that meet this definition. This Plan supports efforts to preserve and support all the services and facilities that are essential to maintaining a healthy commercial fishing fleet.

7.2.4 FREIGHT OPERATIONS

The 2002 Harbor Plan designated certain areas on the New Bedford waterfront between Coggeshall Street and the Hurricane Barrier for particular types of waterborne freight activities, in order to limit potential conflicting waterfront uses in the future. Although the purpose of this determination was well intentioned, the availability of water-accessible land within the DPA (as well as the difficulty involved in creating new land that can be used for freight operations or in improving existing land for future freight operations) self-restricts the expansion of marine industry within New Bedford/Fairhaven Harbor. Essentially, the only facilities currently suitable to accept marine freight shipments are: part of North Terminal, Maritime Terminal, the northwest side of Pope's Island, the Sprague Energy Facility, Bridge Terminal, and State Pier. Therefore, as well as supporting the continued use of these existing areas, this Plan supports, wherever feasible, expansion of existing freight handling facilities as well as the creation of new areas suitable for this use. In particular, this Plan supports the designation of a location within the Port to act as a terminal for Short Sea Shipping. Under the Energy Policy Act, the U.S. Department of Transportation was mandated to build a Short Sea Transportation Program. As part of this initiative, the U.S. Maritime Administration (MARAD) is designating marine highway corridors, building "America's Marine Highway"… It is recommend that the City submit project applications to MARAD with the goal of the Port emerging as a hub on the federal network connecting East Coast ports (e.g. Florida, Virginia, Maine, and the Canadian Maritime provinces). In support of this opportunity, the City of New Bedford has already completed a Memorandum of Understanding, along with the Cities of Fall River, Salem, and Gloucester, with the City of Cape Canaveral in Florida to facilitate the creation of a Short-Seas Shipping corridor. Due to the widening of the Panama Canal, some industry professionals expect marine cargo to at least double with more import/export business coming into the East Coast. This presents new opportunities for the Port of New Bedford. Some modification to existing port facilities or possibly new infrastructure will be needed to efficiently accommodate SSS and Import/Export operations.

To efficiently support expanded freight operations on the New Bedford waterfront, there is a need for a comprehensive truck and cargo staging strategy which likely will require a staging area(s) away from the immediate waterfront. The City has contracted with a transportation consultant to explore best practices and recommend a plan for handling truck and possible rail service that will be needed to support the fully developed Short Sea Shipping and Import/Export industries in the Port.

7.2.5 WATER TRANSPORTATION

The Harbor Plan supports the continued development of a harbor-wide water shuttle service transporting people between New Bedford and Fairhaven central waterfronts and popular destinations within the Harbor such as Popes Island and waterfront parks. There are currently few suitable centrally located public docking facilities on the Harbor. The times of service and design of boat(s) should support a large variety of users including tourists, residents and boaters (at moorings or in marinas

Ideally a market assessment and feasibility study of this concept should be completed determine the level of market support for this service under a range of assumptions regarding routes and level of service. This study should provide the communities and the HDC with an assessment of the feasibility and cost implications of alternative harbor transportation options, including service provider options, funding issues and funding sources.

7.2.6 DPA DEVELOPMENT

The State's DPA regulations are in the process of being modified to better meet port development opportunities while also protecting these critically important areas for continued predominant use by marine industries. The City of New Bedford has chosen to discontinue its Eligibility Credit Program as a mechanism to encourage the consolidation of supporting commercial activities within certain portions of the DPA. Although the program appeared to have potential value, it was little used and not fully embraced by land owners. This Plan recommends that development within the DPA comply with existing State DPA requirements and that the City/Town actively partipate in any initiatives to modify the regulations. The communities should also consider requesting appropriate changes to the DPA boundaries where needed.

7.2.7 WATERSHEET MANAGEMENT PLAN

Full development of the Harbor as anticipated under this Plan could substantially increase vessel traffic. In particular, the development of the North Harbor has the potential to expand deep draft cargo operation to levels substantially higher than exist today. The recovery of fish stocks and an expansion of recreational boating are further factors. A Harbor Watersheet Management Plan is included as Chapter 5 of this Municipal Harbor Plan.

7.2.8 PORT GOVERANCE AND MANAGEMENT

Jurisdiction over the waters, associated land area, and the activities dependent on New Bedford/Fairhaven Harbor are shared by the City of New Bedford and Town of Fairhaven (along with agencies of the state and federal governments). Each community exercises a variety of management and regulatory authorities over the activities occurring on the land and water areas under general laws, municipal codes, or administrative directives. Taken as a whole, the objectives of these authorities are to optimize utilization of the Harbor in the interests of the local and regional economies; protect and improve environmental conditions; ensure adequate, fair and equitable access; and create and maintain the physical improvements that support port operations and related water-dependent activities.

Since the Harbor itself is a shared asset of the two communities and the common basis for all water-dependent activities, coordination between the management measures exercised by each community could be expected to increase consistency and predictability of regulatory decision making, reduce the potential for conflicting uses, improve the overall functioning of the Harbor, and reinforce the image of a rationally and efficiently managed port. These outcomes would contribute to raising the profile of the Port and increase business.

The proposed mechanism to achieve this coordination is one or more memoranda of agreement (MOA) between the two communities. Depending on the scope and nature of the authorities and responsibilities to be coordinated, an MOA establishing the framework and overall principles and objectives could be signed by the chief elected officials of each community, followed by sub-agreements with details relating to particular harbor activities or authorities.

The MOA(s) could be developed with provisions for:

- CAD cell management and the administration of navigational dredge projects.
- Standardized fees in the harbor for publicly-managed moorings and services. This does not mean establishing a single fee, but a fee schedule common to both communities. Fees would vary depending on level and quality of services and location. The fees for moorings in areas occupying the waters of both communities might be a good place to adopt a consistent fee schedule.
- Coordinated enforcement of rules for, e.g., navigation, anchoring of vessels, vessel removal, etc.

- Coordinated emergency response plan for safety and environmental protection
- Establishing a group of municipal officials and business owners to collaborate on marketing the Port and on business development
- Joint applications and shared investment in dredging or infrastructure.
- Regular sharing of information regarding port operations, special events, revisions of federal and state regulations.
- The creation of a formal "Port Alliance" may be a productive step.

7.2.9 PUBLIC ACCESS / WATERFRONT OPEN SPACE

New Bedford/Fairhaven Harbor offers an extraordinary mix of natural, historic and cutural attractions. The authentic working port, lighthouses, waterfront parks and natural areas (e.g Palmer's Island, Marsh Island), old military forts and encampments, and the exceptional beauty of the Harbor's watersheet all combine to make a visit to the Port's waterfront an enjoyable experience for visitors and residents alike. This Plan supports efforts to protect, preserve and enhance public access to and safe and friendly use of the many water-side amenities and supports appropriate initiatives by private operators to offer excursion boat opportunities to attract more people out on the water. Improved waterfront infrastructure will be needed in New Bedford (e.g at Tonnesson Park and Pope's Island Marina) and Fairhaven (e.g Union Wharf) to adequately support excursion boats and water taxis/shuttles.

The Harbor's natural environment and open space network can be advanced through further acquisition and preservation initiatives. The EPA's on-going cleanup efforts in the Harbor will remove contaminated sediments paving the way for harbor restoration initiatives under the auspices of the New Bedford Harbor Trustees Council. Marsh and Palmer Islands continue to be two areas of great potential. The following actions are specifically recommended as part of longer term management strategy to improve the public's enjoyment of the Harbor:

- Complete Harborwalk and bicycle trails around the Harbor
- Initiate harbor restoration efforts.
- Continue efforts to eliminate all Combined Sewer Overflows.
- Establish a coherent network of harbor-wide open spaces with strong pedestrian and bicycle links through individual projects.
- Improve access to and amenities on Palmer's Island.
- Restore Marsh Island to a more natural state and improve opportunities for public access.
- Enhance Fairhaven streets serving as waterfront and downtown gateways.

Upper Harbor Public Access

This Plan supports the City of New Bedford's initiative to increase access to the waterway north of the Coggeshall Street bridge by redevelopment of the industrial mill buildings in such a way as to increase the ability of citizens to travel through or past these buildings by demolition of some or removal of portions of others to create useable public accessways.

This Plan also supports the City's initiative to create a boardwalk running from Riverside Park, north to the planned new park on the Acushnet River north of the Woods Street Bridge. This boardwalk is part of a City initiative to increase public access to waterfront areas. In particular, the areas north of the Coggeshall Street Bridge have been isolated from the Harbor for far too long. This boardwalk will allow the citizens of New Bedford to reconnect to the Harbor.

Hurricane Barrier Boardwalk

This Plan supports the City's initiative to create a boardwalk on top of the Hurricane Barrier on the New Bedford side of Harbor and continuing along the Barrier to Clark's Cove on those sections where it exists. While protecting the Harbor from the fury of major storms and creating a sanctuary that protects its commercial and recreational vessels, the Hurricane Barrier also presents a barrier that blocks the citizens of both New Bedford and Fairhaven from viewing the open ocean. The boardwalk will allow citizens to easily crest the Hurricane Barrier. The paved the walkway will allow joggers or walkers to enjoy the stunning views from the top of the structure

Clarke's Cove

This Plan supports the City's intention to preserve Clarke's Cove for public recreational swimming, parks and beaches, boat moorings and other public amenities and programs that will encourage public use of and access to the water's edge. This will include a walkway/bicycle path along the waterfront from the head of Clarke's Cove around the peninsula past Fort Rodman and back up to the Hurricane Barrier. This will not include displacement of current grandfathered uses along this section of waterfront but, as opportunities develop, creation of more public waterfront should be considered. Some private commercial development in the form of facilities of public accommodation (e.g. restaurants, marina, docks, water transportation) will be encouraged on the waterside of E. Rodney French Boulevard immediately south of the Hurricane Barrier on property currently, or in the recent past has been, used for this purpose.

Rodney French Boulevard Bike Path

This Plan supports the extension of the City of New Bedford's bike pathway currently located adjacent to Rodney French Boulevard. A proposed extension will take the pathway from Cove Street to Gifford Street. It is the hope of this Plan that the pathway will be further extended to the north to create a Harbor Promenade up to the Central Waterfront Promenade.

Palmer's Island

The Plan supports use of the city-owned Palmer's Island for public use and passive recreation with the development of an improved pedestrian connection from the Hurricane Barrier. This initiative should be combined with restoration of the lighthouse and possible reconstruction of other related structures that formerly stood on the site, together with reuse/redevelopment of a boat dock to serve as a landing point for water harbor tours/shuttle.

Marsh Island

Marsh Island will be acquired and established as the largest area of public parkland within the inner harbor, substantially expanding public water access and contributing to the enhancement of the Harbor's natural environment. Marsh Island is the largest undeveloped land area within the inner harbor (20 acres) and is surrounded by shallow waters. Its use as open space will enhance the quality of surrounding neighborhoods and the Harbor as a whole. A dock for launching small boats, canoes, and kayaks will be incorporated to provide a launching point to explore the Harbor and the river. This location may also be used for access to mooring fields located to the north of the New Bedford-Fairhaven Bridge. Marsh Island Park would be accessed from two locations (River Avenue and Taber Street). The property currently includes radio station antennae that will need to be relocated.

Potential funding sources for acquisition and enhancement of the island include Harbor Restoration Funds established to support restoration of the Harbor's natural resources and amenities following harbor cleanup.

Fairhaven Open Space Network/Bike Path

The Fairhaven waterfront within the planning area extends from the proposed Marsh Island Park at its north through the Central Waterfront Area to the historic Fort Phoenix Reservation at its south. An important goal of the Plan is to connect these spaces as part of a harbor-wide open space network. It is not feasible to provide a dedicated pedestrian or bicycle corridor linking these two spaces. However, it is proposed to provide maps showing the open spaces and linking streets at various points along this corridor, together with interpretive materials and information. Over

time, the intention would be to link this landside trail with water connections to New Bedford from open spaces and from the Central Waterfront.

New Bedford Harbor Promenade/Waterfront Public Access

The Plan proposes the development of a harbor promenade running along the entire western boundary of New Bedford/Fairhaven Harbor. The promenade would link existing and proposed visitor attractions. The major goal of this initiative is to reclaim the waterfront for public use by the residents of and visitors to New Bedford. For too long, sections of the City of New Bedford have been visually isolated from the Harbor, which has resulted in disregard for the City's most precious resource. Allowing more public access to the water will not only result in greater recreational benefits for the citizens, but will also result in greater concern by the citizens for preserving and enhancing the quality of the Harbor.

Another goal of this public access initiative is to provide visitors with an increased awareness of the working port, allowing them to observe and experience some port activities with their operations. Therefore, portions of the promenade will weave along the edge of the working waterfront, primarily on the landside edge of the piers, linking viewing areas/observation platforms and public destinations, where appropriate. Finally, the promenade will provide another way to provide connections between the City's downtown area and the northern and southern reaches of the Harbor.

The promenade will link with the following elements:

- The planned boardwalk along the portion of the Harbor north of the Coggeshall Street Bridge.
- Riverside Park.
- The proposed rowing boathouse.
- The developments planned within the Hicks-Logan area.
- Improved interpretive programming and expanded visitor orientation services at the Wharfinger Building, focusing on interpretation of marine industrial activities and the working waterfront
- Water taxi providing links to Fairhaven, marinas, and other harbor attractions
- Tonnesson Park – operating berth for excursion boats
- A proposed fish market open to the public on State Pier.
- A proposed cruise ship terminal on State Pier.
- A central berthing area for excursion and charter vessels on the southwest corner of the State Pier with adjacent central ticketing facility
- The proposed harbor viewing tower at Fisherman's Wharf.

- Bourne Counting House
- The New Bedford Whaling National Historic Park.
- Downtown New Bedford.
- The existing promenade linking Fisherman's Wharf, State Pier,
- The new restaurant being constructed at the former location of the Twin Piers restaurant.
- Future waterfront hotel (outside the DPA).
- A proposed walkway linking the Hurricane Barrier to Palmer's Island.
- Gifford Street Boat Ramp
- The proposed Hurricane Barrier boardwalk.
- The existing bike path running along Rodney French Boulevard.
- Davy's Locker Restaurant.

The promenade will also connect to a walkway across the Fairhaven Bridge and promenade along the Fairhaven waterfront connection many additional attractions including:

- Harbor views from Fish Island
- Pope's Island Marina/Park
- Fort Phoenix Reservation)
- Fort Street Corridor
- Middle Street Corridor
- Pease Park and Boat Ramp
- Main Street Corridor
- Marsh Island Park.

This Plan establishes a framework for a harbor-wide open space network providing a variety of open space experiences. Each of these open spaces must serve the needs of adjacent areas and neighborhoods, but when seen as a whole should provide a cohesive experience of the different aspects of the Harbor. These include the working waterfront, the historic downtowns, views across the water, the recreational waterfront, the Harbor's natural environment, and its manmade features and landmarks, including the Hurricane Barrier, Fort Phoenix and Palmer's Island Light.

7.2.10 TOURISM

The Port of New Bedford/Fairhaven has proven to be a tourist attraction on its own. People want to see the working port. Visitors are impressed by waterfront facilities and intrigues by all the activities. Television shows such as the "Deadliest Catch" and films like the "Perfect Storm" have all served to increase the public's fascination with the commercial fishing industry. New Bedford's annual working waterfront festival has proven to be very popular as has the National Park Service's Working Waterfront Dock Walk. The Port can offer the unique opportunity to observe "Living History". Port has the potential to continue to grow as a tourist attraction and experience has shown that if this growth is managed appropriately this new tourism industry for the Port can be successful without interfering with or displacing the more traditional marine users. In fact existing marine industry should be able to benefit from more tourism along the waterfront. This Plan supports efforts to cater to port visitors, both those arriving by land and those entering the Harbor on a boat or ship. Efforts should be made to provide access to the "authentic" working waterfront operations including opportunities for "behind the scenes" to observe the seafood industry at work – e.g. fish processing, the fish auction, boat tours.

7.2.11 CREATIVE ECONOMY AND THE WATERFRONT

The New Bedford/Fairhaven waterfront also contributes to the region's creative economy. An initiative, promoted by the New Bedford Economic Development Council, encourages the arts as a direct contributor to the City's economy as well as an enhancement to the quality of life for residents and an inducement for new businesses considering locating in the City.

Perhaps the best example of this is New Bedford's Working Waterfront Festival, a celebration of the commercial fishing culture, which takes place along the waterfront each year. The Festival focuses attention on the seafood and fishing industry's essential role in the City's economy and history through performances, visual art, food, demonstrations, films, exhibits, and tours. Two outstanding marine-related cultural assets are the New Bedford Whaling Museum and the Ocean Explorium at New Bedford Seaport.

Another highly visible example is the Artworks! community mural painted on New Bedford's new waterfront trash facility. The Harbor Development Commission (HDC) commissioned the ArtWorks! Teen Mural Project to decorate the structure located on Leonard's Wharf with a mural that depicts New Bedford's fishing fleet and the many varieties of fish species found offshore. The HDC saw this mural project as a way to integrate the artisan community, local youth and the working waterfront. The state-of-the-art trash facility which serves the refuse disposal needs

of the New Bedford fishing fleet is designed to protect the environment and public health.

Recent grants to the city by the Massachusetts Cultural Council will help New Bedford continue to integrate arts and culture into the city's economic development agenda and diversify the base.

The Plan strongly supports the efforts of the New Bedford planning and arts communities in their efforts to develop a creative economy on the waterfront. Integrating the arts into the working waterfront is an important element for gaining community support of the working port and in creating ties between the community and the businesses that serve the waterfront. The presence of murals, sculpture, monuments, and art work acts as a magnet in drawing locals and visitors alike to the water's edge.

7.2.12 RECREATIONAL BOATING

One of the objectives of this Plan is to identify potentially significant opportunities for the Port that have not yet been fully realized. The potential expansion of private recreational marinas and mooring fields within the Harbor and the addition of more services for boaters represents a large opportunity for additional economic growth for the community. Despite difficult economic conditions, the private boating economy continues to flourish. The trends show an increase in larger vessels, up to mega-yacht size (over 100-feet in length); with the number of medium to large private boats (25 to 100-foot long) moving up and down the coast increasing continuously. Private marinas are attempting to expand and deepen their waterways in order to accommodate the increased size and number of vessels that are looking for berthing and mooring space. In most Ports this is difficult because nearly all of the useable space on the waterfront is either already developed or is protected. The shoreline of New Bedford/ Fairhaven Harbor contains many properties that are currently fallow or are underutilized. Many of these exist outside the main industrial parts of the Port; commercial vessels do not utilize these areas because of water depth, or because they are outside the designated commercial operational boundaries. Installing and/or enlarging piers and docks so that additional vessels can be accommodated will significantly increase the recreational use of the water sheet and presents an opportunity for significant economic growth. Areas that are under consideration for new marina development include:

- The shoreline just to the south and north of the Gifford Street boat ramp;

- The shoreline in front of the Hicks-Logan planning area, from the former Revere Copper Facility to the Route I-195 Bridge; and
- The area in the vicinity of the Route I-195 and Coggeshall Street bridges.

Several existing marinas along the waterfront also have the potential to be expanded to encourage home-porting of a larger number of larger vessels. These include:

- Fairhaven Shipyard Marina;
- The Seaport Marina at the Holiday Inn Hotel;
- Neimic Marine Marina;
- The small marinas along the Fairhaven shore north of Pope's Island; and
- Moby Dick Marina.

In addition to expanding the marina piers and docks, the Plan supports the inclusion of additional moorings for recreational vessels in the non-commercial portions of the Port. This would include moorings adjacent to the above noted marinas and potential marinas. The intent is to increase the utility of existing marinas, and to encourage the development of the undeveloped area in a manner that benefits the community and does not conflict with other important aspects of the working port. With this intent, this Plan supports:

- An expansion in the number of recreational vessel slips, where possible, to meet market demand; and
- An expansion in the number of recreational moorings within the harbor.

Several community-oriented boating and cultural/educational programs that are not specifically discussed within the Plan are active within the harbor area, are increasing their membership, and seeking to expand programs. These organizations include the following:

- Whaling City Rowing Club
- Community Boating
- The Whaleboat Project
- Azorean Maritime Heritage.

While the Plan does not identify specific locations for facilities or programs associated with these organizations, the Plan anticipates that facilities will be developed within the harbor area to meet the needs of these important programs.

An area within the Harbor that has the potential for use as a future mooring field is the watersheet north of Popes Island. This is a designated CAD cell area for the use in the disposal of contaminated sediments dredged from the Harbor. After these cells are filled and capped and then allowed to settle for several years, this part of the Harbor will likely be able to support a large mooring field. At present, the area has few moorings due to the shallow water depth. Dredging and CAD cell construction here should create an area with water depths suitable for use by at least small to modest size boats. The Seaport Council has provided funds for the City to explore opportunities to fully permit and where possible to expand the mooring fields both inside and outside the Harbor (e.g. Clarke's Cove). A consultant firm has been contracted to complete this work and a full report has recently been delivered to the HDC. (See Section 6.9 for more discussion of moorings.)

Sailing tours, regatta and boat rendezvous have occurred with more frequency and of a larger size in New Bedford/Farihaven Harbor Potential in recent years. In 2007, one large "Sailing Tours" visited the Port. This grew to three in 2008 and to five in 2009. Each dollar spent by a recreational boaterhas been estimated to have a $4 total impact on the community. Expenditures are typically higher for those participating in these yachting tours. Efforts to attract these groups to the Port should continue although not at the expense of the working port. The productivity of the Port should continue to be the top priority and the authenticity of the working waterfront is what brings many of these boaters to New Bedford and Fairhaven.

Completion of a comprehensive Harbor Recreational Boating Management Plan would be helpful in identifing specific deficiencies and opportunities for support of recreational boating in New Bedford/Fairhaven Harbor.

7.2.13 ENVIRONMENTAL STEWARDSHIP

The Harbor Plan seeks to establish a forward looking environmental stewardship program which encourages the interrelation of initiatives to improve the well being of the community and the Harbor. The program would involve using existing regulations and initiatives to improve the Harbor and increase its accessibility and productivity for the public and commercial interests. The goal of the stewardship program is to establish the City of New Bedford and the Town of Fairhaven as champions of environmental interests in a manner which promotes economic growth. The pursuit of this program will help to attain the Harbor Plan's overall goal of promoting the New Bedford Harbor as the East Coast's first Green Port.

Storm- and Waste-Water Discharge Elimination

In order to achieve this goal, the Plan calls for continued support and implementation of EPA Stormwater regulations under the National Pollution Discharge Elimination System (NPDES), as well as Department of Environmental Protection and local Conservation Commission Regulations and Guidelines regarding water quality and pollution mitigation. Accordingly, the Harbor Plan recommends the following:

- Survey of Existing Discharge Sources: Existing discharges to the harbor should be surveyed and identified, including open flow, piped, and seepage discharges. The survey will provide a comprehensive inventory of the discharge sources and allow for the identification of potential sources of untreated or insufficiently treated stormwater or other discharges entering the harbor waters. The inventory would then be used to develop a plan to bring the discharges into compliance with Stormwater regulations, Federal NPDES requirements, State Stormwater Management regulations, and local regulations.

- Use of Engineering and Source Controls: The Plan strongly supports efforts to control discharges to the harbor. Through the use of engineered stormwater controls the discharges entering the harbor may be controlled and improved. Technologies including settling tanks and ponds, oil-water separators, clarifiers, as well as deep-sump catch basins and other Best Management Practices (BMPs), must be used throughout the harbor to improve water quality.

- The possible addition of a bilge water transfer station should also be evaluated. "Mystery" spills from commercial boats are a common occurrence in the Harbor requiring nearly daily Coast Guard response. These accidental or intentional discharges may be reduced if an easy way to get rid of oily bilge water was offered in the Port.

The Plan recognizes the significant improvement in harbor water quality achieved through the EPA's work under the ongoing Superfund cleanup initiatives to remove contaminated sediments from the harbor, the City of New Bedford's progress to eliminate remaining Combined Sewer Outfalls (CSOs) and to reduce discharges from both commercial and recreational vessels using the harbor, and the Town of Fairhaven's efforts to improve the quality of discharges from their Water Treatment Control Facility. The continued progress on these initiatives will be instrumental in improving the environmental quality of New Bedford/Fairhaven Harbor and is strongly supported by this Plan.

Vessel Sewage Discharge Elimination

The Plan supports existing efforts to deal with boat and vessel sewage, including the New Bedford Harbor Development Commission and the Town of Fairhaven pump-out vessels. The Plan also recognizes that the key to an effective private vessel sewage discharge elimination program is to make boat pump-out stations convenient, quick, clean, easy-to-use, and available on the boaters schedule with minimal waiting. The Plan recommends that additional pump-out facilities be developed in the harbor to increase the ease with which boaters can access these services. The Plan recommends that a study be conducted for the siting of likely additional boat pump-out facilities, which should also include an analysis of staffing and hours and seasons of operation for additional facilities to maximize the potential use of such facilities.

Discharge Elimination Education

As a companion to the development of additional vessel pump-out facilities, the Plan supports efforts to educate the boating public as to the effects of discharges and what boaters can do to eliminate discharges, including using the pump-out facilities. As part of a public awareness campaign, the Plan recommends that an informational brochure be developed on an annual basis that explains the location, schedules, and rules associated with the facilities. This information could be delivered to boaters by:

- A mailing that would go out to all registered mooring and slip users for both Fairhaven and New Bedford;
- Direct delivery to all boats moored in the harbor (drop-off in the cockpit);
- As a hand-out displayed in New Bedford and Fairhaven City and Town Halls, the Harbormaster's Office, the New Bedford Harbor Development Commission, and at the pump-out facilities.

Natural Resource Protection and Pollution Prevention

The Harbor Plan as part of the stewardship program supports all efforts to improve the natural resources in the harbor including but not limited to:

- Cleanup or remediation of contaminated beaches and properties adjacent to or within the harbor, especially efforts to restore contaminated land or properties to a level that allows public uses.

- Habitat restoration or enhancement: Projects with the goal of restoring habitat or enhancing existing habitats are fully endorsed by the Plan. Projects which improve or restore historic fisheries such as anadromous fish runs, ground fish stocks and shell fish beds are of particular interest to the Plan.
- Water Quality Enhancement: Projects or initiatives which seek to improve the general water quality of the harbor are endorsed by the plan, as well as any that would encourage a more robust and diverse harbor ecosystem.

Green Ports

New Bedford and Fairhaven are committed to managing port development and operations in an economically and environmentally sustainable manner. The "green ports" concept has been adopted by many ports in the US and elsewhere in the world and New Bedford is seeking the first green port designation in New England. Green Ports principles are conceived and practices designed to minimize environmental impacts of port development and operations while expanding maritime business and improving public health and living conditions in surrounding neighborhoods.

Large ports have developed environmental management plans to comprehensively address the range of potential issues associated with operating a port; these include issues of air quality, water quality, Brownfield's, hazardous waste, dredged material disposal, habitat, solid waste and oil pollution, energy efficiency. Smaller ports are often able to directly address specific issues of concern.

New Bedford's Green Ports achievements already include:

- The installation of a recycled tire fendering system
- The "Fishing for Energy" program where DFG is gathered and converted to energy at a Covanta incineration facility
- The construction of a trash shed with built-in traps to collect any oil from accidental spills or leaks
- The investigation into Best Management Practices that the industry can implement to reduce pollution from painting, welding, and vessel maintenance activities
- Additional efforts under consideration for both the near term and long term include:
- A state-wide five minute anti-idling regulation
- A waste oil collection and bilge transfer program
- An energy audit
- An improved recycling and disposal management program

- A "green" stormwater management system
- An investigation into opportunities for installing technology to generate renewable energy
- A feasibility study to install shore-side power that will reduce idling in the port
- A short-sea shipping program to connect New Bedford Harbor to other east coast ports in order to increase port efficiency.
- A plan to convert to trucks, busses, and fishing vessels that use alternative fuels.

Some of the following options and practices may also be appropriate as part of the New Bedford/Fairhaven Green Ports initiative:

- Encourage large vessel owners to retrofit boat engines to reduce emissions.
- Hold workshops to keep harbor businesses educated about current environmental regulations and requirements.
- Consider education and outreach opportunities (in schools, through interpretive displays, etc.) to educate the public about the harbor's environmental management practices and to engage the public by showing them ways that they too can have a positive impact on the environment (via fertilizer use, proper disposal of trash and oil, etc.)
- Conduct an audit to help identify ways to reduce the consumption of potable water and recycling of stormwater for use on-site for landscaping, general cleaning, etc.
- Develop a harbor-wide strategy to deal with a large-scale oil spill.
- Encourage the use of fuel intake devices that prevent oil overflows.
- Reduce sources of marine debris by encouraging recycling (batteries, mercury, glass, toner cartridges, tires, etc.) and reduce the sources of debris by opting for products with minimal packaging.
- Explore the use of recycled materials for new construction projects.
- Encourage companies to perform adequate maintenance on vessels to ensure that fuel, electricity and other resources are not wasted on inefficiencies stemming from poor maintenance. Programs such as CASPER (Computerized Analysis of Ship PERformance) offered by Propulsion Dynamics, Inc. (PDI) might provide guidance on how to increase efficiency through maintenance (GreenPort Journal, 2008. Page 11).
- Explore options for boats to use electricity from on-shore sites while in port to avoid having to continue to burn fuel (a practice known as "cold ironing").
- Generally explore ways to improve energy efficiency.
- Explore options for boats to use electricity from on-shore sites while in port to avoid having to continue to burn fuel (a practice known as "cold ironing").

Combined Sewer Overflow (CSO)

CSO and Stormwater and Process Water Outfalls are a continuing issue in and around New Bedford/Fairhaven Harbor. While significant progress has been made in the separation of numerous CSOs, additional work needs to be done before full rehabilitation of the systems can be achieved. The CSO and Outfall issue falls into two categories: those CSOs and Outfalls that are owned or operated by the City or Town, and those Outfalls that are private.

Recent tighter regulations concerning CSOs and Stormwater discharge have been promulgated by the USEPA (the National Pollution Discharge Elimination System [NPDES] Phase II went into effect in May of 2003 – and the USEPA is in the process of being re-permitted the program nationally), and many Cities and Towns are struggling with updating their infrastructure to comply with the new stricter rules. The City of New Bedford and the Town of Fairhaven have both made improvements to their wastewater facilities over the past several years, making the investments in the major infrastructure to comply with the spirit of the new regulations. Additionally, the City of New Bedford has invested significant capital in the separation of combined sewers in the last several years. Most of the former combined sewer outfalls in the lower and outer Harbor portions of the New Bedford have been separated. Additional CSO separation activities are required in New Bedford in the Upper Harbor (from roughly North Terminal to the Wood Street Bridge) in order to meet future regulatory requirements. Additional, several CSO structures in Fairhaven require attention.

Passenger Rail Transportation

The Plan supports efforts to establish passenger rail (commuter) transit for New Bedford. The concept most strongly promoted to date calls for use of the CSX New Bedford rail yard for both expanded intermodal (freight) service and as a site for a passenger multimodal terminal. Passenger rail public transit to and from New Bedford represents an important "green" initiative supported by the community and by this Plan. An extension of rail service to the New Bedford State Pier could potentially create a invaluable intermodal connection to the ferries serving Martha's Vineyard, Cuttyhunk and potentially several other ports such as Woods Hole and Nantucket. Although a freight rail connection to the Pier is worthy of further consideration, a multimodal (or passenger) connection to the Pier is currently considered infeasible as part of the South Coast Rail project planned for the near future.

7.2.14 PARKING

Parking to serve waterfront uses is provided on city-owned land on and adjacent to the Gifford Street Boat Ramp, the Pease Park Boat Ramp, the Pope's Island Marina, Fisherman's Wharf, Homer's Wharf and Leonard's Wharf and at State Pier. In addition, the HDC operates a remote parking facility (the Whales Tooth Parking Lot in the Hicks Logan district) and runs a shuttle bus between parking and the Fast-Ferry terminal at State Pier. These parking areas currently provide adequate parking associated with vessels, seafood processors, various marine industrial uses and other waterfront uses including the Bourne Counting House and Wharfinger Building. As additional development occurs, it is critical to balance parking needs with the development of this area. In the long term, a structured parking lot is being considered.

The HDC and the Town of Fairhaven will monitor the adequacy of parking on publicly-owned land on an ongoing basis to ensure that an adequate supply of parking is made available to serve the needs of vessels and related marine industrial uses. Where in the opinion of the HDC parking controls are needed, the HDC will develop and implement such a program. Where substantial development projects are proposed within the waterfront, project proponents shall assess any potential use of public parking areas, and identify mitigation measures where substantial impacts are anticipated.

7.3 HARBOR SUB-AREAS

The following harbor sub-areas are depicted in Figure 7.1:

- New Bedford Central Waterfront. Major uses include city-owned fishing piers, the State Pier operated by DEM, the former Commonwealth Gas and Electric site, and portions of the downtown area.

- New Bedford North Terminal/Mills Area. Major uses include mill complexes, fish processing facilities, marine terminals including Maritime Terminal, and the former rail yards that will serve as the future New Bedford Intermodal Transportation Center.

- New Bedford South Terminal/Standard Times Field/Hurricane Barrier/Palmer's Island. Major uses include seafood processing and general industrial uses in South Terminal, undeveloped land area at Standard Times Field, and the

Berkshire Hathaway Mill complex. The Plan also looked at the Peninsula between Acushnet River and Clarke's Cove south of the Hurricane Barrier, an area which is largely residential with a waterfront supporting public access/parks and some commercial/retail businesses.

- Route 6 Bridge/ Fish Island/Pope's Island. Major uses include marine terminals and marine industrial uses, retail, and the Pope's Island Marina

- Fairhaven Central Waterfront. Major uses include public and privately owned berthing facilities for the fishing fleet, significant marine repair and marina operations, Pease Park boat ramp, hotel facilities

- Fairhaven Waterfront North and South. Predominantly residential uses to the north and south of the Central Waterfront, including undeveloped land at Marsh Island, two smaller marinas, and Fairhaven Shipyard

7.3.1 NEW BEDFORD CENTRAL WATERFRONT

Planning Goals: The Central Waterfront will continue to serve as the primary berthing area for the Port's commercial fishing fleet and provide land and facilities for its associated functions, including ice and fuel suppliers. State Pier will be repaired and revitalized. These elements of the harbor's working waterfront will be integrated with compatible visitor-oriented uses. A waterfront promenade will be established to link existing and potential future attractions along the edge of the piers between Fisherman's Wharf and Leonard's Wharf, providing opportunities for viewing and understanding the working waterfront without disrupting its operations. A public waterfront destination space will be established on the southwest corner of State Pier. Redevelopment of Route 18 will enhance pedestrian connections between downtown New Bedford and the waterfront and will continue to provide appropriate access to working piers and other water-dependent facilities. The proposed mix of uses in this area includes Supporting DPA Uses that have been evaluated to determine their compatibility with the DPA.

7.3.1.1 Fish Piers Repair and Expansion

Homer's Wharf and Leonard's Wharf will be extended to provide additional berthing space for fishing vessels to relieve overcrowded berthing conditions experienced by the harbor's fishing fleet that have been widely acknowledged during the Harbor Plan process. These extensions, shown conceptually on the Central Waterfront Illustrative Plan would provide safe capacity for approximately 24 additional larger vessels or a larger number of smaller vessels. Additional analysis and design will be needed to determine a final configuration for these pier extensions in terms of both length and width. It is anticipated that pier extensions will extend to the harbor line, unless such an approach unduly results in impacts on navigation. If further analysis indicates that the optimal configuration for pier extensions is to extend beyond the state harbor line or into the federal channel, legislative action would be needed.

The cost of these two pier extensions as shown conceptually on the illustrative plan is estimated at $2.7-3.6 million (higher number assumes a more substantial structure associated with larger vessels than currently use the piers). These costs will need to be refined once the optimal pier length and width is established. With development of these pier extensions, the HDC will have sufficient space to be able to dedicate an area on the piers to accommodate needs associated with loading of supplies and other related activities, a need identified by vessel operators.

The HDC is taking several other steps to improve these wharves including the addition of shore power connections, lighting and debris and waste fluid collection programs.

7.3.1.2 State Pier Redevelopment/Revitalization

The State Pier program represents another of the major initiatives proposed along the New Bedford waterfront. Numerous individual projects are proposed that collectively form the basis for a programmatic modification to the form and use of the Pier. This effort began with the new Ferry Terminal and roll-on/roll-off freight ramps added in the early 2000's, the establishment of a waterfront visitor center, and the startup of the annual Working Port Festival. Further improvements anticipated will enhance the Pier's ability to handle import and export cargo, service cruise ships and support tourism initiatives such as an open air seasonal market, facilities for Schooner Ernestina, an area to view the fishing fleet, and other facilities of public accommodation.

The projects range from replacing the pile supported portion of the Pier with a solid fill structure to improving buildings and other support facilities so that they can support new uses.

Specific infrastructure work includes pier rehabilitation and building reconfiguration. The plan is for the north, south, and east faces of State Pier to be demolished and replaced by a new filled-pier structure. The filled-pier structure will be comprised of a bulkhead that will be filled and capped by a concrete slab. With a few exceptions, the edge of the bulkhead will generally follow the edge of the existing pier. The two exceptions are:

- The northeast corner of the north and east faces of the Pier, which will be squared off in order to accommodate the turning radius of future truck traffic; and
- The southwest corner of the south face of the Pier, at which the bulkhead will be installed further north to accommodate, proposed floating excursion piers in that area.

The plans also call for building reconfiguration. A portion of the east side of Building 1 would be demolished. The remainder of Building 1 would be rehabilitated. Building 2 would be expanded to the south. A second floor would be added to Building 2. The former Coast Guard Building would be demolished. Building 3, previously demolished, would be replaced with a new, two story building with a larger footprint. An elevated walkway would be installed between Building 2 and Building 3. A floating excursion pier would be added in the southwest corner. The excursion pier would consist of two sets of multiple floating pier structures, the outer edge of which would be aligned with the former southern edge of the Pier.

The new building structure would allow the separation of public and cargo areas by keeping public areas primarily on the second floor of most buildings. Cargo would be handled and stored primarily on the first floor. Future public use of the Pier would be maximized by keeping cargo areas isolated from public areas. Flexibility goals would be met by creating multiple-use facilities, by using pier structures for multiple types of vessels (cruise ship vessels, fishing vessels, and shipping vessels), by preserving space in the southwest corner of the facility to potentially add finger piers in the future, and by maximizing the flexibility of the types of cargo (roll-on/roll-off, break-bulk, and load-and-go/inter-modal) that can be accommodated at the Pier. The north, south, and east faces of the Pier would be replaced to prevent the gradual collapse of those structures. Site security and site safety concerns would be met by installing a filled pier structure when rehabilitating the north, south, and east faces of the Pier.

Proposals have also been made to establish the southwest corner of the State Pier as a publicly accessible waterfront destination space with berthing for commercial charter fishing and excursion vessels, interpretive facilities associated with the Schooner Ernestina and the National Park combined with other visitor facilities including an open air market incorporated within temporary structures.

Ferry Terminal/North Side

The Ferry Terminal was constructed in 1999 with service commencing in 2000. The Ferry Terminal currently provides passenger ferry service to Martha's Vineyard and Cuttyhunk Island. It is currently anticipated that this ferry service will continue. This Plan supports the further expansion of ferry service as opportunities are presented including possible service to Block Island, Providence, Nantucket and/or Woods Hole.

Cargo Shipments/East Side

The East Side (as well as portions of the North and South sides) of the State Pier will continue to be primarily used for cargo shipments. The City wishes to maximize the flexibility of the types of cargo (roll-on/roll-off, break-bulk, and load-and-go/inter-modal) that can be accommodated at the Pier. The City of New Bedford has completed a Memorandum of Understanding, along with the Cities of Fall River, Salem, and Gloucester, with the City of Cape Canaveral in Florida to facilitate the creation of a Short-Seas Shipping corridor in order to by-pass shipping along the eastern coast of the United States. Specific needs for accommodation of short-sea shipping vessels will need to be taken into account during the redevelopment of the pier. In order to facilitate the flow of truck traffic on the pier that will be involved in loading and unloading of cargo, this Plan supports the extension of the Harbor Line located proximate to the northeast corner of the State Pier, in order to square the corner off during rehabilitation.

Storage Facilities

This Plan supports the improvement and expansion of warehouse and storage facilities on the eastern end of State Pier, particularly on the ground floor of the buildings. The 30,000 square foot cooler storage space that had existed in one of the buildings, for example, was too small to accommodate the cargo typically on a vessel of a size that would be expected to visit the Port. Ultimately, the coolers were removed, and the facility now accommodates general cargo. New refrigerated facilities will need to be sufficiently large to accommodate typical cargo loads.

Expansion of these facilities would likely attract more cargo vessels to the Port and an associated increase in the local economy.

Cruise Ship Terminal/East Side and South Side

Cruise ship operations were first accommodated at the New Bedford State Pier in July of 2002, at which time the Regal Empress docked at State Pier. The visit was a success, but revealed the problems associated with the existing pile-supported structure of the south side of State Pier, when exposed to significant lateral loads from a large vessel.

Since 2002, a vessel of the size of the Regal Empress has docked only rarely at the State Pier (due to the damage such a vessel would cause); however, multiple smaller cruise ships have arrived and been serviced. DCR intends to upgrade the facilities at the pier such that cruise ship operations with larger vessels, such as the Regal Empress, can continue in the future.

Pursuant to the Cruise Ship Initiative, the City and the HDC have been actively marketing the Port of New Bedford as a full service port of call for appropriate cruise and other transient vessels. For the coming year, the City has signed a contract with American Cruise Lines for up to 25 cruise vessels per year to arrive in the Port. As a result of this increase in Cruise Ship activity and marketing efforts by the State to attract more cruise ships to the region under Historic Ports of Massachusetts initiative, the HDC would like to see the redevelopment of State Pier to include a Cruise Ship Terminal that will allow for waiting areas, refreshments, and tourist-themed areas that would allow for increased economic activity associated with the arrivals.

Southwest Corner/National Whaling Historical Park

The Harbor Plan designates an area on the southwest corner of the State Pier to function as a waterfront destination area for harbor visitors. The Harbor Plan supports continued use of the central berthing area in the southwest corner of the pier for commercial excursion and charter vessels, and the Ernestina, the official vessel of the Commonwealth (see below). The south wharf building will include a center for visitor services, programs, and support for the Schooner Ernestina, ticketing facilities for the excursion vessels, offices and classrooms to help support education of commercial and marine industrial uses of the Harbor, and will also include a fish market that will serve as a centralized location for Citizens to purchase fish for consumption at home. The south wharf will also include a harbor viewing area, allowing visitors to view the fishing fleet berthed on Steamship Wharf.

This initiative will attract substantial numbers of visitors to the waterfront, enhancing its vitality and providing direct benefits to the downtown area as a whole.

Schooner Ernestina

The Schooner Ernestina is a National Historic Landmark and the official vessel of the Commonwealth; it was a gift from the Cape Verde government and is owned by the Department of Conservation and Recreation. It is currently berthed on the southwest corner of the State Pier. A center for visitor services, programs and support for the Schooner Ernestina will be developed on the southwest corner of the State Pier The Harbor Plan concept for the southwest corner of the State Pier includes a berth for the Ernestina adjacent to its proposed visitor service facilities. The Ernestina anticipates a need for 5,000 square feet of support space onshore, some portion of which including interpretive facilities and storage space will be provided on the State Pier.

Floating Dock for Excursion/Charter Boats and Water Taxi/Shuttles

A substantial floating dock system is proposed to be placed adjacent to a portion of the Southwest Side of the State Pier to serve the Ernestina, and to establish an accessible central berthing area for charter fishing boats, excursion vessels, and other commercial boating services. These services have strong market support and will be the catalyst that establishes the waterfront as a visitor destination attracting visitors to the community and contributing directly to downtown revitalization goals. Establishing a critical mass of vessels in a central location will also bring tangible benefits to boat owners based on shared ticketing, shared advertising, and an established destination. Several such services currently exist around the harbor but they are dispersed and lack critical mass. Development of the proposed floating dock system would be subject to any applicable leases and would require approval from the Commonwealth or its designee.

A similar opportunity exists on the northwest (inland) corner of State Pier including Tonnesson Park and adjacent to the existing Waterfront Visitor Center, where docking facilities should be improved to adequately support excursion boats and water shuttle/taxi services. Currently New Bedford/Fairhaven Harbor lacks the ability to provide adequate berthing for water taxis and launch service, excursion boats and space to berth security and port operational vessels.

The City of New Bedford has requested $75,000 from the Massachusetts Seaport Council to build two (2) launch/berthing facilities that would support maritime operations and tourism on the waterfront. One site would support access from launch and excursion services to a newly built waterfront restaurant in the working port and access to the historic downtown area. The other site would support access

by launch and excursion service to the historic down town area as well as berthing for the Port's security vessels (police patrol, harbor master, and fire boat). The project is considered critical to support commercial and recreational boating activities in the Harbor. Studies sponsored by the Maritime Trades Association indicate that for each $1 spent by a boater there is an $8 economic return to the community. By not having an adequate water/land interface to support water taxi, excursion, and recreational boating operations, the Port loses the opportunity for this economic spin-off. Further and equally important, this project would meet some of the security goals critical to the maritime operations of this Port.

Water Taxi/Launch Dock

A water taxi/launch dock will be provided on the northwest corner of the State Pier.

Use of the State Pier for Special Events

As efforts proceed to revitalize the State Pier through development of freight ferry service and with renewed efforts to attract break bulk cargoes, full use will be made of the Pier on an interim basis for special events, waterfront festivals, and related activities including parking. These activities may make use of exterior pier areas, the cooler storage facility and both levels of the transit shed to the extent that they are not otherwise in use. Incorporation of these activities will not require any significant alterations to Pier facilities and will not impede use of the Pier for its primary users. Temporary uses will be limited to activities that are fully compatible with the needs of other Pier users and consistent with any applicable leases. Excellent examples of appropriate public events that fit with the State Pier's mission are the annual Working Waterfront Festival in mid September and the Commercial Marine Expo held very successfully for the first time on the Pier in June 2010.

7.3.1.3 JFK Memorial Highway Improvements

The reshaping of Route 18 has been a goal of the City of New Bedford for some time. Currently, the roadway slices through the City waterfront, effectively separating the main portion of the City commercial street sector from the waterfront. A plan has been to improve the connection between the waterfront and downtown and to reclaim land around the existing Route 6/Route 18 interchange to support downtown expansion. The project is moving from the final design stage to construction supported by $15 million in state and federal funds secured by the City of New Bedford Since the modifications planned for the Route 18 corridor will significantly improve access to the City's waterfront facilities, this Plan supports these actions.

7.3.1.4 Reuse of Former Power Plant Site

Special Study Area: The so called "NStar" site, formerly Commonwealth Gas and Electric, now owned by Sprague Energy, was identified in the 2002 New Bedford Harbor Plan as the site for a proposed "Oceanarium" project. The project was to be one of the largest waterfront attractions in the Commonwealth, with a projected visitorship of over one million people. The project would have included a large aquarium and associated commercial development, including a hotel. In order to facilitate this development, a complicated set of procedures was established to allow for the transfer of "development rights" from other areas of the DPA to the proposed NStar site. This plan resulted in significant restrictions on the use of properties throughout the DPA in order to support the Oceanarium project.

Unfortunately, the Oceanarium project did not prove feasible and is no longer under consideration. Much like the planned relocation of the New England Aquarium to the Yard's End in the Charlestown Navy Yard, there was much excitement and support for the project locally, but the economics did not work. Nevertheless, the NStar project site has much potential as one of the largest single parcels of land on the waterfront and with its proximity to the Downtown and Historic District. The site is currently owned by Sprague Energy with part of the facility used as office space and a lay-down area for an electrical service company. Only a portion of the site is being used by Sprague for oil storage. Most of this large waterfront parcel with its several major buildings is not being utilized to their highest and best use.

As it is not clear at this point in the current economic cycle what the potential best uses of this site are or what the current owners' interest may be in using the site, the Harbor Plan Renewal is recommending that a Special Study Area be established for the site. The Special Study Area would allow the City to continue to work with the

owners and other interested parties to seek creative uses for the site to further the economic vitality of the waterfront. The site could potentially be used for an expansion of existing water-dependent industrial uses, such as increase petroleum storage, more seafood processing or even short sea shipping. On the other hand, there may be opportunities for mixed use development including both water-dependent industrial and other supporting commercial uses. Depending on the outcome of the current deliberations in the legislature, the site could also become the location for a proposed gaming facility. While there is no such proposal on the table, it remains a potential use.

Because the nature of future development on this parcel is so uncertain and because its potential is so high, the area is being designated as a Special Study Area. This will allow time for further planning to take place and allow for a more thoughtful amendment to the Harbor Plan, if required, at a point in the future when the proposed use of the parcel is better defined.

7.3.1.5 Harbor Promenade / Waterfront Access

The promenade is discussed in section 7.2.9.

7.3.1.6 Harbor Viewing Tower—Fisherman's Wharf

The existing support structure for the Route 18 pedestrian bridge will be reused as a harbor viewing tower. Following the redevelopment of Route 18, the existing concrete bridge structure that spans the highway will be removed. However, the stair/ramp structure that supports the bridge on the waterfront side should be retained and reprogrammed as a harbor viewing tower. Excellent harbor views and views all along the waterfront can be captured from the top of this structure without intruding on the working piers and wharves. Interpretive materials and telescopes could be located on top of the tower to allow visitors views across the harbor, close up views of in-harbor activities, the freight ferry, and other activities. This viewing tower could be operated much as a city park with a gate that closes in the evening and opens again in the morning. It is anticipated that the viewing tower will be classified for regulatory purposes as a structure to accommodate public access.

7.3.1.7 Former Twin Piers Restaurant

This site has been extensively renovated for reuse as a restaurant. The former Twin Piers restaurant operated as a significant attraction on waterfront for many years. The restaurant was closed for several years until it reopened in 2008.

7.3.1.8 Hotel Development

An approximately two-acre parcel outside the DPA between Herman Melville Boulevard and Route 18 has been designated for hotel development. This site has the potential to accommodate a 200-300 room hotel facility including conference space, meeting rooms, and structured parking. The hotel site would provide a much needed location for visitors to New Bedford to stay. The site contains an historic whale oil facility. A hotel proposal would include preservation and restoration of this important historic structure that relates to the city's whaling era heritage. Parking for the hotel would be provided on the site. No portion of parking would be located within the DPA or on tidelands.

7.3.1.9 Transient Boater Facility/Tourism Welcome Center

The Plan supports the development of a transient boater building in the downtown area of New Bedford or near Pease Park or Union Wharf that would offer lockers, showers, wash-up areas, and other welcoming facilities. This facility should be centrally located in order to integrate available boating facilities with bars, restaurants, and shops within the city, as well as other potential tourist destinations within both New Bedford and Fairhaven. Ideally, this facility will also offer access to shopping and a tourism welcome center that can be utilized by cruise ship tourists or automobile-utilizing tourists. Shuttle-busses can be used to transport transient boaters from planned transient moorings and transient slips throughout the City of New Bedford or the Town of Fairhaven.

7.3.1.10 Waterfront Access/Downtown Access/Streetscape Study

A waterfront access/streetscape study is needed to assist the town in evaluating the economic and physical implications of changes in waterfront access and development patterns. This study should establish a designated route for providing access to the DPA along Water Street. The town should seek funding assistance to assist it in evaluating these important issues.

7.3.1.11 Historic Structures and Areas

MIDDLE STREET

Streetscape improvements will be undertaken along Middle Street to enhance the attractiveness of the town's principal commercially oriented waterfront gateway street and stimulate appropriate tourism-oriented development and waterfront investment. These improvements will enhance the area and create the sense of a cohesive waterfront district combining marinas and commercial tourism-oriented services, and supporting commercial uses, as opposed to a number of isolated and unrelated uses. Enhancements would include tree planting, aesthetically pleasing

lighting, and other pedestrian amenities. Enhancements to Middle Street waterfront gateway are described in more detail below.

POTENTIAL FOR HISTORIC DISTRICT DESIGNATION

The central areas of Fairhaven outside the Designated Port Area have the potential to be listed as a district on the National Register of Historic Places. This designation would place no restrictions on individual property owners, but would bring the town the benefits of historic district status in terms of recognition and offer owners potential tax benefits associated with undertaking changes to buildings within the area. The Plan supports consideration of National Register listing.

MAIN AND GREEN STREETS

Streetscape improvements will be undertaken to Main and Green Streets to enhance their attractiveness as community gateways connecting from Route 6 to the downtown area. Improvements will include tree planting, lighting, and pedestrian amenities such as benches. Improvements to these streets will be funded through ISTEA.

BOURNE COUNTING HOUSE

The Bourne Counting House was constructed in 1847-1848 and has direct links to the peak of the whaling period in the harbor. The building served as the office of Jonathan Bourne, the most important owner of whaling ships of his day. The original massive granite structure was extended to 3 ½ stories in a recent renovation. Future use of this important historic structure is anticipated to include some space dedicated to National Park exhibits, as well as office and retail space. The DEP issued a written determination in 2007 for the property authorizing office and retail space and/or publicly accessible visitor facilities.

WHARFINGER BUILDING/VISITOR CENTER

The building, a former fish auction house, is currently very successfully used as a Waterfront Visitor Center. Since approval of and in response to the 2002 Harbor Plan, extensive improvements have been made to this centrally located structure and to its displays. Not only were the physical structure and its systems improved, but new exhibits and outside displays were added. The Center continues to provide general visitor information about the region but now also interprets the historic and current uses of the working waterfront., including the rich history of the building and its site on Fisherman's Wharf. Activities at the building include operating a ship's bell and displaying marine weather and international code flags. These initiatives should continue to be supported along with other traditional operations that help activate this section of the working port and attract the public down to the

water's edge. The addition of a floor map of the City and Harbor should be considered for the visitor center to help with visitor orientation. The site provides support for a harbor water shuttle and should continue to be used to allow easy public access out onto the harbor and for water-borne transportation connections to other waterfront sites. The Wharfinger Building should not be altered in any way that would significantly detract from its historic character or be appropriated for uses which would deny public access to most of its ground floor. It is anticipated that for regulatory purposes, its current uses would be considered to be a Supporting DPA Use, or, in the alternative, accessory to public access use.

7.3.2 North Terminal / Hicks Logan

Planning Goals: The North Terminal/Mills Area contains some of the most underutilized land and water resources in the Harbor. Since the construction of the New Bedford-Fairhaven Bridge in the mid-19th century, the economic potential of the North Terminal area as a port facility has been constrained. However, the areas of the Harbor south of the existing bridge are now close to fully developed and future harbor development is contingent upon renewed efforts to revitalize port-related activities north of the existing bridge. Substantial changes to the North Terminal area are supported through the Plan and major infrastructure improvements are needed to advance this vision. With implementation of these projects including dredging, bridge replacement, development of a multi-modal transportation center and water terminal, and the Hicks Logan Urban Industrial Park, this area has the potential to serve as a regional intermodal transportation hub for passengers and freight on land and on water. Without bridge replacement or relocation, the potential of this area to support harbor development will continue to be severely limited. The areas of North Terminal located east of Herman Melville Boulevard and south of Hervey Tichon Avenue, including substantial users such as Maritime Terminal, are fully developed with marine industrial businesses. The Plan anticipates a phased development of the remainder of the area. Initial projects will include development of the Multimodal (passenger)Transportation Center with connections to a colocated or nearby intermodal (freight and maintenance) terminal, development and enhancement of the Hicks Logan Urban Industrial Park, and harbor cleanup dredging. Subsequent projects will include bridge replacement/relocation and development of marine facilities on CDF D. Substantial additional planning and economic analyses are needed to advance the vision for this area. The Plan supports the following projects within this area:

7.3.2.1 Transportation Center

This Transportation Center will most likely be located within the Hicks-Logan/North Terminal area on the site of a former rail depot.

In addition to supporting rail service (both multimodal and intermodal terminals), this site may also be employed as a truck staging area to support short sea shipping operations and as a bus maintenance facility.

COMMUTER RAIL AND BUS TERMINAL

The Plan supports the extension of commuter rail service into a commuter rail station (multimodal terminal) on the site of the former rail depot that could also include commuter rail, local and regional bus service, taxis, waterfront trolley service, and parking spaces (with future expansion to include rail and pedestrian links to a water terminal). . The commuter rail service is being advanced by the MBTA with commencement of commuter rail service projected for 2016-2017. Station design must facilitate the development of strong pedestrian connections between the station and downtown area and central waterfront. Station design should also serve to facilitate shared use of commuter parking areas in off peak and weekend hours.

The addition of public passenger transport rail enhancements to the existing rail infrastructure at the CSX rail facility represents a significant potential expansion to the economy of the entire region. Direct public passenger rail service to points north, including the City of Boston, would connect the City of New Bedford and the Town of Fairhaven with the region's other metropolitan areas, allowing for the development of a commuting hub on the South Coast. Increases in the development of housing to support the commuting public, coupled with an increase in commercial opportunities made possible by the direct connection between the Port and other communities in Massachusetts, would have a dramatic effect on the economy of the area.

FREIGHT RAIL/TRUCK/CONTAINER STAGING

The CSX rail facility that exists adjacent to the Port is currently utilized by the USEPA for the transport of contaminated sediments to upland disposal sites. The rail yard represents an enormous opportunity for future economic development in the transportation sector. With existing active and inactive rail spurs running directly out onto several piers within the New Bedford North Terminal area of the Port, the opportunity for inter-modal (ship-to-rail) commerce exists. Development of bulk and break-bulk inter-modal ship-to-rail transport would open the Port for extensive shipping opportunities, including Short Sea Shipping with sister ports up and down the east coast, new shipping opportunities with ports outside the south coast area including international ports, and an expansion of bulk cargo transport to the islands off of the New England coast. Economic studies of the Port have indicated that the return of inter-modal ship-to-rail transport will have a substantial positive impact on both the local, regional, state, and national economies.

The Plan strongly supports efforts related to the redevelopment of rail infrastructure aimed at supporting inter-modal ship-to-rail transport. The rail spur currently used by the USEPA extends all the way down to the waterfront bulkhead of the pier at the southern end of New Bedford North Terminal. Currently, USEPA utilization of this rail spur precludes its use for cargo transport. The Plan supports efforts underway to expedite the USEPA cleanup of the Harbor, with one benefit being the release of the USEPA transfer facility to the City for cargo transport.

Additionally, the Plan supports the redevelopment of the North Terminal area, building out of the bulkheads in the terminal with the extension of rail lines to the waters edge. Coupled with dredging in front of the new bulkheads, the conversion of the North Terminal area to an inter-modal transport facility would allow for extensive economic expansion via a dramatic expansion of the transportation industry within the Port. The new terminal would be a hub for local, regional and even national shipping interests.

FREIGHT HAUL ROAD

The I-195 exits at Washburn Street and Coggeshall Street and the connecting roadway network within the area shall be developed to serve the needs of port-related industrial traffic.

The Plan envisions that direct access to and from the North Terminal area and the Intermodal Transportation Center will be provided from Route 18 and that provision will be made to provide easy connections to the Route 6 harbor crossing.

BUS/RAIL REPAIR/ LAYOVER

Southeastern Regional Planning & Economic Development District (SRPEDD) has suggested that moving the Southeast Regional Transit Authority (SERTA) bus maintenace and storage garage from its current location (which is too small) to the new intermodal site should be considered. Bus passenger services would be moved to the nearby multimodal (passenger) terminal.

A separate train layover area in the current Whale Tooth parking area is being considered as one of two options for this necessary support function. A decision on the final location of the layover area is expected by late 2010.

7.3.2.2 Confined Disposal Facilities

EPA DE-SANDING FACILITY

The Plan supports the initiative by the City of New Bedford to re-develop the EPA de-sanding facility in order to help re-develop the area of New Bedford north of the Coggeshall Street Bridge. Due to the height of the Coggeshall Street Bridge and the Route 195 Bridge it is infeasible to plan for water-dependent industrial or commercial uses in this portion of the Harbor. The planned re-development should allow pedestrian access from Riverside Park to the planned boathouse at the end of Sawyer Street.

EPA DE-WATERING FACILITY

The Plan supports the reuse of the EPA de-watering facility as an inter-modal transportation center once the EPA has completed its work. This property will likely have a large economic value due to the rehabilitation the EPA has completed on the rail lines running to the facility. With a rail connection directly out to the heavy-duty bulkhead at the water's edge and deep-water access, the site is ideal for ship-to-rail freight transfer, import/export shipping, short sea shipping, hazardous cargo shipping, coal shipment, and a wide variety of bulk cargo operations.

NORTH TERMINAL LAND EXPANSION

The Plan still proposes land enlargement north of North Terminal as did the 2002 New Bedford/Fairhaven Harbor Plan. This 2010 Plan anticipates that the bulkhead line from North Terminal would be extended north into the Hicks-Logan area. The additional land area created within the DPA would be allocated for a mix of maritime industrial uses including expansion of bulk terminal operations, inter-modal transportation, and public access and open space, to the extent allowable under Chapter 91 within a DPA. It is anticipated that the uses within this area will be planned in coordination with the usages determined within the Hicks-Logan area. Areas outside of the DPA could be allocated to mixed-use development, recreational boating, transient boater berthing or berthing for yachts or yacht clubs. A final determination of the appropriate and licensable mix of uses will be determined in subsequent amendments to this Plan. The Plan anticipates that the fill to be used to create this WDSF (see 7.2.1.3) will be generated during CAD cell construction, thereby facilitating dredging within the harbor during WDSF construction. It is currently estimated that approximately 442,000 cubic yards of fill would be utilized during the WDSF construction during the North Terminal Land Expansion.

A North Terminal WDSF would be an extension of the bulkhead built by USEPA to house its dewatering facility. This facility will create a total of approximately 30 acres of new waterfront land within the North Terminal. Design criteria for this

facility will be established over the next several months. These criteria will determine the types of activities and or structures that can ultimately be accommodated on the WDSF, as well as design of the water's edge/bulkhead area, and assumptions regarding future water depths.

As noted in the economic assessment, the North Terminal is the only area of the harbor that may ultimately have the potential for facilities development consistent with the needs of ocean going cargo operations. This assessment is made contingent upon the availability of sufficient land area to develop appropriate port facilities, water depths, and supporting landside infrastructure, including road and rail access. However, while land at the EPA De-Watering Facility and the WDSF extension will not immediately be available for heavy industrial use, decisions on design of the WDSF that will determine its possible use must be made in the near term. These decisions must be informed by a strategic economic assessment of future market opportunities for ocean going freight and passenger service within New Bedford that provides a basis for determining facility needs.

A study should be initiated now to determine the parameters that should guide a WDSF design that facilitates a multi-user terminal to be owned by the City and the HDC. This multi-user design will promote efficient and flexible use of the terminal.

7.3.2.3 Hicks-Logan Mixed Use Development

The Plan supports comprehensive redevelopment of the Hicks Logan area as a mixed-use urban industrial park involving reuse and redevelopment of existing buildings supported by complementary infrastructure/site access improvements. The mix of uses would range from residential to light industry with an intermodal transportation facility and the possibility of a future gaming complex. Improvements should be focused on improving the area's image, as well as enhancing roadway capacity and truck operations. Along the waterfront, continuous public access should be incorporated in future redevelopment projects. An existing boat ramp should be rehabilitated and made available for public use. Efforts to incorporate water-dependent uses such as marina facilities along the waterfront, in a location that is highly visible from I-195, are strongly encouraged and could serve as a major amenity enhancing the market attractiveness of the area. Residential use will not be permitted within the Hicks Logan Urban Industrial Park.

HICKS LOGAN URBAN INDUSTRIAL PARK

The Plan supports comprehensive redevelopment of the Hicks Logan area. A specific plan for this area has not yet been determined. However, along the waterfront, continuous public access should be incorporated in future redevelopment projects. An existing boat ramp should be rehabilitated and made available for public use. Efforts to incorporate water-dependent uses along the

waterfront, in a location that is highly visible from I-195, are strongly encouraged and could serve as a major amenity enhancing the market attractiveness of the area.

7.3.3 SOUTH TERMINAL / HURRICANE BARRIER

Planning Goals: The New Bedford South Terminal/Standard Times Field/Mills/Hurricane Barrier/Palmer's Island area will be developed to address multiple objectives. An extension of the bulkhead is planned for South Terminal. This area is the heart of the city's seafood industry and has great potential for expanded support of this industry and other water-dependent industries. Anticipated expansion needs of this sector and other industrial users will be addressed through subdivision and redevelopment of Standard Times Field. Open space and community recreation needs will be addressed through improvements to Palmer's Island and the Gifford Street boat ramp, establishing a destination open space along the Hurricane Barrier walkway.

The Plan supports continued use and development of South Terminal as a major center of the seafood industry within the harbor together with use by other port-related uses and functions. Future roadway connections should be established to land within Standard Times Field.

7.3.3.1 Bulkhead Extensions

SOUTH TERMINAL LAND EXPANSION (WDSF)

The Plan continues to support the land enlargement south of South Terminal proposed within the 2002 New Bedford/Fairhaven Harbor Plan but to a much smaller extent. The Plan anticipates that the existing bulkhead line in South Terminal would be extended to the south approximately 500 to 1,000 feet. Water adjacent to the South Terminal Land Expansion could be expanded to include new berthing for both larger commercial vessels (within existing deeper water) and recreational vessels (within existing shallower water).

7.3.3.2 Standard Times Field Development

Standard Times Field was acquired by the New Bedford Redevelopment Authority in 1998 and has been redeveloped as an industrial park serving the expansion needs of the marine industrial uses, including the seafood industry and other general industrial uses. T The property was subdivided to create approximately nine development parcels to meet the needs of large and medium-sized businesses. Blackmer Street was extended to provide access to individual parcels and links to Front Street. At full build-out, Standard Times Field has the potential to

accommodate approximately 300-500,000 square feet of development. Portions of Standard Times Field may also be used for temporary activities that support the Port.

In 1998, based on initial recommendations of the Harbor Plan process, the City of New Bedford expanded the Working Waterfront Overlay District to the property to open the potential of future development of seafood related businesses. The waterfront areas of Standard Times Field will not be conveyed for development. Public access may be provided along the seaward portion of the site in a manner that is consistent with, and does not preempt, future use of the water's edge for water-dependent industrial use, including commercial vessel berthing. Any public access way would ultimately connect to South Terminal near the Fish Auction in the area adjacent to the intersection of Wright and Hassey Streets.

Standard Times Field has previously been considered as a site for disposal of harbor maintenance dredge materials within a CDF. The extent of the proposed CDF has been significantly decreased and would use only clean dredged material to create new wharf area (what is being called a WDSF or Waterfront Development Shoreline Facility in this Plan). An initiative to extend the existing South Terminal waterfront bulkhead south by as much as 1,000 feet is supported by this Plan and would be used by the Port's existing and future marine industries. Some dredging will be needed to allow access by larger merchant vessels. A comprehensive study is needed to prepare a strategic marketing and development plan to guide the future use of the remaining areas of the Standard Times Field, including potential future wharf expansion. This planning work began in 2009 and has included new development that would further serve the expanding needs of the seafood industry and other marine industrial uses. In addition to extending the bulkhead to support marine industry, the extension could also include support for vessel service facilities centered on the Gifford Street Boat Ramp.

7.3.3.3 Commercial and Recreational Boat Service Center

GIFFORD STREET BOAT RAMP

The Gifford Street boat ramp will continue to be used to provide public access to the water. The ramp is a potential water access point for future Duck Tour activities within the Harbor and may require modifications to serve this function. The City is exploring opportunities to expand the mooring fields off Gifford Street.

PALMER'S ISLAND/HURRICANE BARRIER

The Plan supports the expanded use of the City-owned Palmer's Island by the public including for passive recreation and for historic and environmental education programs. The Plan supports construction of a foot-bridge or other elevated pathway that would allow safe and easy public access between the Island and the Hurricane Barrier but that would not compromise the environmental or historic character of the Island. Access improvements including reuse/redevelopment of a boat dock to serve as a landing point for water harbor tours, should be combined with restoration of the Palmer's Island Lighthouse and possible reconstruction of other structures that formerly stood on the site. Innovative approaches for restoration and ongoing maintenance and management should be considered, including leasing space to a private or non-profit organization that would undertake work and possibly maintain an ongoing presence on the Island while continuing to allow free and full public access to the site. Repairs to and improving security for the lighthouse should be a top priority. This historic structure is a central element of the City Seal and the HDC logo and is deserving of special attention. These proposed Island improvements have long enjoyed support within the community. The Harbor Open Space Plan that was initiated in 1999 contains an implementation strategy for funding improvements and undertaking the Island's ongoing management responsibilities.

7.3.3.4 Public Access

See Secions 6.9 and 7.2.9).

7.3.3.5 Berkshire Hathaway Mill Complex

The Plan supports the revitalization of Berkshire Hathaway mill complex to support more intense use with a focus on commercial and industrial uses. Primary access should be from Gifford Street.

7.3.3.6 JFK Memorial Highway Improvements

See Section 7.3.1.3.

7.3.3.7 E. Rodney French Blvd / Hurricane Barrier

See Section 7.2.9.

7.3.4 POPE'S AND FISH ISLANDS

Planning Goals: The Route 6 Bridge/Fish Island/Pope's Island area will continue to contain a mix of marine industrial and water-dependent recreational facilities.

7.3.4.1 New Bedford/ Fairhaven Bridge (Rt 6)

This Plan supports the replacement the Route 6 harbor crossing with a modern, reliable bridge offering wider water access to the northern part of the inner Harbor

The replacement of the Route 6 Bridge between New Bedford and Fairhaven has been and continues to be a high-priority shared-goal of both communities. This bridge, which runs between Fish and Pope's Islands, passes over the only navigable shipping channel connecting the northern portion of the inner harbor to the remainder of the working port and the open ocean. In addition to being slow to open and close and at times unreliable, this 100^{+}-year-old bridge is of a center-pivot swing design. This means that the pedestal supporting it is in the middle of the channel, thus reducing the channel's functional width and the size of vessels able to access facilities in the northern portion of the inner harbor.

As currently configured and operated, the Route 6 Bridge limits the viability and marketability of substantial areas of waterfront land within the Designated Port Area and many of the Harbor's deep-water berths (i.e. North Terminal and the north sides of Popes and Fish Islands) and thus seriously limits the potential for significant economic expansion within the Port. The 2002 Harbor Plan proposes the relocation of the bridge further north within the harbor. Over the past several years, it has become apparent to many that a bridge relocation would face many significant hurdles, several of which may be insurmountable including environmental concerns and the estimated cost of the project. There still appears to be general consensus within both New Bedford and Fairhaven port communities that replacing this bridge is essential to relieve a major obstacle to port development, to expand harbor capacity, and to improve Route 6 cross-harbor roadway connections. With the understanding that relocation may not be feasible, the currently favored approach is to replace the 100-year-old pivot bridge with a double bascule bridge increasing the bridge opening from the current 90 feet to a new width in excess of 150 feet. The new bridge would not only improve access to the North Terminal and the new proposed terminal on the north side of Pope's Island but would also significantly improve the speed and reliability of the bridge opening. A thorough cost benefit analysis needs to be completed and if bridge replacement is determined to be fully justified than the plan/schedule for bridge construction should carefully consider the impact on local businesses during the work, particularly for those located on Popes Island.

7.3.4.2 New Harbor Terminal

This Plan proposes a modified version (see Figure 6.2) of the land enlargement outlined in the 2002 New Bedford/ Fairhaven Harbor Plan. The area would be substantially smaller than proposed in the 2002 Plan and also smaller than shown in CZM's Dredge Material Maintenance Plan (DMMP). The expansion would add several acres of new DPA land on the northwest portion of Pope's Island. This would be accomplished by driving sheet piling and then filling behind it with clean material generated during on-going CAD cell construction occurring just to the north of the Island. It is currently estimated that approximately 350,000 cubic yards of fill would be utilized during the WDSF construction on Pope's Island and would significantly decrease the cost of disposal of clean fill removed during CAD cell construction.

The Plan anticipates that the new land created (i.e. the Pope's Island North WDSF or New Harbor Terminal) would be dedicated to a mix of maritime industrial uses including expanded bulk cargo operations and vessel haul-out/launch facilities supporting marine industrial businesses already on Pope's Island and others that would likely be attracted to this new Port facility. In addition to expanding the useable MI land, plans call for a new travel lift at the terminal and expanded/improved deep-water access along the northwestern and northern sides of the terminal area.

Additionally, CAD cell materials could be used to fill a small cove, immediately adjacent to the DPA and just to the southeast of the new Harbor Terminal. The proximity of this site to the proposed CAD cell sites would also serve to reduce the construction cost of these cells. Although creating this WDSF would result in the loss of several existing recreational boat slips, it would provide access to watersheet outside the DPA that the displaced marina operator could use to add more slips. In the long-term, the area could also offer an access point to future boat moorings proposed to be added in the vicinity of the CAD cells after they have been filled and stabilize.

7.3.4.3 HDC Offices and Municipal Boat Docks

At present, operational logistics for the Port are spread throughout the Harbor. Vessels for the HDC, Police, Fire, Harbormaster, and Shellfish Constable are berthed or moored at various locations, and the buildings that house the various Port logistics authorities are separate in mostly rented space. Vessels supporting the various Port agencies and authorities currently utilize space on an ad-hoc basis, with their vessels tying up at different locations around the Harbor depending on availability of dock space. With distributed response, support and patrol resources moving their location relatively frequently, operational coordination becomes a challenge.

In the interest of providing a better response and command-and-control capability for the Port, while at the same time enhancing public safety and service to Harbor users, this Plan supports the creation of a Centralized Port Operations Center (aka Port Security Sub Station). This initiative would provide a secure central location for HDC, law enforcement, firefighting and harbormaster personnel and assets. Dock facilities and related waterfront infrastructure located here would house all municipal equipment and vessels at the one location. The facility would also be used as a unified command center for marine events and emergencies supporting other state and federal maritime law enforcement agencies (see the Watersheet Management Plan – Chapter 5 of this Plan). While a final location for such a facility has not been identified, Pier 3 has been suggested as a potential site. Other contenders include a portion of the former power plant site, Popes or Fish Islands, or at either the North or South Terminals. The site would require good water access (at least 15 feet of water depth) and ideally be near the center of activity for the working port.

7.3.5 FAIRHAVEN CENTRAL WATERFRONT

Planning Goals: The Fairhaven Central Waterfront area contains two distinct sub-areas. Between Route 6 and Washington Street, the waterfront along Middle Street should develop as an attractive commercially-oriented recreation area. Desirable uses include combined marina and hotel development, supporting commercial development, public parking, extensive public waterfront and water access, and development of a center for excursion and charter vessels and a water taxi dock. Between Washington Street and South Street, the Fairhaven Designated Port Area will continue to serve as an industrially-oriented working waterfront with significant vessel repair and marine service business combined with limited compatible commercial and tourism oriented uses. Specific projects supported by the Plan are described below.

The Town will consider petitioning the Massachusetts Department of Environmental Protection (DEP) for a local permitting option under the provisions of 310 CMR 9.07 that can reduce redundancy for an applicant seeking permits for docks and piers. DEP has offered technical assistance in completing this petition (see Section 3.3.2).

7.3.5.1 COMMUNITY/WATERFRONT GATEWAY

The Fairhaven Gateway area encompasses several properties along the Fairhaven waterfront just south of the Route 6 Bridge. These properties include the Seaport Marina and Holiday Hotel, the Acushnet River Safe Boating Club (ARSBC), and the Town of Fairhaven's Pease Park. This landscape is the initial view of Fairhaven that greets any visitor approaching the Town from the Route 6 Bridge (one of the main entrances to the Town proper). Currently, this visual first impression could be improved. The Harbor Plan supports all reasonable efforts to rehabilitate and improve the Gateway area, including the rehabilitation of private facilities and the improvement of public access and public amenities along the Fairhaven Gateway waterfront.

The northern-most property in the Gateway area is the Seaport Marina and Holiday Hotel. While aspects of this property (i.e., the marina and the newer hotel building) are well kept, other portions of the property are in need of repair and rehabilitation (including the older hotel building on the property, the restaurant, and the waterfront amenities). This first Gateway area property in particular holds one of the greatest potential future improvement impacts to the Town's waterfront. Because of its location (the first property to be viewed while entering the Town), the existing and potential future use (as a marina and hotel), and the existing permit structure, this property has the potential for transformation, and is key to any improvement to the Fairhaven Gateway area. However, this property is privately

held, thus making any improvement contingent upon the plans and activities of the private entity that owns the property.

A new owner has recently purchased the Seaport Marina and Holiday Hotel property, thereby providing the Town with a here-to-fore unavailable opportunity to partner with the new owners to optimize the future potential of this site. Interviewed as part of this Harbor Plan update, the new owners of this property (the Congroup), who took over the property in October of 2008, has already begun rehabilitation of the buildings on the property. The developer's future plans for the site include rehabilitation and upgrading of shore-side and waterfront amenities, with the goal of creating a first class property that reflects the charm and maritime history of the Fairhaven waterfront. Central to the new owners' plans for increased opportunity at the site are the following elements:

- Rehabilitation of the onsite structures that are in need of repair;
- Rehabilitation of the seawall that fronts a portion of the property. This seawall is of wood beam construction, is in very poor conditions, and is failing along its entire length. Because of the poor condition of this seawall, the land adjacent to the seawall is at very real risk of collapse into the harbor;
- Dredging of the marina areas to allow better and expanded access for vessels. Dredging has not occurred on the property for decades, and the process of siltation has caused many of the marina pathways for navigation to have silted in, restricting their use or rendering them un-useable;
- Rehabilitation and enlargement of slips and dockage areas, including replacement and realignment and addition of piers and slips.

Additionally, the new owners are interested in incorporating several new initiatives into the development that would improve the ambiance of the Gateway waterfront; these include:

- Incorporation of a large-size to mega-yacht vessel section into the Marina, which would be visible from the Route 6 Bridge, whereby large yachts would be the first thing a visitor would view while entering the Town from Route 6;
- Incorporation of rowing amenities and facilities into the Marina, including a dock for launching rowing vessels, and racks for the storage of rowing sculls and other small rowing vessels;
- Incorporation of a pedestrian pathway and observation platform into the waterfront rehabilitation of the seawall at the property, encouraging public utilization of the waterfront.

Contingent upon the use and expansion of the Marina slips is a MA Chapter 91 License requirement to incorporate a 5-foot wide public access-way along the waterfront at the property edge, which was placed on the property during a previous owner's tenure, and has been inherited by the new owners. The combined effect of the new owners' initiatives and requirements, coupled with a renewed focus from the Town on this Gateway area, should act as a catalyst for the implementation of the Fairhaven Gateway improvement. The Town of Fairhaven will have the ability to incorporate input into the Marina and Hotel property through the various permit processes. Additionally, the Plan supports an active interchange of ideas and concepts between the Town and the new property owners in order to maximize the potential shared benefit to both the Marina and Hotel property, the Town, and the Harbor.

Along the waterfront just to the south of the Marina and Hotel property lies the Acushnet River Safe Boating Club (ARSBC). Because the site is used nearly exclusively by members of the Coast Guard Auxiliary and for flotilla operations, it has special significance to the safety and security of the Fairhaven waterfront and the Port and coastline in general. This property has a large marina and several waterfront structures related to boating and yachting, and currently represents one of the more appealing visual assets within the Gateway waterfront area. The Plan supports continuing the current use of this property, and the Plan supports relevant and necessary infrastructure maintenance necessary to maintain the vibrant nature of this facility, including dredging, bulkhead/shoreline maintenance, and pier rehabilitation and replacement as necessary to maintain the fleet and the vessel makeup of the marina.

South of the ARSBC site is Pease Park. This property, owned by the Town of Fairhaven, is used as the Pease Park Boat Ramp. This is a very active boat ramp facility used by both residents of Fairhaven and visitors for the launching of private watercraft. The boat ramp itself was renovated and dredged in 2004-2006. The pier used for temporary vessel tie-up is in poor condition and is in need of attention. Additional dredging to enlarge a portion of the southern basin surrounding the boat ramp began in 2009, and additional dredging to deepen the basin surrounding the boat ramp to the north is also necessary in the future to allow the facility to reach its full potential.

The incorporation (through Ch 91 License requirements) of a public walkway along the waterfront at the Seaport Marina and Holiday Hotel property would be the first step in creating a public access corridor along or in close proximity to much of the water's edge through the entire Fairhaven Gateway area. Such a corridor would begin at the Route 6 Bridge and continue to the Pease Park property, thereby opening up the Gateway waterfront for public enjoyment along this section of the

Harbor. Since much of the land involved in this area is privately held, it will be important for the Town to actively work with property owners as these sites are developed or further altered in the future.

Main and Green Streets

Streetscape improvements will be undertaken to Main and Green Streets to enhance their attractiveness as community gateways connecting from Route 6 to the downtown area. Improvements will include tree planting, lighting, and pedestrian amenities such as benches. Improvements to these streets will be funded through federal NEXTEA, Chapter 90 and Community Development Block Grant funds.

Middle Street

Enhancements to Middle Street waterfront gateway are described in section 7.3.5.2.

Waterfront Access/Downtown Access/Streetscape Study

A waterfront access/streetscape study is needed to assist the town in evaluating the economic and physical implications of changes in waterfront access and development patterns. This study should establish a designated route for providing access to the DPA along Water Street. The town should seek funding assistance to evaluate these important issues.

Potential for Historic District Designation

The central areas of Fairhaven outside the Designated Port Area have the potential to be listed as a district on the National Register of Historic Places. This designation would place no restrictions on individual property owners, but would bring the town the benefits of historic district status in terms of recognition and offer owners potential tax benefits associated with undertaking changes to buildings within the area. The Plan supports consideration of National Register listing.

7.3.5.2 RECREATIONAL WATERFRONT

The Plan supports future development that establishes the area as a cohesive district for commercial and recreationally oriented water-dependent uses and supporting commercial activities and amenities. Specific initiatives or potentials include:

Middle Street

Streetscape improvements will be undertaken along Middle Street to enhance the attractiveness of the town's principal commercially oriented waterfront gateway street and stimulate appropriate tourism-oriented development and waterfront investment. These improvements will enhance the area and create the sense of a cohesive waterfront district combining marinas and commercial tourism-oriented services, and supporting commercial uses, as opposed to a number of isolated and unrelated uses. Enhancements would include tree planting, aesthetically pleasing lighting, and other pedestrian amenities.

Pease Park Boat Ramp

The Pease Park boat ramp will be substantially improved with the addition of a floating dock providing a central landing for a cross-harbor water taxi, transient berthing for recreational vessels, and ramp improvements to support Duck Tour use. The ramp will also continue to provide public water access for recreational use.

Mooring Field

The Town of Fairhaven will establish a mooring field to the north of Crow Island. The Town of Fairhaven, under the auspices of the Harbormaster and the Marine Resources Department, has developed a mooring area plan. Under this plan, the town would install moorings in this area and rent moorings on an annual basis. To ensure safety, careful review of other vessel movements within this area will be undertaken prior to finalizing the design of this mooring area. The Plan does not mandate exclusive municipal ownership of any mooring within Fairhaven.

Charter/Excursion Vessel Center/Berthing Area

The Plan supports development of a central berthing area for commercial charter and excursion vessels within the Fairhaven Central Waterfront. Several potential locations exist, all situated on private property. The Plan does not designate one particular site for this facility. However, to provide maximum benefits to the community, such a facility should be situated in a prominent location, adjacent to commercial and recreational uses, and the downtown area. The best location for such a facility would be the northern face of the Linberg Marine property, facing the Pease Park boat ramp.

This location combines visibility, compatibility with surrounding uses, and adjacency to the downtown area. However, should the owners of the facility not seek to advance such an opportunity, other central waterfront sites need to be considered.

Linberg Marine

This site currently forms the transition between the primarily recreational uses along Middle Street between the Pease Park Boat Ramp and Route 6, and the primarily marine industrial uses that extend from the site along the waterfront into the Designated Port Area. The existing marine repair business in this location represents an acceptable use of the property though landscape screening and streetscape improvements are desirable to enhance the attractiveness of this gateway to the center. As noted previously, the Plan is supportive of reuse of a portion of this property as a center for excursion and charter vessels on the Fairhaven side of the harbor. Such a use would be compatible with continued use of the balance of the property for the current marine service and vessel repair business. Other acceptable future redevelopment opportunities supported by the Plan include commercial water-dependent uses such as marina development in association with a hotel or other commercial uses. The Plan does not support residential reuse of this property. The property could also be successfully redeveloped in conjunction with other adjacent properties such as the Park Motors property.

Park Motors

Future redevelopment of this former auto-dealership site has the potential to contribute significantly to the goals of the Plan within this area. Though this one-acre property does not have direct waterfront access, it can contribute directly to the implementation of the Plan by incorporating ground floor facilities of public accommodation and upper floor multiunit residential use that can all help activate

the nearby waterfront. Its location at the southern end of the proposed waterfront gateway area is ideal for this purpose. This site is located on tidelands and though separated by a public way from the water is largely situated within 250 feet of the water's edge and is therefore subject to Chapter 91 jurisdiction, substantially enhancing opportunities for public involvement in any site redevelopment activities. Mixed use development incorporating residences combined with some ground floor commercial/retail appears to be an acceptable use of the property. There has been a special permit approved for a 30-unit condominium complex on this site and it is zoned for mixed use.

7.3.5.3 DPA

The DPA will continue to serve as the heart of the community's marine industrial waterfront with a strong commitment to preserving and strengthening existing marine industrial businesses. Where possible, public access and compatible supporting commercial uses may be incorporated as allowed under Chapter 91 regulations governing tidelands within Designated Port Areas. Any commercial or industrial supporting uses will be concentrated along Water Street away from the water's edge.

Union Wharf

Repairs to the wharf's fendering system were completed in 1999 with funding from the Seaport Bond Bill. The town is also evaluating potential pier enhancements, including finger piers to add to the capacity of the wharf to provide berthing space for smaller fishing vessels. Additionally, the Plan supports the concept of utilizing a Waterfront Development Shoreline Facility (WDSF) to augment the existing filled pier structure. This concept would involve the enlarging of Union Wharf by a marginal amount in order to allow for the installation of a new sheeted retaining wall around the perimeter of the Wharf, filled in with clean fill from the construction of CAD Cells (used as backfill behind the bulkhead wall). This would allow for the beneficial re-use of CAD Cell material within the Port, thereby benefitting both the navigational dredge projects and the Union Wharf rehabilitation project.

A more comprehensive discussion of the plans for redeveloping Union Wharf are discussed in Chapter 4 (Section 4.5 of this Harbor Plan).

Fairhaven Shipyard (formerly Norlantic)

In late 1998, the owners of this facility closed their business. This property was purchased by D.L Kelley in 2000 and then by Fairhaven Shipyard as part of their purchase of D..L. Kelley in 2008. Desirable reuse options for the property include

continued use of the facility for marine services/vessel repair business, expansion space for other similar neighboring businesses within the Designated Port Area, or another compatible use providing support for other harbor activities and providing significant employment opportunities on the waterfront. Other uses that might be incorporated within the property include a center for excursion and charter vessels if such a use is not advanced elsewhere in the Fairhaven Central Waterfront. A market and site development study is needed to identify the most advantageous reuse of this facility. The town should investigate the feasibility of undertaking such a study in cooperation with the property owner and MassDevelopment.

Steam Ship Authority (formerly Hathaway Braley)

This property is located partially inside the Designated Port Area. Parts of the property located outside of the DPA terminate the Middle Street corridor. This part of the property has excellent views of the Hurricane Barrier and the harbor entrance. If this portion of the property were to be redeveloped for commercial use, careful consideration should be given to opening up this view from public streets and providing public access to the water's edge.

Expansion of Fishing Boat Berthing

The Plan is supportive of expansion of fishing vessel berthing on the Fairhaven side of the harbor, potentially including the Steamship Authority, Fairhaven Shipyard North, or other properties within the DPA. The Plan supports amendments to the State Harbor Line and the Federal Channel/Anchorage Line to enable such an expansion to take place, if further planning analysis confirms it will not result in a significant interference to navigation.

7.3.6. FAIRHAVEN WATERFRONT NORTH AND SOUTH

Planning Goals: Both of these areas will continue to be almost exclusively residential in character with complementary open spaces and a limited numbers of water related uses. Fairhaven South includes waterfront residential properties along Fort Street, the Fairhaven Shipyard, and important regional open spaces at the Fort Phoenix State Beach. This area is mature and largely fully developed with limited opportunities for change. Fairhaven North is also primarily residential in character with only Cozy Cove Marina and Moby Dick Marina interrupting the pattern of waterfront residential use. Marsh Island will be acquired and established as a major waterfront public space to enhance public water access and serve as an amenity for surrounding neighborhoods. Mooring fields will be developed to the North of

Pope's Island adjacent to Cozy Cove Marina. Other substantial changes in this area are not advocated by the Plan.

7.3.6.1 MARSH ISLAND

Marsh Island will be acquired and established as the largest area of public parkland within the inner harbor, substantially expanding public water access within the inner harbor and contributing to enhancing the harbor's natural environment. Marsh Island is the largest undeveloped land area around the inner harbor (20 acres) and is surrounded by shallow waters. Its use as open space will enhance the amenity of surrounding neighborhoods and the harbor as a whole. A dock for launching small boats, canoes, and kayaks will be incorporated to provide a launching point for exploring the harbor and the river. This location may also be used for access to mooring fields located to the north of the New Bedford-Fairhaven Bridge. Marsh Island Park would be accessed from two locations, from River Avenue and Taber Street. The property currently includes radio station antennae that will need to be relocated.

Potential funding sources for acquisition and enhancement of the island include Harbor Restoration Funds established to support restoration of the harbor's natural resources and amenities following harbor cleanup. Additional assessment of Marsh Island in terms of access and design will be undertaken in the Harbor Open Space study that has been funded by the New Bedford Harbor Trustees Council.

7.3.6.2 MOORING AREA EXPANSION

The Town of Fairhaven, under the auspices of the Harbormaster and the Marine Resources Department, has developed a mooring area plan for the area north of the New Bedford-Fairhaven Bridge. Under this plan, the town would install moorings in this area and rent moorings on an annual basis. These moorings could be accessed from multiple areas including existing marinas and public docks. The Plan does not mandate exclusive municipal ownership of any mooring within Fairhaven.

Some of these moorings may be placed in areas where CAD cells have been constructed, filled, and capped. The plan supports pilot testing of such mooring placement to ensure that moorings will not damage the CAD cell cap. Preliminary modeling conducted by U.S. Army Corps of Engineers for USEPA has indicated that moorings should not penetrate the lower 1-foot of the cap material, where some diffusion of CAD material could accumulate.

7.3.7 UPPER HARBOR

The New Bedford Crew Course represents a heretofore unimagined amenity that will create both a wonderful resource for the community and will also have a positive financial impact to the City (and the Town) via tourism and out-of-town participation. The nearly mile long stretch of the Acushnet River has been called one of the best potential crew courses on the east coast. The nearly straight long run of the Acushnet River between the Wood Street Bridge and the Coggeshall Street Bridge (as opposed to other venues where river meanders dictate the form of the course), will allow for the construction of a nearly straight international crew course. This fact, coupled with the calmness of the water, the width of the watercourse, and the proximity to facilities, has some experts indicating that this course could become one of the best on the coast. It is anticipated that rowers rowing on the New Bedford course could turn in some of the fastest times in the sport, as the straightness of the course assists by shaving precious seconds off of rowers' times.

The infrastructure required to support a crew course in the City will need to be constructed. The elements include a Boat House with storage racks for the sculls, and a pier or dock for the launching of sculls and other boats that support the sport. The course itself needs to be dredged to a depth that allows for the safe passage of rowers in typical formation. Additionally, viewing areas that will allow fans of the sport to view the rowers from the shore will need to be constructed. It is the City's wish that a Harbor walkway be created from the Coggeshall Street Bridge to the Wood Street Bridge. Such a walkway would provide an excellent opportunity for fans of the sport of rowing to have access to the water-sheet for the purpose of observing rowing activities. The Boathouse and docks would be operated as a community boating center, would promote public boating interests, and would also be open to other public and private boating interests in the City and Town.

The Plan supports the initiative by the City of New Bedford and the HDC to create a world-class rowing course and boathouse within the Upper Harbor (the area of the Harbor north of the Coggeshall Street Bridge). The full implementation of this project will require the completion of EPA's Superfund dredging within the Upper Harbor and additional dredging by the City of New Bedford in order to ensure the 5 feet of water required for completion of the course. The boathouse is currently planned for the end of Sawyer Street, adjacent to the current location of the EPA de-sanding facility. The course will incorporate the planned boardwalk within the upper-harbor as a viewing area for boat races. Until the EPA is complete with their work, the Plan supports shifting the proposed course to the south, in order to allow longer races to occur. In this scenario, boaters would row under the Coggeshall Street and Route 195 bridges.

7.3.8 PROGRAMS AND FOLLOW-ON STUDIES

7.3.8.1 HARBOR LINE

The Harbor Line denoting the administrative boundary representing the maximum extents of shoreline infrastructure (such as piers, wharves, pilings, floats, etc.) has been modified several times in the past ten years. Updates have concentrated on the small segments of the Line that were actually administratively moved. The recent changes have led to some confusion among Harbor users as to the actual current location of the line. In addition, several of the recommended or allowable projects noted in this Plan update will require that the Harbor Line be modified again. In order to present a consistent and verifiable Harbor Line throughout the entire Port, it is recommended that a full update of the Harbor Line be commissioned upon the completion and acceptance of this Harbor Plan update. The revised line would take into account the requirements of the projects promoted via this plan, and would provide the necessary room and vision to allow for the completion the projects noted in this Plan without the need for another Harbor Line amendment.

7.3.8.2 DPA

The Designated Port Area (DPA) Boundary for the Port of New Bedford/Fairhaven has remained unchanged through the period of the previous Harbor Plan. However, a review of the uses and needs of various portions of the existing Port have brought to light the possible need for some slight modifications to the DPA boundary in order to accommodate some new development within the Port. The most significant of these is the de-designation of a portion of the New Bedford side of the Port from south of the (proposed extension of the) South Terminal to the Hurricane Dike. This area is too shallow to accommodate significant ocean-going commercial vessels, and the land-side infrastructure is insufficient to accommodate significant marine commercial/industrial uses. It is however ideally suited for development into a recreational vessel marina and mooring field. With close access to the existing City-owned Gifford Street boat ramp, public vessel launching facilities are also in close proximity. Additional minor modifications to the DPA Boundary may also be warranted to accommodate future activities and facilities envisioned in this Plan. If a modification is needed, the New Bedford Harbor Development Commission and/or the Town of Fairhaven will determine whether to initiate a specific request to the State for any potential modifications to the DPA Boundary.

During the collection of the data supporting this Plan update, numerous complaints concerning the existing Eligibility Credit Program were noted. As a result, it was the opinion of the Harbor Plan Committee that the Eligibility Credit Program should be

removed from the Plan, allowing the normal regulatory processes (Chapter 91 and Zoning) associated with waterfront property use to once again apply. The State is in the process of evaluating some adjustments to the DPA restrictions. The City should participate in this process.

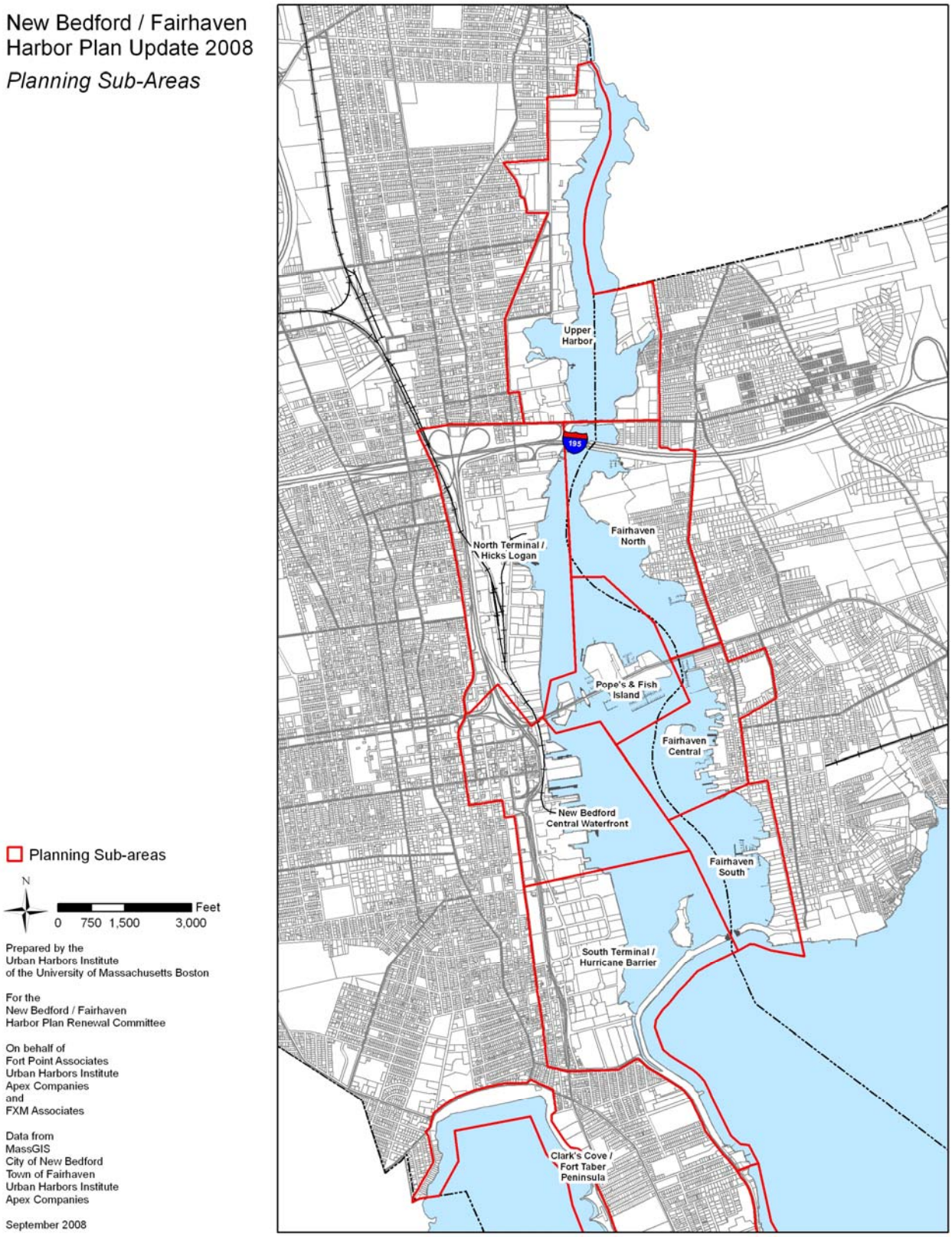
7.3.8.3 WATERFRONT PUBLIC ACCESS PLAN

Public access planning is ongoing within the Port and surrounding Harbor lands. The Plan supports a comprehensive effort to develop a Public Access Plan for the Harbor. The Plan would incorporate all of the existing facilities, as well as those activities for improving access that are planned. The Plan would incorporate elements such as a Harbor Walk and Bike Path with planned recreational facility upgrades and other public areas such as parks and public access-ways.

7.3.8.4 COMPREHENSIVE GREEN PORTS STRATEGY

See Section 6.2.11

Figure 7-1 Planning Sub-Areas



8.0 IMPLEMENTATION

The implementation of recommendations supported by this Plan will involve the active participation of City and Town Government, the management authorities of the Harbor, State and Federal partners, State and Federal representatives, regulatory authorities, public servants, business interests, labor, community organizations, small businesses to large industry, and most importantly, the people of the region. The following paragraphs describe the Plan's implementation strategy, including a time horizon for each major element including: *short-term* (immediate to 2-year) implementation; *medium-term* (2-year to 5-year) implementation; and *long-term* (5-year to 10-year or beyond) implementation. Additionally, some Plan elements noted herein are *on-going*, meaning that they are currently occurring and will continue for the foreseeable future.

8.1 PROCESS

Implementation of the Plan will involve the planning, scoping, estimating and executing of individual elements and will generally follow a typical three-phase project approach:

Phase 1: Plan - identify the problem/issue, evaluate the alternatives, estimate the costs and timing for implementation, and identify potential funding options;

Phase 2: Organize – determine the project scope, schedule and budget the activity, and obtain the resources necessary to complete implementation (i.e. funds to complete the project and staff and/or contractor support to manage implementation); and

Phase 3: Implement – conduct the necessary studies and evaluations, complete the infrastructure design or details of the new policy/process, obtain all necessary permits and approvals, complete construction, and promulgate policy and/or employ new policy/process.

8.2 OVERSIGHT

Responsibility for implementation of significant portions of the Harbor Plan in New Bedford falls to the New Bedford Harbor Development Commission (HDC) and in Fairhaven to the Planning Department and Harbormaster, as appropriate. Joint projects that directly involve both the City and the Town will be conducted under Memorandums of Understanding or Memorandums of Agreement if shared

resources or legal/political issues are involved that require binding participation. Cooperation between the communities surrounding the Harbor has been a hallmark of the progress that has been made in the Harbor to date, and the Plan supports continued cooperation between the parties in the implementation of Plan elements that mutual benefit the two communities.

The HDC possesses the legislative authority to enable it to serve as the lead entity in implementing the Harbor Plan within the City of New Bedford for Chapter 91 licensing purposes under 310 CMR 9.34 (2)(a) 1. The HDC also has bonding authority which can prove very useful in plan implementation. (More about the HDC governing power is in Section 5.2 of this Plan.) For Fairhaven, coordination of implementation efforts largely falls to the Board of Selectman with the direct support of the Planning Director and Harbormaster. However, neither the HDC nor the Fairhaven administration have the dedicated funding or staff resources to enable it to significantly expand its role in harbor management or development. In the immediate term, resources are needed to enable the HDC and Fairhaven to either expand their staff or obtain contract support for implementation efforts.

The HDC and Fairhaven Planning/Harbormaster implementation management teams may choose to obtain assistance from experts in implementing particular Plan elements. This staff support is often available from federal, state and local municipal agencies, from non-governmental organizations (NGO's), from local businesses or business organizations, and/or from the community. For some Plan elements, professional assistance will most likely be needed from consultants, consultant groups, engineering firms, and/or construction contractors with specialized experience and expertise in these fields. Some contract support may also be needed to assist the HDC or Town staffs in the general management of Plan implementation initiatives. Master Service Agreements (MSAs) may be helpful in obtaining on-going or repeatable support with various entities to ensure that implementation of the Harbor Plan's key elements moves forward in a timely fashion.

Public participation and outreach is an important part of the implementation process. Focus groups, community planning sessions, public and committee meetings have historically been an important part of the process for both the City and Town, and the Plan supports continued emphasis on these important activities in all phases of implementation. Effectively capturing and incorporating the ideas and decisions made at these public sessions has traditionally proven invaluable and fosters cooperation and support from those most impacted by the Plan's initiatives. Public input should be recorded, organized, disseminated, and incorporated into the various project phases as a regular part of the Implementation management process.

The Plan calls for creation of a Harbor Alliance that will promote improved coordination between the HDC or City of New Bedford and the Town of Fairhaven, both during plan implementation and for consistency in the port operations across the entire harbor.

Task Forces

The work of the Harbor Master Plan Committee will be continued through a series of task forces that will be established to provide input to HDC Commissioners on key areas of harbor development. The following task forces existed or should be considered:

- Fishing Industry Task Force
- Seafood Processing/Wholesale Task Force
- Freight Task Force
- North Harbor Development Task Force
- Central Waterfront Task Force
- Recreational/Community Boating Task Force
- Dredging Task Force.

State Pier Management

Future management authority of the State Pier is a pending issue that will need attention. The Department of Conservation and Recreation (DCR) currently manages the Pier but the City and HDC have proposed other management alternatives that would in their view allow needed flexibility to implement their priorities for this facility. Local control over State Pier will enable the HDC to have a more direct role in pier revitalization and redevelopment efforts.

Until management changes are made, the City of New Bedford/HDC is working cooperatively with DCR to enable the City to play an expanded and active role in the redevelopment and marketing of the New Bedford State Pier. This effort will build on the already successful cooperation that has led to successful support of both cruise ship and ferry operations.

Oversight of the implementation of the various Plan elements ranges from simple monitoring by an individual or department, to governance by official committees and boards. Table 8.1 below presents various Plan elements and the stakeholders that are involved in the oversight of the implementation of those Plan elements.

Table 8.1 Matrix of Plan Implementation Oversight and Authority

Plan Element	Example	Primary Responsible Stakeholder or Authority	Additional Principal Stakeholders or Vested/Interested Parties	Potential Funding Mechanisms
Infrastructure				
In-water Infrastructure:	Federal Channels, Turning Basins, Anchorages	U.S Army Corps of Engineers	New Bedford HDC; Fairhaven Planning Board; Harbormasters; U.S. Coast Guard; Northeast Marine Pilots; SER Committee; Commonwealth of MA	Seaport Council Grants; EOT Grants, Economic Development Grants, US Army Corps of Engineers
In-water Infrastructure	Fairways, Driveways, Slips	New Bedford HDC; Fairhaven Planning; Harbormasters; Private Owners	SER Committee; U.S. Coast Guard; Northeast Marine Pilots; Commonwealth of MA; U.S. Army Corps of Engineers	Seaport Council Grants; EOT Grants, Economic Development Grants
Adjacent-to-Infrastructure	Bulkheads, Piers, Wharves	New Bedford HDC; Fairhaven Planning; Harbormasters; Private Owners	Northeast Marine Pilots; Commonwealth of MA; U.S. Army Corps of Engineers; SER Committee; U.S. Coast Guard	Seaport Council Grants; EOT Grants, Economic Development Grants, DOT Grants.
Adjacent-to or In-water Infrastructure	Sewers, Pipelines, Cables, Pipes	New Bedford DPI; Fairhaven DPW; Private Owners	New Bedford HDC; Fairhaven Planning; Harbormasters; U.S. Army Corps of Engineers; SER Committee; U.S. Coast Guard	USEPA Grants, Seaport Grants, DPI Bonds, EOT Grants.
Adjacent-to-Infrastructure	Roads, Bridges	State/Federal DOT; New Bedford DPI; Fairhaven DPW	New Bedford HDC; Fairhaven Planning; Harbormasters;	MassHighway, DOT, Seaport Council, Bond Release.

			U.S. Army Corps of Engineers; SER Committee	
Adjacent-to-Infrastructure	Rail Line(s)	CSX, New Bedford HDC, New Bedford DPI	New Bedford HDC; U.S. EPA; SER Committee	CSX, DOT Grants, EOT Grants, Economic Development Grants
Resource				
Tidal Waters	Below the High Tide Line	Commonwealth of MA	New Bedford HDC; Fairhaven Planning; Harbormasters; U.S. Army Corps of Engineers; SER Committee; Resource Agencies; Conservation Commissions	
Wetlands and Inter-tidal	Wetland and Inter-tidal Areas	Conservation Commissions	SER Committee; Resource Agencies; New Bedford HDC; Fairhaven Planning; Harbormasters; U.S. Army Corps of Engineers	
Fisheries	Fisheries and Shellfish	Resource Agencies; Shellfish Commissions	SER Committee; New Bedford HDC; Fairhaven Planning; Harbormasters; U.S. Army Corps of Engineers; Conservation Commissions	
Acushnet River to Buzzards Bay Interests	Environmental Interests and Public Health and Safety	Coalition for Buzzards Bay; Hands Across the River	SER Committee; New Bedford HDC; Fairhaven Planning; Harbormasters; U.S. Army Corps of Engineers;	

			Conservation Commissions; Resource Agencies; Shellfish Commissions	
Superfund Cleanup	Environmental Cleanup of Superfund Contaminants	U.S EPA, U.S. Army Corps of Engineers	SER Committee; New Bedford HDC; Fairhaven Planning; Harbormasters; Conservation Commissions; New Bedford Environment Dept.	
SER Cleanup	Environmental Cleanup of Non-Superfund Contaminants	SER Committee; New Bedford HDC; Fairhaven Planning	Harbormasters; Conservation Commissions; New Bedford Environment Dept.	
Emergencies, Spills	Spills, Releases	U.S. Coast Guard; U.S. EPA, MA DEP	SER Committee; New Bedford HDC; Fairhaven Planning; Harbormasters; Conservation Commissions; New Bedford Environment Dept.	
Community				
Ferries, Public Transport	Ferries, Shuttles, Water-Taxis	Private Ferry and Water Taxi Cos; Steamship Authority; New Bedford HDC, Fairhaven Planning/Harbormaster	SER Committee; New Bedford HDC; Fairhaven Planning; Harbormasters	Seaport Council Grants; EOT Grants, Economic Development Grants.
Sailing, Marians	Sailing Clubs, Recreational Boating	Community Boating; Private Marinas	New Bedford HDC; Fairhaven Planning; Harbormasters	Private Funding, Seaport Council Grants; EOT Grants, Economic Development Grants.
		New Bedford		Seaport

Rowing	Recreational and Competitive Rowing; Crew	Economic Development, New Bedford HDC	SER Committee; U.S. EPA	Council Grants; EOT Grants, Economic Development Grants, Not-for-Profit Organization Fundraising.
Security				
Harbor Security	General Harbor Security and Rules-of-the-Harbor	New Bedford and Fairhaven Harbormasters; Police Departments; U.S. Coast Guard; New Bedford HDC	Dept. of Homeland Security; State Police	Dept. of Homeland Security Grants, Seaport Council Grants; EOT Grants, Economic Development Grants.
Policing	Law Enforcement	Police Departments; Harbormasters	New Bedford HDC; Fairhaven Planning; U.S. Army Corps of Engineers;	Dept. of Homeland Security Grants, Seaport Council Grants; EOT Grants, Economic Development Grants, Coast Guard.
TWIC card	Transportation Workers Identity Program	Dept. of Homeland Security	Harbormasters; New Bedford HDC; Fairhaven Planning	Dept. of Homeland Security Grants,

8.3 PROPOSED ACTIONS

The following paragraphs describe specific lead responsibility, implementation timing, and possible funding sources for key projects and programs supported by this Harbor Plan.

8.3.1 DREDGING

Timeframe: On-Going, Present to Long Term
Project Leads: NBHDC and Fairhaven Planning

The navigational dredging program for New Bedford/Fairhaven Harbor is far reaching in both scope and size. Implementation of the program for the Harbor's navigational dredging requires the shared input of a number of stakeholders. A total of over 2 million cubicyards of navigational dredging is anticipated over the long term. The following paragraphs describe the implementation process for dredging promoted by the Plan.

As noted in Section 5.2, strategic planning at the federal, state and local levels led to the emergence of a unique program to address the clean-up of New Bedford / Fairhaven Harbor.

ROLES AND RESPONSIBLITIES

The EPA and MassDEP set the legal and regulatory framework for managing navigational dredging through legal agreements designating the MassDEP as the lead state agency with oversight authority and the HDC as the project manager.

LEGAL FRAMEWORK

Through a Memorandum of Agreement (MOA), the EPA and MassDEP agreed that for the New Bedford Harbor Superfund Site DEP would assume the State's "lead for supervising the Enhancement." The MOA "recognizes that the City of New Bedford and/or the HDC and the MassDEP will enter into a separate MOA to define roles and responsibilities of these parties for implementing and overseeing the Enhancement." The MOA between EPA and MassDEP contained the following:

- The City will "procure one or more contractors to conduct and complete the work and to retain an independent contractor to conduct daily oversight of the work and to assist the City in the management and oversight of the work."
- "MassDEP will supervise the work, but not be responsible for the funding, procurement or contract associated with the City's implementation of such work."
- The "Enhancement shall consist of all or any part of the navigational dredging projects...which will be implemented by the NBHDC and shall proceed as individual projects as funding becomes available."
- Clearly sets the "lead designations" with MassDEP as the lead agency for the Commonwealth to supervise and review the conduct of the enhancement

work and reinforces the EPA's role as the lead agency for overseeing the implementation of the remedial action.

- Tasks the US Army Corps of Engineers with coordinating enhancement work with the MassDEP.

The MOA between the NBHDC, the Town of Fairhaven and the Commonwealth (MassDEP) includes the following:

- Requires the NBHDC and the Town of Fairhaven to be "responsible for all aspects of implementing the SER, including the direct management of all fiscal, administrative, and technical matters and ensuring compliance with Performance Standards and all other applicable statutes, regulations and requirements."
- Establishes that MassDEP as the lead agency for the Commonwealth to oversee and review the conduct of the Enhancement work including regulatory and on-site construction oversight.

Summary of Legal Framework: **The** EPA has the overarching oversight for the Enhancement initiative pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). In MOA with the EPA, the MassDEP assumes the role the lead state agency for the Enhancement via an MOA. In MOA with the MassDEP, the HDC assumes the designation as the party responsible for the implementation of the SER, responsibilities to include funding, procurement, and the management of contractors, the overall management of the projects and the related, fiscal, administrative and technical aspects. Note that the SER process will end when the upper and lower harbor cleanup, as required in the 1998 ROD, is complete.

PROJECT PROCESS

The lead parties (HDC, Town of Fairhaven, MassDEP, and EPA) have adopted an open and transparent process for implementing the Enhancement, thereby creating the opportunity for those interested entities to provide input into the Harbor Dredging program, including comment on engineering, dredging, and construction. As the State's oversight entity, the MassDEP utilizes the SER working group to bring interested parties into the SER process. This group was formed by NOAA under the federal Portfields program and members include EPA, US Army Corps, NOAA, MassDEP, CZM, DMF, Seaport Council, DCR, New Bedford Conservation Commission, the City of New Bedford, the Town of Fairhaven, and local industry and advocacy group partners.

Project materials, regulatory issues, and strategies are all vetted at the SER working group meetings, held approximately monthly and facilitated by the MassDEP. After each meeting, the retained project engineers create deliverables that are forwarded to MassDEP for distribution to the SER working group. Depending on the phase of the project, these deliverables include conceptual design, final design, bid documents, etc. While a typical design process will include a comprehensive permitting effort and a design train of submittals at about the 25%, 50%, and 90% stages, the SER/Superfund process adopted for the dredging in New Bedford Harbor contains expedited regulatory review, instead of permitting. Under the SER, the work process is vetted at monthly meetings with the stakeholders, culminating in a set of draft designs for the committee review. Committee comments are received and incorporated into a final design that is advertised for competitive bid by the HDC. The SER process has shortened the normal 12-18 month process of permitting and design to about a 3-6 month process. This translates to significant savings in both time and money and provides the mechanics for an efficient and streamlined approach to the Harbor cleanup and dredge projects.

Summary of Project Process: Comments and reviews are made during SER working group meetings and integrated into the project with MassDEP and EPA oversight. Under the MOA with the EPA, MassDEP assumes the responsibility of state approval authority for each SER project and coordinates the oversight and reviews with the EPA, USACE and the Regulatory Agencies.

Dredge Areas: All areas dredged are considered by the Commonwealth to fall under State jurisdiction (since they are under water) and are thus not considered private properties. All work on piers, wharves, and docks require Chapter 91 license(s) as does all work on filled tidelands, unless adequately regulated under another regulatory process (i.e. Superfund or SER processes). All current (Phase III) dredge projects have been vetted through and approved by the SER working group over the course of the last 4 years.

Project Financing: As directed in the MOA with the MassDEP, the Harbor Development Commission and/or the Town of Fairhaven Planning Department manages the financing of the project; Funds come from state grants and local matches.

- State Funds: The NBHDC and/or Town of Fairhaven receive state grants through the Governor's Seaport Council and their project vote. The Department of Conservation and Recreation administers funds to the City through a standard contract. The seaport bond bill account for DPA dredging requires no match for dredging. The new environmental bond bill for seaport projects also does not require a local match.

- Private Funds: The MOA between the MassDEP and the EPA allows for the NBHDC/Fairhaven to accept any non-CERCLA match. The NBHDC and Town of Fairhaven have requested private funds to leverage the state monies and make the project more palatable for Seaport Council support. Private industry has agreed to contribute a 20% match for the specific areas being dredged abutting their businesses. Private funds cannot be secured until the project goes to bid and costs are understood. The HDC will go into MOAs with the private industry to acquire private monies for the dredge project. This demonstrates an excellent partnership between the communities and private business to move critical projects forward.
- Funding Allocation: State and private funds support the engineering and construction of the dredge project. The NBHDC and Town of Fairhaven reserve the right to draw a percentage off the project cost to support administration of the project. The percentage allocated for project administration is decided by the Town of Fairhaven and the NBHDC through a MOA. It is expected to total less than 5% of the total project cost. Funds are not coming from the state share. The NBHDC and Town of Fairhaven are also considering imposing a fee per cubic yard disposal to establish a fund for CAD management to include the monitoring of the Harbor CAD cells and potential construction needs.

Summary of Project Financing: The NBHDC and Fairhaven Planning assume the responsibility of project funding and fiscal matters in the MOA with the MassDEP. The NBHDC and Fairhaven Planning, as the fiscal agents, are responsible over how the local funds are leveraged and/or invested in the project.

8.3.2 RT. 6 BRIDGE

Timeframe: Long-Term
Project Lead: New Bedford Economic Development, NBHDC, Fairhaven Planning, MassHighway

Timing: Although considered a high priority, either bridge replacement or realignment could easily take a decade or more. It is estimated that it could take several years to determine the appropriate bridge format and develop a concept plan. While technically the design and engineering phase of the project could be completed over the next five years, a project of this magnitude will require significant funding, the availability of which will likely determine the actual project time horizon.

Funding: This project will require blended funding from a variety of sources. State Highway funds are anticipated to represent the core of State funding, additional

State bonded funds may be required. The balance of the funding may be made up of locally bonded funds and grant monies. As noted above, an assessment of the funding sources will be required as part of the conceptual design of the bridge.

8.3.3 MOORING FIELDS IN CAD CELL AREA

Time Frame: Medium to Long-Term (some limited Short-Term use possible)
Project Leads: New Bedford Harbor Development Commission,
Fairhaven Planning Department and Harbormaster

Implementation: The New Bedford HDC and the Fairhaven Planning Department in concert with the Harbormasters of the City and Town will oversee the development and management of any expansion of the mooring field to the north of Popes Island. Ownership of the mooring rights, and the fees associated with those rights will be divided in accordance with the position of moorings relative to the City/Town boundary. As the long term presence of moorings in the CAD cell areas will need to be coordinated with the management of the CAD cells themselves, a Memorandum of Understanding (MOU) will need to be drafted between the City and the Town concerning the use of the CAD areas for moorings and the interface between mooring use and CAD cell management and maintenance. The use of CAD cell area for mooring field will need discussion with federal, state and municipal regulatory. During CAD cell design and construction, full consideration should be given by the SER committee of how best to maximize use of the CAD cell area (particularly just north of Popes Island) as a mooring field for both recreational and commercial vessels – both in the long-term and short-term.

Timing: The CAD cell construction process in the Harbor is ongoing. At present, none of the CAD cells in the Harbor have been fully capped, though the cell known as the "Borrow Pit CAD Cell" is beginning to be capped by the Phase III Dredge Project team. Once it is determined that the capping technique initially applied to the cell was fully successful, the Harbor bottom within the capped portion of the CAD cell may become useable again for moorings. It is anticipated that the earliest that such determination could be made would be the Spring of 2011, thus it is possible that some limited use of that CAD cell space may be possible by the summer of 2011. As the first cell to be available for mooring use is in New Bedford waters, the development of an MOU concerning moorings in CAD cell areas is not immediately necessary. However, the earlier that such an agreement is drafted, the easier the implementation of such initiative will be. Additional CAD space will become available as CAD cells are capped. The next round of capping is expected to occur during the construction of the next CAD cell, which could begin in 2010. It is anticipated that CAD cell construction is a long-term activity for the Harbor, and

that filling and capping of CAD cells will occur over approximately the next ten years and out into the foreseeable future.

Funding: At present, the construction of the CAD cells in the Harbor is accomplished with blended funding from private sources, State Seaport Council grant funding, and local matches. Future CAD cell construction will involve additional funding sources, including federal funding and additional private sources. The placement of moorings in CAD cell areas will involve blended funding as well. City and Town moorings will be placed and maintained using mooring fee and usage monies, and private moorings will involve private monies for placement and maintenance while City and Town mooring fees and charges will cover management of the mooring field.

8.3.4 FAIRHAVEN GATEWAY

Timeframe: Short-Term to Medium-Term
Project Leads: Fairhaven Planning; Town of Fairhaven; Individual Property Owners

Implementation: Rehabilitation and improvements to the Gateway properties will be largely conducted and managed by the individual property owners. Town of Fairhaven will have the ability to weigh in with requirements and desires through the permitting processes. Through inclusion of this discussion of the Fairhaven Gateway into this Plan, the Town of Fairhaven is signaling particular interest in these properties. Fairhaven Planning will have input via local, state, and federal permitting processes when these properties undertake permitted activities. Additionally, this Plan supports direct and open dialogue between the private owners and the Town of Fairhaven on issues affecting the Gateway area. For improvements to Town-owned land and the water-sheet adjacent to Town-owned land, the Fairhaven Planning Department will manage activities.

Timing: The new owner of the Seaport Marina and Holiday Hotel property has already begun the process of rehabilitation of this northern-most property in the Gateway area. That owner plans on having renovations complete within 5 years or less. Additional renovations and or amenities at the other Gateway properties are expected to be undertaken over the next 5 years.

Funding: Renovations and improvements to the land-side portions of the private Gateway properties will be the responsibility of the property owner. Grants, loans, and other funding sources may be available from various sources, with the responsibility for identifying and utilizing such funding mechanisms lying with the private property owners. Water-sheet improvements (such as dredging) may take advantage of blended funding from the private owners with State funding if certain

conditions are met, including: water dependent use, commercial use, public safety, and/or the public good. Funding for Town-owned infrastructure improvements in the Gateway area is expected to be obtained from State funding sources, including the Seaport Advisory Council funding source.

8.3.5 STATE PIER:

Time Frame: Ongoing-Long Term
Project Leads: New Bedford HDC; MA Department of Conservation and Recreation; New Bedford Economic Development

Implementation: The DCR, in concert with the City of New Bedford and the HDC and the NBEDC, will manage the planning, design, and construction aspects of future rehabilitation to the Pier and pier structures. It is anticipated that decisions related to the use of the Pier and the infrastructure elements to support those uses will be made cooperatively between the principal stakeholders: the MassDCR, local elected officials, NBHDC and NBEDC. A number of plans, studies, and/or reports have been produced related to changes at the State Pier. These are summarized in Appendix B. Recent proposals have been submitted seeking State and/or Federal funds for the upgrade of the State Pier Warehouse including the expanded capability for product cold storage. Several marine operators have expressed interest in the more robust use of this facility including Maritime International and, with proposed upgrades, the opportunity it will offer to significantly increase shipping activity in the Port.

Timing: The State Pier Rehabilitation program is ongoing and will continue to the long-term time horizon. As noted, planning, studies, and permitting are underway for several elements of the pier rehabilitation. Additionally, several improvements to the Pier have been made since the last Harbor Plan publication. Future rehabilitation construction is expected to be conducted in phases. Construction of the solid fill pier structure will likely occur in the one year to five year time horizon. Building reconfiguration will likely occur over the one year to ten year time horizon. As the Pier is such an integral part of the New Bedford waterfront, it is anticipated that the Pier will constantly be adjusting to the changing needs of the Port community, and therefore flexibility is being built into the Pier plans. As such, the Pier will have the ability to adjust to the demands of the local maritime industry of the time, and modifications to the Pier use and layout will continue for the foreseeable future within the context of the overall mission and plan for the Pier.

Funding: For a program of this magnitude, significant blending of funds will be required. Long term investment in the Pier is in the tens of millions of dollars. Funding sources include State grants and economic incentive loans, State and Local bonds, and Local matches, including blending of private monies. As the Pier is one

of the economic engines in the community, it is anticipated that the investment in infrastructure will pay significant dividends into the future, with the Pier expected to maintain long term solvency through the collection of rents, fees, and use charges.

8.3.6 FORMER POWER PLANT SITE

Time Frame: Medium-Long Term
Project Leads: NB Mayor's Office; NB Economic Development; NB HDC.

Implementation: A comprehensive review of the Site is planned by the Mayor's office, the EDC and the HDC. Several private entities exist at the Site, and ownership is fractional. As such, the Site planning also involves the private stakeholders that currently exist at the Site. The planning for the Site is on-going, and proposed developer initiatives for the Site are under constant review.

Timing: It is anticipated that the review of the Site potential will be completed in the next one to two years, and that a master plan for the Site will be produced. Once the Site use(s) has been established, and a developer or developers become involved, it is anticipated that construction efforts will occur over a five to ten year period. Water-sheet development is likely to be an early activity, and it is likely that revisions to the water-side area adjacent to the property could begin within the two-year time horizon. Dredging in front of the facility bulkheads, and in the driveways, slips and approaches to the property will be required for expanded water-sheet use, and it is anticipated that the property will be incorporated into Phase IV of the Harbor dredge program, which will likely occur in the 2010-2012 time frame.

Funding: Development costs for the upland portions of the property are expected to be covered by private investment. Economic Development, State, and Federal loans will also be available, but will be dependent upon the ultimate development that occurs at the Site. Because of the importance of the property to the well-being of the community, the City will have significant involvement in the planning for the Site. Funds for the City involvement, studies, reviews, etc. may come from Local and State development grants and from Economic Development funds. Funds for the water-side infrastructure rehabilitation at the property will be drawn from public and private sources, with funds appropriated by the Seaport Council coupled with private funds representing the local match requirement expected to cover the costs of dredging. Docks, piers, and floats will likely be developed using private resources with HDC oversight of the process to the extent allowable under the statutes.

8.3.7 CSOs AND STORMWATER

Time Frame: Ongoing-Long Term
Project Leads: NB DPI, Fairhaven DPW, USEPA, MADEP

Implementation: For the structures that are the responsibility of public entities, the City of New Bedford Department of Public Infrastructure (DPI) and the Fairhaven Department of Public Works will be the lead agencies for infrastructure improvements. Regulatory oversight will be provided by the USEPA, the MADEP, and the local Conservation Commission. For private structures, the owner/operator of the structure will be responsible for all infrastructure compliance with Federal, State, and Local regulation. Oversight to ensure compliance with the regulations will be provided by the USEPA and the MADEP. Additional regulation and oversight of private structures is promulgated by the Conservation Commissions of the City/Town. Rehabilitation to existing, or installation of new, stormwater conveyance and/or treatment systems must conform to the appropriate regulations. Systems must be installed in order to treat stormwater prior to its discharge into New Bedford Harbor. All stormwater management system structures must be operated, inspected and maintained in accordance with a site-specific Stormwater Operation and Maintenance Plan that must be developed by the system owner/operator.

Future upgrades and improvements to CSO's and/or stormwater infrastructure in New Bedford will be undertaken by the NBDPI with input from the New Bedford Environmental Coordinator and the New Bedford Conservation Commission. Because of the size and expense of each CSO/Stormwater project, significant involvement of other City and Town officials is anticipated. Repairs and upgrades in Fairhaven will be lead by the Fairhaven DPW, with input from the Selectman and Engineering Departments.

For aspects of the CSO and Stormwater issue that effect the Harbor, the New Bedford HDC, the Harbormasters of New Bedford and Fairhaven, and the Fairhaven Planning Department will be involved. These entities will review major changes to the infrastructure that might have an effect on the environment, water quality, and/or use of the water-sheet, and will provide comment and direction on plans.

Timing: The rehabilitation of CSO and Stormwater infrastructure is ongoing and long-term. Remaining significant changes to CSO infrastructure (separation of pipes) for both New Bedford and Fairhaven are by definition long-term activities (because of the significant cost of the projects). It is anticipated that the ongoing actions to upgrade stormwater and sewer infrastructure will continue for at least the next 10 years. In the shorter term (the next 1-3 years) the City of New Bedford plans on cleaning out and conducting maintenance on sewer structures that will improve the flow and decrease the incidence of CSO overflow events. Upgrade and installation of required stormwater systems on private properties in accordance with new

regulation is ongoing, and is expected to continue long-term. The regulations require that every new development and every significant modification to an existing development that may affect stormwater have a plan in place to ensure appropriate discharge of stormwater. Compliance with these regulations will require significant upgrades at many facilities, with the result being a long-term improvement in surface water quality with time.

Funding: Public funding for CSO and Stormwater infrastructure upgrades traditionally comes from City and Town resources. Bonding and budgeting (out of general funds) for these long-lead-time, large-dollar projects have in the past covered the expenses. Some grant monies have been identified and used, as have long term loan arrangements. It is expected that this form of funding will continue to provide a large proportion of the monies needed for these projects. In addition, an aggressive campaign to identify and obtain grant funds (including USEPA program grants and revolving loan funds) for the remaining CSO and Stormwater upgrades that the City and the Town need to complete is being pursued in both the City and Town. Funding for the private infrastructure upgrades and new installations that are planned will come from private sources, though those entities can also apply for some USEPA and revolving loan funds under certain circumstances.

8.3.8 BERTHING

Time Frame:	Ongoing-Long Term
Project Leads:	New Bedford HDC; Fairhaven Planning; Harbormasters

Implementation: As noted above, several initiatives are currently under way aimed at both temporary and long-term solutions. The New Bedford HDC, which administers berthing permits and owns a fair amount of the pier and wharf space along the waterfront, is taking the lead on the larger and more comprehensive initiatives. The Fairhaven Planning Department and the Fairhaven Harbormaster are also working on initiatives in Fairhaven aimed at alleviating the congestion. Chapter 5 (Watersheet Management Plan) offers more detail on both commercial and recreational vessel traffic in the Harbor and actions in place or needed to possible congestion resulting from future growth. Concerning berthing, additional initiatives that will need to be conducted include:

Piers and Wharves

- Continual review to the City and Town vessel docking and berthing plans with adjustments as needed for ever changing conditions that accompany the fishing and maritime trade industries;
- Rehabilitation and repair of existing piers and wharves to allow for better berthing geometries;
- Extensions of existing piers and wharfs to allow for more berthing at existing structures;
- Construction of new bulkheads, piers, and wharves in order to add berthing space; and
- Dredging around existing piers and wharves and any new piers and wharves that may get constructed in order to increase the size and number of vessels that can berth.

One additional change to the berthing and docking strategy for the Harbor that was not anticipated in earlier versions of the Plan is the encouragement of private marina and pier owners and operators to rent berthing and dockage space out to commercial vessels, particularly fishing vessels. Port personnel have signaled support for this type of private-but-in-the-public-good approach, encouraging developers with Marina plans to consider including either permanent or transient commercial vessel berthing. While this activity would, by necessity, be dictated by the type of docks and other infrastructure available, inclusion of even a relatively small number of commercial vessels into private piers and wharves would help with the berthing congestion problem.

Currently, docking and berthing activities within the Port are monitored by the Dock Superintendant (for the HDC) and the Harbormaster (for Fairhaven). Day-to-day activities are overseen by these entities, as are any conflicts that arise. Fees are collected by the HDC office and by the Fairhaven Harbormaster, and the revenue is utilized to partially offset the expense of managing the piers, wharves, and moorings. It is anticipated that this management methodology will continue into the foreseeable future. As additional berthing space comes on-line, a review of the man-power required to properly manage the expanded facilities will need to be made. The Plan supports continue oversight of these activities utilizing the HDC (in New Bedford) and the Harbormasters Office (in Fairhaven).

Timing: Studies and actions aimed at short-term and temporary alleviation of at least a portion of the berthing and docking congestion in the Harbor are under way. It is anticipated that the short-term horizon will be devoted to the implementation of these near term and temporary initiatives (e.g. temporary floats). In addition, some dredging of existing piers and wharves is currently underway that will provide

additional berthing and docking space. In the medium-term horizon, it is expected that a comprehensive Harbor-wide study will be conducted that will identify all potential expansion possibilities for berthing in the Harbor. Additional medium-term solutions are also expected to be implemented, including the incorporation of commercial tie-up at private marina or marine terminal locations. Long-term plans such as the expansion of existing docks, the construction of new bulkheads and piers, and additional dredging at existing or new docks will continue over the five to ten year timeframe.

Funding: Funding for activities related to management of vessel Berthing in the Port will come from several sources:

- Day-to-day management costs, minor repairs, and general maintenance will be drawn from the fees collected by the HDC and Fairhaven Harbormaster from vessels for berthing;
- Grants from Seaport Council will be sought for studies and engineering costs related to pier, wharf, and bulkhead berthing for the purpose of commercial vessel tie-up;
- For construction costs related to rehabilitation, replacement, and/or new piers, wharves, or bulkheads, grants and loans will be sought from multiple sources, including Federal agencies such as NOAA, NMFS, DOT, and State sources such as Seaport Council, the Environmental Bond, and State Legislature/General Fund. Bonding by HDC, City of New Bedford, and Town of Fairhaven is another possible source of funds for such projects;
- Costs for dredging are expected to be covered through the dredge project phasing monies for the Port through the Seaport Council.

Commercial Moorings

An on-going study by the City of New Bedford is currently looking at the organization and expansion possibilities for the Port's mooring fields. The study has suggested four different types of moorings:

- PRIVATE / RECREATIONAL MOORING: Moorings placed for the permit holder's personal use as the habitual mooring for his/her recreational vessel.
- COMMERCIAL MOORING: Moorings installed for which any type of user fee is charged.
- MARINE INDUSTRIAL MOORING: Moorings that are not for sale or rent but used by a commercial establishment or marine industrial business for the holding of vessels including but not limited to commercial fishing vessels, barges and transient marine industrial vessels.

- MUNICIPAL MOORING: Moorings installed for the use by the HDC or City of New Bedford.

This study will be proposing fee structures, identifying permitting requirements and recommending distribution of mooring fields and the density of moorings that can comfortably and safely be accommodated into each. This mooring study is expected to be completed in 2010 and will offer additional details not included here. A similar evaluation is being completed by the Fairhaven harbormaster. The expansion and reclassification of mooring fields should provide additional income for both City and Town port operations.

8.3.9 PORT OPERATIONS CENTER (NEW BEDFORD)

Time Frame; Medium-Term
(some limited use in short-term).
Project Leads: NB HDC, NB Harbormaster, NB Police,
NB Shellfish Commission

Implementation: With its experience as a managing entity of waterfront property and facilities, the HDC would take the lead on determining the requirements for such a facility and identifying potential locations within the Harbor. A committee of representatives from the various New Bedford stakeholder agencies and authorities concerned would then be formed to oversee the Planning phase of the project. A Facilities Consolidation Plan and Location Feasibility Assessment would be conducted as part of the planning which would identify the best location for such a facility. As part of the organizational phase, funding would be sourced, land would be acquired, permits would be filed, and engineering studies would be conducted. Implementation would include the design and construction of a facility, including land-side infrastructure and water-side support facilities, including piers, wharfs, docks, etc. A lead facility management entity would be identified or created to manage the facility long-term.

Timing: While not a new concept, this idea of consolidated logistics and authority facilities for the Port has recently returned to the forefront with an increase of on-water and Harbor-side emergency situations over the last several years. The organization of the entities involved in such an initiative is expected to occur over the next year or two after submission of this Plan, and the work to develop the consolidation planning elements and then implement the program is expected to occur over the medium-term time horizon (2-5 years).

Funding: Application would be made to Federal and State Homeland Security Grant programs for funding assistance with the structural infrastructure needed on the land-side and water-side (buildings, piers, docks, etc.). Funding from Seaport

Council would be sought for any dredging or other in-water infrastructure needs. Funding for the acquisition and/or lease of land would be obtained from City or State capitalization sources, and could include direct budgetary support, bond issuance, and/or loans.

8.3.10 BULKHEADS/WDSFs

Time Frame: Medium to Long-Term.
Project Leads: Property Owners, NB HC, Fairhaven Planning Department, SER Committee.

Implementation: The construction of shoreline bulkheads is the responsibility of the property owner or operator. The New Bedford HDC will assume responsibility for the projects that are on City property, Fairhaven Planning for those properties on the Town of Fairhaven property, and private property owners for those facilities that are privately held. WDSF sites supported by this Plan included (see Figure 6.2):

- Extension of South Terminal Bulkhead
- State Pier Rehabilitation
- North Terminal Reconfiguration/Expansion
- Pope's Island New Harbor Terminal & other area(s) in Island's DPA
- Union Wharf Solid-fill Bulkhead and other immediately adjacent DPA

That fact notwithstanding however, because the potential bulkhead/WDSFs noted above represent such an important opportunity for the Harbor to benefit from the beneficial synergy of linking the bulkhead/WDSFs with CAD cell construction in the Harbor, this Plan supports the use of the SER streamlined process for bulkhead WDSFs that have been vetted through the SER process and generally meet the following conditions:

- The proposed bulkhead/WDSF must sit atop contaminated sediment, thereby either entombing or removing that sediment, rendering it inaccessible to the environment; and
- The construction of the proposed bulkhead/WDSF must incorporate sediments from the New Bedford/Fairhaven Harbor navigational dredge projects in a beneficial manner. This could include utilizing clean sand, silt, or gravel dredged from the Harbor bottom during the construction of one of the CAD cells used for the navigational projects, or it could include utilizing other sediments dredged as part of the navigational dredge projects (including contaminated sediment, clean sediment, and/or "debris"), as appropriate.

If the proposed bulkhead/WDSF meets the criteria noted above, then the Plan supports the inclusion of that structure into the SER process of regulatory oversight, with all of the privileges and responsibilities that accompany such a designation. It is recognized that the development of WDSF facilities on the waterfront in the Harbor will require consultation between the proponents, the SER regulatory group, and MassDEP and Chapter 91 authorities to determine the future Chapter 91 status and long-term regulatory process for such developed facilities. Additionally, it is recognized that the development of WDSFs on the waterfront may require additional discussion with the SER partners and other federal agencies.

The use of WDSFs in the Harbor, and the regulatory process under which the WDSFs would be administered, is currently being discussed by both Federal and State regulatory authorities as this Plan is being developed. On January 25, 2010, the Massachusetts Department of Environmental Protection (MassDEP) submitted a letter to the USEPA requesting that the USEPA consider inclusion of an Enhancement of Remedy to the remedy modifications (that the USEPA is proposing) as part of an Explanation of Significant Difference (ESD) to the Record of Decision (ROD) for the Superfund Project. In the January 25 letter, MassDEP requested that the WDSFs (referred to as "CDFs") that the City of New Bedford has proposed in the 2010 Harbor Plan Update for North and South Terminals (as well as a yet to be identified potential third CDF) be included in the SER regulatory process. The USEPA responded to the MassDEP request with a series of questions in a February 11, 2010 letter to the Deputy Commissioner of MassDEP, and on March 22, 2010, MassDEP submitted a response letter to USEPA. This open communication between the regulatory agencies concerning WDSF/CDFs and the SER process indicates that careful consideration is being given to the role that the SER process will play in the development of WDSFs and/or CDFs in New Bedford/Fairhaven Harbor. It is anticipated that a decision on at least a portion of the MassDEP request (the portion that involves South Terminal redevelopment) may be made by the summer of 2010.

WDSFs presented in the Harbor Plan that do not become specifically regulated under the SER Process should undergo the normal Massachusetts Chapter 91 permitting process as defined in 310CMR9.32(1) and other normal local, state and federal permitting requirements, unless other specific regulatory processes are established for the proposed facilities.

Timing: The planning and construction of such large and complex structures an involved effort. As none of the proposed structures noted above is currently in the planning or design process yet, it is expected that the earliest that one of the proposals noted could be advanced is between one and two years out. As such, this element of the Plan is considered to be a medium to long term program. It is expected that the planning and design for one or more of the structures noted above could occur within about a year, however it is expected that construction of that

element is at least 3-5 years in the future. Construction of all of the projects noted above is at least a 10-year proposition.

Funding: Funding for bulkhead/WDSFs is likely to be complex. Those structures that are to be constructed at private facilities should be mostly funded by the property owner or operator. Those structures that are to be built at public facilities (New Bedford and Fairhaven properties), will likely require a blending of funding elements, including Federal and State Grants, private (pier operator) input, and potentially City and or Town funds, either through direct budget support or via bonding actions or loans.

8.3.11 CREW COURSE, BOAT HOUSE, AND HARBOR WALK:

Time Frame: Short- to Long-Term.
Project Leads: Mayors Office, New Bedford Economic Development
New Bedford Harbor Development Commission.

Implementation: The planning for the project has already begun and is being directed by the New Bedford Economic Development Council with close coordination between the Mayor's Office and the New Bedford HDC. At present, negotiations are under way with the USEPA concerning the timing of the construction of the rowing facility infrastructure. Development of the course will take additional time, as some of the areas that will become part of the rowing course in the future contain contaminated sediment that the USEPA is cleaning up. Because of the presence of contamination within the course boundaries, and because of the level of coordination that the project must undertake in coordinating with the USEPA, the US Army Corps of Engineers, the US Dept, of Environmental Protection, and with the rowing community as well as with the local community, the management of the effort will stay with Economic Development as the lead agency for the foreseeable future. However, the City plans to set up a not-for-profit entity that will eventually manage the course. That entity would act as overseer of the operation, raising the funds necessary to build and maintain the infrastructure, organizing to effectively manage the course and any venues that the course would attract (races, practice sessions, etc.), and developing and managing events. Because of the special in-water infrastructure requirements for the course, the HDC will oversee aspects of the course related to dredging and marine construction. The development of viewing areas, including a Harbor walkway would be conducted jointly by Economic Development, HDC, and the Department of Public Infrastructure.

Timing: Planning for the crew course and the boathouse are already underway. Additionally, public forums have been held by the EDC aimed at obtaining public

participation in the planning of the use of the waterfront in this section of the City. Dredging for an initial boat basin has advanced passed the planning and design stage, and construction of that element of the course was planned for 2009. Once the initial basin is constructed, a pier and dock system can be installed and rowers can begin to utilize the facility. Construction of a Boathouse will be funding dependent, and it is likely that a temporary structure will be erected until a more proper boathouse can be built. Because the completion of the extents of the course relies upon the USEPA cleanup dredging that is ongoing in the Harbor, it is anticipated that the full course will not be completed for at least the next ten years.

Funding: It is anticipated that the not-for-profit entity that will be set up to manage the boating course will raise the necessary funds to continue the project. At present, Economic Development is covering the costs of studies and engineering related to the facility. Other potential sources of funds include the Harbor Trustee Council, Gateway City, Regional Tourism Council (Bristol County) and State bond funds through the Executive Office of Energy and Environmental Affairs. Funding from the Seaport Council for the Phase III dredge project is expected to cover the cost of dredging of the initial boat basin.

8.3.12 RECREATIONAL VESSEL MARINA AND MOORING EXPANSION

Time Frame:	Short-Long Term (Short-Term planning with Medium- to Long-Term construction).
Project Leads:	Private Developers, NB HDC; NB and Fairhaven Harbormasters; NB EDC

Implementation: The key to maximizing the community interest while leveraging private investment is managed private development (City/Town oversight of private development). It is thought that waterfront development is already sufficiently regulated in terms of laws and legal codes. The element that could be enhanced is the attraction of qualified developers, and the oversight of such development once a developer has been identified to ensure the public interest is protected and the economic potential for the community is maximized. The Plan supports the development of a subgroup within New Bedford Economic Development, HDC, Fairhaven Planning Department and Fairhaven Harbormaster focused on the expansion of recreational marina and mooring development. The subgroup will identify the areas of potential development and expansion, work with existing marina operators to identify options for expansion, market potential areas for new marinas, and work with developers of both new and existing marinas to increase the incorporation of public amenities in order to better the public interest. The

subgroup can utilize other Plan elements in its decision making, such as the Public Access Plan and the Marketing of the Port (see below).

Timing: In the short-term, a subgroup of planners and economic development experts should be established focused on the potential for investment in the recreational opportunities within the Port. The Plan encourages the development of this subgroup as soon as is practical in order to begin the process of developing a strategy for expansion. As several properties noted in this Plan are existing marinas that are interested in expanding (Fairhaven Shipyard, the Seaport Marina and Holiday Inn Hotel and Neimic Marine), the subgroup should begin a dialogue with these entities to encourage such expansion while at the same time ensure the incorporation of available amenities that benefit the boating public into the expanded facilities. Also in the short-term, the subgroup should begin the process of marketing to and identifying potential developers for the undeveloped areas that are potential future marina locations. In the short- to medium-term, studies may be necessary to lay the groundwork for the attraction of viable development interests. These studies may include: characterization of the conditions within the potential development area (bathymetric contours, potential dredging required; depth of underlying obstructions to deepening such as bedrock ledge); type and amount of piers and docks that may be incorporated; on-water traffic patterns; and shore-side infrastructure assessments. The goal of such effort is to allow for the presentation of viable options to potential development interests. In the longer-term, oversight of the development(s) by the subgroup would continue to ensure that the proposed developments meet their full potential and incorporate an appropriate amount of public interest.

Funding: Formation of a subgroup to encourage and oversee marina and mooring development is expected to be incorporated from existing operational budgets for the entities involved. Additional funding for studies, reports, and consultants reviews will need to be obtained, and it is expected that Economic Development and/or Seaport Council/Environmental Bond Bill grant funds may be applied for. Construction of facilities is expected to be funded by the private development interests. Economic Development loans and other credits may be available for developers to apply for under specific circumstances. It is anticipated that the subgroup can eventually become self-supporting, with long-term funding needs covered by fees generated from the increased number of vessels and facilities paying mooring and marina fees.

ROUTE 18

Time Frame:	Short-Long Term (Short-Term planning with Medium- to Long-Term construction).
Project Leads:	Mayors Office, NB EDC, NB Department of Public Infrastructure (NBDPI), NB HDC

Implementation: The NBDPI, working closely with Economic Development and the Mayor's Office has developed a plan for decreasing the impact of the Route 18 on the waterfront that includes improved traffic controls and better crossing infrastructure. The NBDPI is taking the lead on field implementation of the modifications with input and planning assistance from Economic Development and the HDC.

Timing: Implementation of the Route 18 improvement plan is beginning at the time of the writing of this Plan update. Full implementation is expected to take approximately one to two years.

Funding: Funding for this project thus far has been obtained from operating budgets associated with NBDPI and Economic Development, and from bonding initiatives. It is expected that future funding required for full implementation will come from a blending of operating budget funds, bonding sources, and the City's general fund for infrastructure maintenance.

8.3.13 NORTH TERMINAL AREA

Time Frame:	Medium-Long Term (Medium-Term planning with Long-Term construction).
Project Leads:	Mayors Office, NB EDC, NB Department of Public Infrastructure, NB HDC

Timing: Planning for the redevelopment of the North Terminal area in New Bedford is underway and is ongoing. Discussions aimed at utilization of the USEPA rail facility at the southern end of the Terminal between the City of New Bedford and the USEPA have begun and are ongoing. Planning for the redevelopment of the remainder of the North Terminal, including the installation of new bulkheads, has begun with the initiation of the discussions within this Plan. It is anticipated that the redevelopment of North Terminal bulkheads could begin within the next 5 years and could take as long a 10 to 20-years to complete, depending upon funding and depending upon USEPA use of the dewatering facility.

Funding: It is anticipated that funding for the project will come from many different sources. Funding for pier infrastructure redevelopment is expected to be sourced from granting authorities such as the Seaport Council and the Environmental Bond Bill. Additional pier infrastructure funding may come from local resources such as construction bonds, loans, and/or economic development grants. Passenger rail service will require funding from a mixture of sources as well. Funding for track infrastructure will likely be sourced from State sources with some private railroad funding also sought. Local infrastructure, such as station and parking facilities, will likely be funded through cooperative blending of grants, bonds, and local infrastructure money. Funds generated via the sale or lease to private interests of facilities at or near the rail depot represents another potential source of long term funds to help offset the development costs.

8.3.14 DEFINING THE HARBOR LINE

Time Frame: Short-Ter
Project Lead: HDC, Fairhaven Planning and Harbormaster.

Implementation: The New Bedford Harbor Development Commission would work cooperatively with the Fairhaven Planning Department and Harbormaster to plan, administer and oversee the implementation of a complete Harbor Line update. It is anticipated that a consultant would be retained to conduct the research and collect any field measurements necessary in order to compile a map of the updated Harbor Line for submission to the appropriate regulatory authorities for approval. The Line would be designated using the survey coordinate system denoted for the Harbor, and the results would be plotted digitally in a format that will allow transfer of the information to the MassGIS system. The updated line, once accepted, would be transmitted to the MassGIS administrator for uploading as a layer within the MassGIS system.

Timing: Once this Plan update has been approved by the Massachusetts Secretary of the Environment, the Harbor Line update process can begin. It is expected that the Plan will be approved sometime in mid 2010, and it is thought that a Harbor Line update activity could start as early as late 2010 (pending availability of funding). It is anticipated that a Harbor Line update for the Port will take approximately six months to complete, followed by a period of approximately six months to one year for acceptance by the State Legislature, putting the completion of the project at approximately the middle to end of 2011.

Funding: It is anticipated that the funding for this activity will be sought from granting sources such as the Seaport Council. Should Seaport funding for such effort be not forthcoming, then other sources of funding may be sought.

8.3.15 DPA BOUNDARY

Time Frame: Short-Term.
Project Lead: NB HDC, Fairhaven Planning.

Implementation: The New Bedford Harbor Development Commission will work cooperatively with the Fairhaven Planning Department to determine whether to initiate a specific request to the State for modifications to the DPA Boundary (see Section 7.3.8.2). This initiative should follow efforts to more precisely define the needs of local marine industry balanced against the requirement for public access and support for recreational boating. These needs should be defined in a Harbor Recreational Boating Management Plan (see Section 7.2.12) and Waterfront Public Access Plan (see Section 7.3.8.3). It is anticipated that a consultant would be retained to analyze the existing boundaries, collect data and conduct extensive stakeholder outreach. Based on finding and recommendations from this effort, City/Town may initiate a specific request to the State for any desired modifications to the DPA boundary.

Timing: One such project that would require DPA Boundary modification is creation of a marina and mooring field at the southern end of the New Bedford side of the Harbor just inside the Hurricane Dike. A portion of this area is currently designated DPA, and, under that designation, development of a facility for private recreational vessels would be prohibited. Therefore, in order for the marina project to fully develop, the DPA Boundary would most likely need to be adjusted. It is anticipated that in mid to late 2010 (shortly after this Municipal Harbor Plan update is expected to be approved by the Massachusetts Secretary of Energy and Environmental Affairs), the process for more fully evaluating possible adjustments to the DPA boundary will begin (pending availability of funding). Once submitted to the State, it is anticipated that any DPA Boundary modifications could be reviewed and approved by the relevant regulatory authorities over a period of approximately six to nine months.

Funding: This DPA boundary review would be completed in close partnership with Mass Office of CZM. It is CZM's responsibility to identify and map the existing DPA boundaries. It is anticipated that if funding for this activity is needed, it will be sought from granting sources such as the Seaport Council. Should Seaport funding for such effort not be forthcoming, then other funding sources, potentially including private sources, may be sought.

8.3.16 PUBLIC ACCESS PLAN

Time Frame: Short-Term.
Project Lead: NB HDC, Fairhaven Planning and Harbormaster.

Implementation: The development of a Public Access Plan would involve a cooperative effort between the City and Town Planning Departments, the HDC, harbormasters and Economic Development. This effort has begun, spearheaded thus far by City of New Bedford Economic Development, which has held focused public information working sessions in many of the sectors of the City of New Bedford that abut the Port. This Plan update supports the incorporation of other entities into the planning process in order to develop a more comprehensive, all-Harbor approach to Public Access for the Port and Harbor. Incorporation of the HDC and Fairhaven Planning/Harbormaster into the appropriate areas of the planning process will allow for a broader approach to public access for the community.

Implementation of increased Public Access on public lands can be incorporated through a planning process. Incorporation of Public Access on private lands will require a more substantial effort, and may involve the modification of existing statutes to accommodate required changes to the zoning and water dependant use guidelines and regulations.

Timing: Public Access Planning has been initiated by New Bedford Economic Development as part of its public outreach program for the neighborhoods nearest to the Harbor. A comprehensive Public Access Plan would build on these ongoing efforts, combining the ideas developed at planning sessions held recently with the results of similar future public outreach efforts, and combining the results into one comprehensive document. It is thought that this process could be completed over the course of one year, and that the process could begin as soon as funding could be identified for the project.

Funding: It is anticipated that funding for this effort would be sourced from Economic Development sources, as well as from the budgets of the Planning entities. Additional funding may be sought from private sources or from open-space or public-action granting authorities.

8.3.17 MARKETING THE PORT

Time Frame: Ongoing and Short-Long Term.
Project Lead: NB EDC, NB HDC, NB Tourism Office, Fairhaven Tourism, Fairhaven Planning.

Implementation: Cooperative efforts between the New Bedford and Fairhaven tourism and planning entities have proven effective to date, and these efforts are expected to continue. The Port's presence at trade shows for the fishing, maritime trade, maritime transportation, and maritime tourism have yielded results in the past, and it is anticipated that these efforts will continue, budgetary considerations notwithstanding. The development of a coordinated marketing effort, involving all of the entities interested in promoting the Port, is supported by this Plan. Development of a Port-wide marketing theme, a marketing strategy, and a standard set of marketing materials that highlight the theme, will increase the recognition of the Port throughout the region and the nation. It is anticipated that this activity will require cooperative effort between the market-related entities within the Port, and that professional assistance may be required in order to ensure that branding of the Port occurs in a manner that has the most impact.

On the Tourism side, an extremely successful method of marketing the Port has been the hosting of several festivals and events, and the City and the Town plan to not only continue the existing festivals and events, but also to increase the number and duration of the events and festivals. Those events that are planned to be added include crew rowing events on the upper harbor, antique sailing vessel events, seafood festivals, and waterfront concerts. The existing events have been managed by committees established for each event for the larger festivals and events. For the smaller events, a sponsoring entity (such as the HDC) has planned and managed the event. It is anticipated that this method of management of events will continue.

Timing: The management of the marketing of the Port is constant and on-going.

The development of a brand theme for the Port, and the marketing strategy and marketing materials is anticipated to be a Short- to Medium Term activity. The outline of a plan and some initial marketing and branding activities can be conducted by the marketing entities within the Port immediately (as they have been in the past). Development of a brand-based marketing strategy, with marketing materials and an advertising strategy, will require the involvement of additional marketing resources and (potentially) outside consultants, and will take a longer period of time. It is anticipated however, that such a brand strategy could be developed over a six month period, once funding was identified and a suitable consultant was procured for the project.

Funding: It is anticipated that the majority of the funds for the marketing of the Port will continue to come from the operating budgets of the entities marketing the Port (Tourism, HDC, Economic Development, and Planning). The additional resources required to procure consultants for the purpose of developing a strategy and then marketing the Port may be sought from both public and private sources. The Port marketing entities should look for opportunities for synergy (the marketing of more than one entity or activity at a time) to try to stretch every marketing dollar spent.

8.3.18 EXPANSION OF FERRY SERVICE

Time Frame: Ongoing and Short-Long Term.
Project Lead: Mayor's Office, NB EDC, NB HDC

Implementation: Opportunities to expand ferry services from New Bedford is being aggressively explored by the HDC and City. The efforts include growing existing services now offered to Martha's Vineyard and Cuttyhunk and evaluating the potential of other routes including service to Woods Hole and/or Nantucket. A prototype service to Woods Hole was offered during the fall of 2007. This could include both passenger and freight service.

Timing: This is an on-going initiative.

Funding: Start up funds for this project are being sought through the Executive Office of Transportation's Transportation Bond grant program.

8.4 SUMMARY OF SCHEDULE AND SEQUENCING

The initiatives proposed under the Harbor Plan are categorized into short-term (1 to 2 year), mid-term (3 to 5 year) and long-term (5 to 10 year) initiatives. The long-term plan focuses on the implementation of major enhancements that would need to follow other projects (e.g. dredging), have not yet had funding sources identified to advance projects, and/or would require further planning or a more thorough cost/benefit analysis before being initiated. Projects such as creation of an Transportation Center, commencement of commuter service to Boston and replacement of the Route 6 Bridge fit into the longer range plans.

The following list highlights the initiatives within each of the implementation periods:

Short–term Plan (2010 – 2011) Addresses immediate harbor needs, including the implementation of harbor-related projects that are already planned and fully funded or where funding sources have been identified.

- Extending the South Terminal Wharf and enhancing multiuse facilities to efficiently and safely accommodate marine shipping
- Extend Homer's and Leonard's Wharves to provide expanded commercial fishing vessel berthing.
- Complete the following studies/plans:
- Comprehensive Waterfront Public Access Plan
- Harbor Recreational Boating Management Plan
- North Harbor/North Terminal Study, including port marketing and facilities development strategies, bridge and infrastructure improvements.
- Greenport Strategy
- Inventory of vessel movements within the harbor to provide a framework for assessing the future harbor carrying capacity.
- More precisely define position of the Commissioner's Harbor Line and DPA boundary and request change as needed including adjustments that may be required to facilitate construction of proposed projects in the vicinity of State Pier, Fisherman's Wharf and Homer's/Leonard's Wharf.
- Acquire and install port security equipment funded by HLS grant and SPAC match.
- Continue efforts to aggressively market the Port to appropriate new marine industries
- Initiate repairs of and improvements to New Bedford State Pier
- Implement combined sewer outflow (CSO) improvements to reduce influx of contaminants to the Harbor.
- Expand/reorganize existing mooring fields north and south of Pope's Island (for all vessels outside of DPA waters and for commercial vessels within DPA)
- Add/improve launch and dinghy docks focused particularly on needs of transient boats and smaller commercial vessels
- Develop a Fairhaven gateway to the Harbor near east end of Route 6 causeway.

Mid-term Plan (2012 - 2015)

New Bedford

- Repair public piers and wharves in the Central Waterfront.
- Revitalize/redevelop/repair State Pier as an active water terminal facility with a mix of non-conflicting uses that might include short-sea shipping/break bulk cargo activities, passenger ferry and cruise ship operations, cultural amenities (Ernestina, National Park Service), public accommodations such a maritime marketplace and restaurant, and a deck for public observation and interpretation of port operations.
- Develop a prototype short-sea-shipping operation with connections to one or more East Coast port including appropriate infrastructure to support this initiative.
- Pursue developing opportunities in the expanding Import/Export trade.
- Continue to explore options for expanding local freight service to nearby islands (Martha's Vineyard, Nantucket and other locations).
- Develop a center for visitor services, programs and support for the Schooner Ernestina on the southwest corner of State Pier.
- Develop a floating dock on the southwest corner of the State Pier to provide berthing space for commercial excursion and charter fishing vessels and for transient recreational boat use.
- Support cross-harbor water taxi and launch service between the New Bedford and Fairhaven central waterfronts, marinas, inner harbor mooring fields and significant tourism destinations.
- Continue development of an industrial park at Standard Times Field providing expansion opportunities for seafood processing, related industrial uses and commercial water-dependent uses, while providing improved public access at the shorefront without preemption of future vessel activity or other incompatibility with marine industry.
- Assist in finding a permanent home for Seafood Display Auction.
- Continue efforts to expand the Port's capacity to safely accommodate the commercial fishing fleet including modern, adequate and efficient support infrastructure.
- Enhance pedestrian and bike access to the waterfront, including development of a pedestrian and bike network in all proposed infrastructure projects.
- Continue EPA harbor cleanup dredging,
- Develop Palmer's Island as a city park including landscape and access improvements and a park management strategy.

- Continue to forge a strong relationship with United States Coast Guard that supports the Coast Guard's mission and strategic development of the Port of New Bedford.
- Explore and evaluate opportunities to create facilities for recreational boat (services and transient docks/moorings) south of Hurricane Barrier
- Repair and expansion the South Terminal bulkhead
- Develop the Upper Harbor crew cruise and support facilities

Infrastructure

- Develop a major Intermodal Transportation Center in the North Terminal area to include commuter rail, freight rail, local and regional bus service, taxis, and waterfront trolley service (with future expansion to include links to a water terminal).
- With the design Route 18 completed, begin implementation to provide improved waterfront access, including substantially enhanced pedestrian access between downtown New Bedford and the waterfront. This includes a connection at the end of Union Street and at Water Street and other locations.
- Continue dredging of driveways and berthing areas outside the federal channels.

Fairhaven

- Conduct wharf repairs at Union Wharf.
- Work with the Coalition for Buzzards Bay to improve Marsh Island for use as public open space for passive recreation.
- Implement streetscape improvements along major gateway streets—Main, Middle and Green Streets.
- Initiate maintenance dredging in the 10-foot and 15-foot federal channels and associated private sector berthing areas and driveways.
- Enhance the Pease Park Boat Ramp area, including provision of tie-ups for transient vessels, a dinghy dock, and associated dredging.
- Initiate cross-harbor water taxi and launch service between the New Bedford and Fairhaven central waterfronts, marinas, and other significant tourism destinations.
- Develop a central berthing area for charter fishing and excursion vessels.

Long-term Plan (2016 - 2020) Projects involving major enhancements to harbor capacity where additional planning is needed or where funding sources have not yet been identified.

New Bedford

- Expand Pope's Island on its northwest corner through land creation resulting from harbor maintenance dredging to create a new Harbor Terminal.
- Undertake additional structural repairs/enhancements to the State Pier.

Infrastructure

- Replace the Route 6 harbor crossing including the New Bedford-Fairhaven Bridge to facilitate development of port operations and expand harbor capacity. (Planning to start in the short term).
- Create intermodal transportation center to service passenger and freight trains, buses, and connection to port facilities, tourist attractions and water transportation
- Continue maintenance and improvement dredging in the harbor.
- Create mooring field northeast of Popes Island as CAD cells will permit.

9.0 REGULATORY GUIDANCE

9.1 OVERVIEW OF CHAPTER 91

New Bedford Harbor and the Fairhaven/New Bedford waterfronts are subject to the regulatory authorities of the local, state and federal governments. Among the state's authorities, Massachusetts General Law Chapter 91 (Public Waterfront Act) and the Waterways Regulations (310 CMR 9.00), which was adopted to implement the law, seek to ensure that the Commonwealth's tidelands are used for water-dependent activities or for uses that support a "proper public purpose." The Chapter 91 licensing program is administered by the Waterways Regulation Program of the Massachusetts Department of Environmental Protection (DEP)

Chapter 91 applies in tidelands, great ponds, and along certain rivers and streams. Tidelands refer to all land presently or formerly beneath the waters of the ocean at mean high tide. On the landside, tidelands extend to the *historic* high tide line, i.e., the farthest landward tide line which existed "prior to human alteration" by filling, dredging, impoundment or other means. Generally, DEP jurisdiction applies to all filled as well as flowed tidelands, with the exception of "landlocked" tidelands. Landlocked tidelands are filled tidelands which are outside of Designated Port Areas, are located more than 250' from nearest existing mean high water (MHW) mark, and are separated from the shoreline by a public way. See Figure 9.1 for an approximate location of the historic high tide line in New Bedford Harbor. This is a "presumptive" line used by the Department of Environmental Protection (DEP) for preliminary jurisdictional determinations in the Waterways licensing process and by the City and Town for planning purposes. It can be challenged by a project proponent if reliable historical records or charts/maps are presented to show the location of this line to be inaccurate.

9.2 ACTIVITIES SUBJECT TO CHAPTER 91

Chapter 91 authorizations in the form of a State-issued license is generally required for the placement of fill, building of structures, changes of use, and dredging in tidelands. Types of structures include piers, wharves, floats, retaining walls, revetments, pilings, bridges, dams, and waterfront buildings (if on filled lands or over the water). A new license also may be required if there has been a structural change or change in use of a previously licensed structure. Although the placement of temporary rafts, floats or moorings in the waterway do not require a Chapter 91 license, they require an annual permit from the Harbormaster, per Chapter 91 Section 10A.

Water-Dependent Uses

In general, uses licensed under the waterways program must either be water-dependent or "serve a proper public purpose, which provides greater benefit than detriment to the rights of the public in said lands."

A water-dependent use is one that requires direct access to or location in tidal or inland waters, and therefore cannot be located away from said waters. A full definition of water-dependent uses can be found in the regulations (see 310 CMR 9.12(2)). Among the uses defined as water-dependent that are likely to apply to New Bedford Harbor are:

- Marine industrial activities and facilities
- Waterborne passenger transportation facilities such as those serving ferries, cruise ships, commuter and excursion boats, and water shuttles and taxis;
- Navigation aids, marine police and fire stations, and other facilities which promote public safety and law enforcement on the waterways;
- Shore protection structures, such as seawalls, bulkheads, revetments, dikes, breakwaters, and any associated fill which are necessary either to protect an existing structure from natural erosion or accretion, or to protect, construct, or expand a water-dependent use;
- Flood, water level, or tidal control facilities;
- Dredging for navigation channels, boat basins, and other water-dependent purposes and subaqueous disposal of the dredged materials below the low water mark;
- Discharge pipes, outfalls, tunnels, and diffuser systems for conveyance of stormwater, wastewater, or other effluents to a receiving waterway.
- Aquaculture facilities;
- Marinas, boat basins, channels, storage areas, and other commercial or recreational boating facilities;
- Facilities for fishing, swimming, diving, and other water-based recreational activities;
- Parks, esplanades, boardwalks, and other pedestrian facilities that promote use and enjoyment of the water by the general public and are located at or near the water's edge, including but not limited to any park adjacent to a waterway and created by a public agency; and
- Aquariums and other education, research, or training facilities dedicated primarily to marine purposes.

9.3 DESIGNATED PORT AREA

Within the Designated Port Area (DPA), it is the intent of state policy and programs to encourage water-dependent industrial uses. In support of this goal, State Chapter 91 regulations enhanced by local zoning and development reviews are intended to reserve an extensive amount of the total DPA land area in close proximity to the water for water-dependent industrial uses. In general, water-dependent industrial uses are those industrial and infrastructure facilities that are dependent on marine transportation or require large volumes of water to be withdrawn from or discharged into a waterway for cooling, process, or treatment purposes.

Water-dependent industrial uses include:

- Commercial fishing and fish processing facilities;
- Marine terminals and related facilities for transfer and storage of goods transported by marine vessels;
- Facilities associated with commercial passenger vessel operations;
- Manufacturing facilities relying on goods shipped by waterborne transportation;
- Boatyards, dry docks, and other facilities related to the construction, servicing, maintenance, repair, or storage of vessels;
- Facilities for vessels engaged in port operations or marine construction;
- Other industrial uses or infrastructure facilities which cannot reasonably be located at an inland site as determined in accordance with 310 CMR 9.12(2) (c) or (d); and
- Uses determined to be associated with the operation of a Designated Port Area.

Portions of both the New Bedford and Fairhaven waterfronts have been identified by the Commonwealth as DPAs (see Figure 9.1). On the New Bedford side, the DPA consists of the land, piers, and water area seaward of Herman Melville Drive and MacArthur Drive and South Front Street from the approximate seaward extension of Wamsutta Street, including all of Fish Island the portion of Pope's Island located north of Route 6, south to Gifford Street (a land area is are approximately 216 acres). Major water-dependent industrial uses within this DPA range from fish processing, cold storage, and other fishing industry support services to the State Pier with facilities that handle both freight and passengers (ferries and cruise ships). In Fairhaven, the DPA extends seaward of Walter Street from Washington Street south to Ferry Street centered around Union Wharf (a land area of about 15 acres). The primary marine industrial activities here are commercial vessel repair, maintenance, and berthing. The regulations describe the water area of a DPA to include the side slopes of channels and all water area lying between the port's main shipping channel and any land or water areas of the DPA.

Other uses, including certain general industrial, commercial, and transportation activities, and compatible public access can be accommodated within a DPA under prescribed circumstances and conditions. To enhance flexibility and the economic viability of DPAs, most nonwater-dependent industrial uses and commercial uses are eligible for licensing as Supporting DPA Uses if they are compatible with nearby marine industry, do not involuntarily displace existing marine industry, and provide direct economic or operational support to water-dependent industrial uses in the DPA. Nonwater-dependent industrial uses and commercial (water-dependent and nonwater-dependent) uses qualifying as Supporting DPA Uses may occupy an area of a DPA property up to 25 percent of all filled tidelands and piers on the project site. Larger amounts of the site may be developed for non water-dependent industrial uses if authorized by an approved DPA Master Plan. Uses specifically excluded from the DPA include residential (including hotels and private residences) and recreational boat marinas. The Eligibility Credit Program included in the 2002 Municipal Harbor Plan has been eliminated in this 2010 update of the Plan.

9.4 AUTHORITY OF THE HARBOR PLAN

The New Bedford/Fairhaven Harbor Plan sets forth the City/Town's vision for guiding public and private use of the land and water areas of the Harbor, and offers an implementation program to achieve the desired plan. The area covered by a harbor plan typically includes the central portion of the municipalities' working waterfront where there are filled tidelands and the existence of and/or potential for significant water-dependent activities.

The New Bedford/Fairhaven Harbor Plan (upon approval by the Executive Office of Energy and Environmental Affairs (EOEEA)) will serve to guide EOEEA agency actions including the regulatory decisions of DEP under Chapter 91. When a state-approved harbor plan/DPA master plan exists, any project seeking Chapter 91 license from DEP must be in conformance with those provisions of the plan that have been approved by the EOEEA Secretary as binding for Chapter 91 purposes.. In essence, once the New Bedford/Fairhaven Harbor Plan is approved by the State, DEP will use its regulatory authority to help implement the goals and objectives articulated in the Plan.

Through the Plan, a municipality has the ability to "substitute" local standards for certain Chapter 91 dimensional requirements such as building height limits and setbacks. These substitutions, if and when approved by the State, apply only to nonwater-dependent uses and are subject to conditions as specified in the required Harbor Plan approval standards (see 301 CMR 23.05). The provisions of a Municipal Harbor Plan also can provide guidance for DEP by "amplifying" or

elaborating upon the numerous *discretionary* requirements of the Chapter 91 regulations for projects under review.

With the exception of changes to the minimum required width of the public accessway along the water's edge (increased from 10 to 20 feet in the central harbor area outside the DPA), this Plan does not propose any regulatory amplifications or substitutions for Chapter 91 regulations including DPA restrictions. No specific waterfront development projects have been addressed in this Plan. When future waterfront projects are proposed, they will be subject to public review and comment to provide input to MassDEP for their consideration in determining compliance with Chapter 91 standards. For large parcels, such as the former power plant site in New Bedford, extensive development proposals may require a formal amendment to this Harbor Plan.

The City of New Bedford has a Waterfront Overlay District which will support this Harbor Plan's goals to facilitate desired waterfront redevelopment and encourage appropriate uses along the waterfront. It specifically allows, by right, seafood processing facilities in this district.

9.5 GUIDANCE TO DEP: SUBSTITUTE PROVISIONS

The New Bedford/Fairhaven Harbor Plan contains one substitute provision for the minimum numerical standards outlined in 310 CMR 9.52(1) (b) (1). The numerical standard has been increased from ten (10) to twenty (20) feet for the required minimum width of pedestrian access walkways in the central harbor area extending along the entire length of the water-dependent use zone from the I-195 bridge over the Acushnet River to the Hurricane Barrier on both sides of New Bedford/Fairhaven Harbor but excluding any areas within the DPA. A detailed Waterfront Public Access Plan with a specific route for the "River Walk" north of the I-195 bridge will be completed as part of the implementation of recommendations contained in this Harbor Plan (see Section 7.3.8.3). The following provides some of the detail that will be included in the Access Plan. It is anticipated that these requirements will eventually be extended north to the Wood Street Bridge.

This dedicated 20-foot wide public accessway will include a minimum of 10 feet of unobstructed pathway. The remaining 10 feet of this accessway could be used for landscaping and accessory amenities that would enhance the general public's waterfront experience. Accessory amenities supporting water-dependent uses could include benches, lighting, tables, signs, trash receptacles, canoe and bicycle racks, safety ladders, shade/weather shelters and children's play areas. In an effort to help further activate the near water's edge, seasonal, temporary outdoor seating for food

service could also be allowed within the inland 10-foot section of the public accessway but only with an approved City/Town permit for such activity (e.g. victualler license and Board of Health food permit). These access requirements would be in addition to the standards for public access to the waterfront required under Chapter 91.

This public accessway is essential to improving access along the water's edge. New development or redevelopment of existing structures must comply with this 20-foot standard. In cases of properties requiring licensing of existing development and for development projects, where the existing building is within twenty feet of the shoreline, the passageway shall consist of the entire area between the building and shoreline, but not less than ten feet (minimum standard). If necessary, this minimum 10-foot passageway is to be created either by a) removing structures along the water's edge, b) creating a passageway through the building or, if these alternatives are infeasible, c) building new pedestrian structures over the water. In cases where existing walkways along the waterfront are being improved or widened to provide a ten-foot width, such improvements may be cantilevered and/or pile supported if necessary. An inland route connecting with the waterfront walkway on either side is considered a final alternative, but only when the above are not possible (due to insurmountable obstacles) and where it would be a benefit to encourage movement between the nearest public way and activities on the waterfront.

This substitution does not apply to waterfront in the DPA. Within the DPA, the Harborwalk will generally run along the inland boundary with accessways that allow visitors to reach the water's edge and/or use observation platforms to observe the activities of the working port. Understandably, access to certain areas of the working waterfront will be restricted or prohibited due to the industrial nature of operations that can present safety risks for the general public or to port security restrictions mandated by the Homeland Security Act.

Note to Developers of Projects within the Area Covered by this Harbor Plan:

The Commonwealth's Waterways Regulations contain several core provisions that are essential to the open space and waterfront access goals of this Plan. These are:

1. Projects shall preserve any rights held by the Commonwealth in trust for the public to use tidelands...for lawful purposes...[Specifically], the project shall not interfere with public rights of navigation...public rights of free passage over and through the water...public rights associated with a common landing, public easement, or other historical legal form of public access from the land to the water that may exist on or adjacent to the project site...public rights of fishing, fowling, and the natural derivatives thereof...(§9.35)

2. Nonwater-dependent use projects that include fill or structures on any tidelands shall not unreasonably diminish the capacity of such lands to accommodate water-dependent use...[taking] into account any relevant information concerning the utility or adaptability of the site for present or future water-dependent purposes...(§9.51)

3. Nonwater-dependent use projects that include fill or structures on any tidelands shall devote a reasonable portion of such lands to water-dependent use, including public access in the exercise of public rights in such lands...[taking] into account the capacity of the project site to serve such water-dependent purposes...(§9.52)

With the exception of a specific substitution relating the Harborwalk in the inner Harbor outside of the DPA, this Plan does not request EOEEA Secretary's approval for any binding substitutions or amplifications of State Chapter 91 regulations for the New Bedford/Fairhaven Harbor.

Table 9-1 provides a summary of key issues presented in and supported by the 2010 New Bedford/Fairhaven Municipal Harbor Plan, the areas impacted within the Harbor, and specific sections of the Plan where the issues are discussed in detail.

Table 9-1 KEY ISSUES MATRIX

Issue		Area of Impact	Comments	MHP Discussion
Dredging		Harbor-wide	Plan strongly supports on-going dredging initiatives	6.2.2, 7.2.1, 8.3.1, Appendix A
	CAD cells	North of Pope's Island	Primary disposal options for contaminated sediment	6.2.2.2, Fig 6.2, 7.2.1.3
	CDF/WDSFs	Sites in DPA	Primary disposal options for clean dredged materials	6.2.2.2, 6.10.5, 7.2.1.3, 7.2.2, 8.3.10
Navigational Access		DPA facilities	Preserve MI deep-water access, remove nav hazards/swing bridge	5.7, 6.2.1, 7.3.4.1, 8.3.2
Industrial Port		Harbor -wide	Separation of possibly conflicting uses	5.7, Fig 5.2
		Supporting Commercial	No more than 25% within DPA	9.3
		Eligibility Credit Program	Eliminated (properties permitted under program grandfathered)	7.3.8.2, 9.3
		State Pier	Facility Business Plan under development	7.3.1.2, 8.3.5
		North Terminal	Improvements to better accommodate marine cargo	7.3.2, 8.3.14
		Pope's Island	Expansion proposed to create New Harbor Terminal (bulk cargo)	7.3.4.2, 8.3.10
		South Terminal	Bulkhead extension	7.3.3, 8.3.10
		Fairhaven DPA	Plans for improvement & expanded MI uses	7.3.5.3, 8.3.10
Public Access		Harbor-wide	Need for comprehensive public access plan	5.7, 7.3.8.3, 8.3.17, 9.6
		River Walk & Crew Course	20' walk width outside DPA. Rowing course/facilities added.	8.3.11, 9.6
		Rec boat services	Expand/improve mooring fields, boat ramps, dinghy docks	5.7, 7.2.12, 7.3.3.3, 8.3.12
		Harbor Gateways	Improvements to better define/create harbor gateways	7.3.1.5, 7.3.5.1, 8.3.4
Special Study Area		Former Power Plant Site	Special Study Area proposed	7.3.1.4, 8.3.6
Environment		Green Port	Aggressive Green Port initiatives	5.7 , 6.10, 7.3.8.4
		CSO/discharges	Eliminate ASAP as resources allow	7.2.13, 8.3.7
		Marsh & Palmer's Islands	Protected/restored environment & improve public access	7.3.3.3, 7.3.6.1
Regulatory Boundaries		Harbor Line	Adjust to existing channels, mooring/anchorage, turning basins	5.7, 7.3.8.1, 8.3.15
		DPA	Slight adjustemnt to SW corner. Formal boundary eval needed	7.3.8.2, 8.3.16
Port Operations		Port Operations Center	Centralized facility for HDC and other port ops agencies	5.7, 7.3.4.3, 8.3.9
		F/V berthing	Top priotity set for additional berthing for fishing fleet	6.3, 7.2.3, 8.3.8

9.6 GUIDANCE TO DEP: NON-SUBSTITUTE PROVISIONS (AMPLIFICATIONS)

This Plan does not contain any non-substitute provisions (amplifications) to Commonwealth waterways regulations.

9.7 OTHER LOCAL AND FEDERAL REGULATIONS AND PERMITS

9.7.1 WETLANDS REGULATIONS

The Wetlands Protection Act (Chapter 131, Section 40) through the Wetlands Protection Program requires local conservation commissions to examine and regulate development activities that may alter wetlands and to issue or deny permits based on whether the proposed activity is consistent with the requirements of the Wetlands Protection Act and DEP regulations (state Wetlands Regulations at 310 CMR 10.00 provide clarification of the provisions of the Act). DEP issues superseding orders and variances, and offers compliance, enforcement, and technical assistance.

Under the Wetlands Act, the Conservation Commission has authority over projects in or affecting six categories of resource areas: bank, beach, dune, flat, marsh, swamp, freshwater or coastal wetlands which border on the ocean or any estuary, creek, river, stream, pond or lake; land under water bodies; land subject to tidal action; land subject to coastal storm flows; land subject to flooding; and riverfront areas. Activities within these resource areas subject to jurisdiction include activities that would remove, fill, dredge or alter the resource. The Commission also has the right of review for activities within a 100-foot buffer zone around wetlands bordering water bodies, banks, beaches, and dunes.

9.7.2 THE CLEAN WATER ACT

Section 404 of the Clean Water Act establishes a permit program to regulate discharges of dredged or fill material into wetlands and other waters of the US. In tidal areas, "waters of the US" extend to the (spring) high tide line. The Section 404 permit program is implemented by the US Army Corps of Engineers (Corps). The National Marine Fisheries Service and Fish and Wildlife Service have advisory review role. In addition, Section 404(c) gives the US Environmental Protection Agency veto authority over the Corps' decision to issue a permit.

The Corps cannot issue a Section 404 permit unless it determines that:

1) The proposed project is not contrary to the public interest. The general criteria for the public interest review are in 33 CFR section 320. The factors involving the public interest include economics, environmental concerns, historical values, fish and wildlife, aesthetics, flood damage prevention, land use classifications, navigation, recreation, water supply, water quality, energy needs, food production and the general welfare of the public.

2) The proposed project complies with the Section 404(b) (1) Guidelines. Section 404(b)(1) Guidelines are federal regulations (40 CFR section 230) that provide the environmental criteria to be satisfied before a Section 404 permit involving discharge of dredged or fill material can be issued.

The 404(b) (1) Guidelines prohibit discharging of dredged or fill material if there is a practicable alternative. An alternative is practicable if it is available and capable of being accomplished considering cost, existing technology and logistics, and overall project purpose. The Guidelines also require that the discharger undertake all appropriate and practicable mitigation measures to minimize any potential harm to the aquatic ecosystem. The Corps' evaluation of a project under this standard progresses through the following stages: avoidance of impacts where practicable through the evaluation of alternative sites; minimization of impacts; and appropriate and practicable compensation of unavoidable impacts through wetlands creation or restoration.

Section 401 of the Clean Water Act requires a water quality certification from the state in which a discharge under a 404 permit will originate. The certification is that the discharge complies with the state water quality criteria.

9.7.3 THE RIVERS AND HARBORS ACT OF 1899

Section 10 of the Rivers and Harbors Act of 1899 authorizes the Corps to regulate structures and work in navigable waters of the U.S. Jurisdiction extends shoreward to the mean high water line. Regulated activities include construction of piers and wharves, permanent mooring structures such as pilings, intake and outfall pipes, boat ramps, and dredging or disposal of dredged material, excavation, and filling.

9.7.4 General Permitting Requirements for Dredged Material

Regulatory permitting for dredging projects requires approvals from many agencies. The following is a list of required regulatory agency approvals:

Massachusetts Environmental Protection Act (MEPA) requires submission of an Environmental Notification Form (ENF) for dredging projects anticipating the removal of over 10,000 cubic yards of material. This form is reviewed by and comments are sought from many agencies. The MEPA process also involves a 30-day public review process. The public notification is accomplished by publication of the first page of the ENF in the Environmental Monitor. The review identifies project elements that need to be considered in the design and permitting of the project, and determines whether the project requires the filing of an Environmental Impact Report (EIR). At the conclusion of the ENF review a certification is issued by the Secretary of the Office of Energy and Environmental Affairs indicated whether the ENF satisfied the MEPA requirements or if an EIR is required. Other State agencies cannot issue their approvals, or funds, until the MEPA process is completed.

The **Corps** is required to review the project for possible impacts on navigation, flooding, coastal resources, and the transportation and disposal of sediment in navigable waters. A Corps' review involves several other agencies including the Environmental Protection Agency (EPA), National Marine Fisheries, U.S. Fish and Wildlife Service, and the State Historic Commission. Filing of a Corps of Engineers application initiates a review process which includes a suitability determination for the disposal of dredged material, addresses historic resource, environmental, navigation and abutter issues, and begins a public notification process that, if the project meets all permitting requirements, concludes with a permit describing necessary dredging operational procedures.

Department of Environmental Protection (DEP) Wetlands and Waterways has three departmental agency approvals. They are:

1. Water Quality Certification for the dredging and for the handling and disposal of dredged material;
2. Chapter 91 permit granted under Waterways Regulatory Program for the proposed dredging and development activities; and
3. Local Conservation Commission's review of the project's impact on area's wetland resources.

Massachusetts Coastal Zone Management (MCZM) office will complete a consistency review as part of the Army Corps' federal permit process. MCZM will also determine whether the proposed project satisfied State-level polices. These

include defined requirements regarding Water Quality, Habitat, Protected Areas, Coastal Hazards, Port and Harbor Infrastructure, Public Access, Energy, Ocean Resources, and Growth Management.

The local **Conservation Commission** must receive a Notice of Intent (NOI) for the project. After review by the Commission an Order of Conditions may be issued outlining the procedures and mitigation measures required to minimize impact on wetland resources. Bathymetric survey, identification of resources, and sediment sampling and testing are required to describe the project for NOI submittal. The Conservation Commission review process includes a public hearing where the applicant presents the project and how it conforms to the requirements of the Massachusetts Wetlands Protection Act. Comments from proponents, opponents, and abutters are heard during the hearing.

9.7.5 THE FEDERAL EMERGENCY MANAGEMENT AGENCY

The Federal Emergency Management Agency (FEMA) performed a Flood Insurance Study of the City of New Bedford and for Town of Fairhaven in 2008. The study utilized hydrologic and hydraulic analyses to establish Flood Insurance Zones and flood plain management measures. The study considered historic flood elevations, estimates of shoreline levels considering still water and wave run-up for various storm frequencies.

The study provides a plan of the various Flood Insurance Zones along the Harbor. FEMA flooding studies should be considered in the design of all coastal structures

The following summary describes the Harbor area zone designations:

Zone A: Special Flood Hazard Areas inundated by types of 100-year shallow flooding, determined by the approximate methods; no flood elevations shown or flood hazard factors determined.

Zone AO: Areas of 100-year, shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.

Zone A2 and A4: Special Flood Hazard Areas inundated by the 100-year flood, base flood elevations shown, and zones subdivided accordingly.

Zone V2 - V4: Areas of 100-year coastal flooding with velocity (wave action); base flood elevations and flood hazard factors determined.

Zone B: Areas between the limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or area protected by levees from the base flood.

Zone C: Areas of minimal flooding.

A majority of project area dredge sites are located in velocity zone designation V3.

9.7.6 HOMELAND SECURITY ACT (HSA) OF 2002

The HSA (Public Law No. 107-296, 116 Stat. 2135 (Nov. 25, 2002)) enacted following the terrorist attack on September 11, 2001 created the Department of Homeland Security in the largest government reorganization in 50 years. The HSA is a sweeping anti-terrorism bill giving federal law enforcement agencies broad powers. The impact on New Bedford/Fairhaven Harbor is still being defined. It has led to increased security requirements at the State Pier and other port facilities and will need to be considered in the future waterfront operation that may be considered for redevelopment of the old Power Plant Facility. Security Plans are required for major port facilities that receive vessels carrying more than 150 passengers, commercial vessels greater than 100 gross register tons or vessels subject to the international convention for Safety of Life at Sea on international voyages – such as cruise ships.

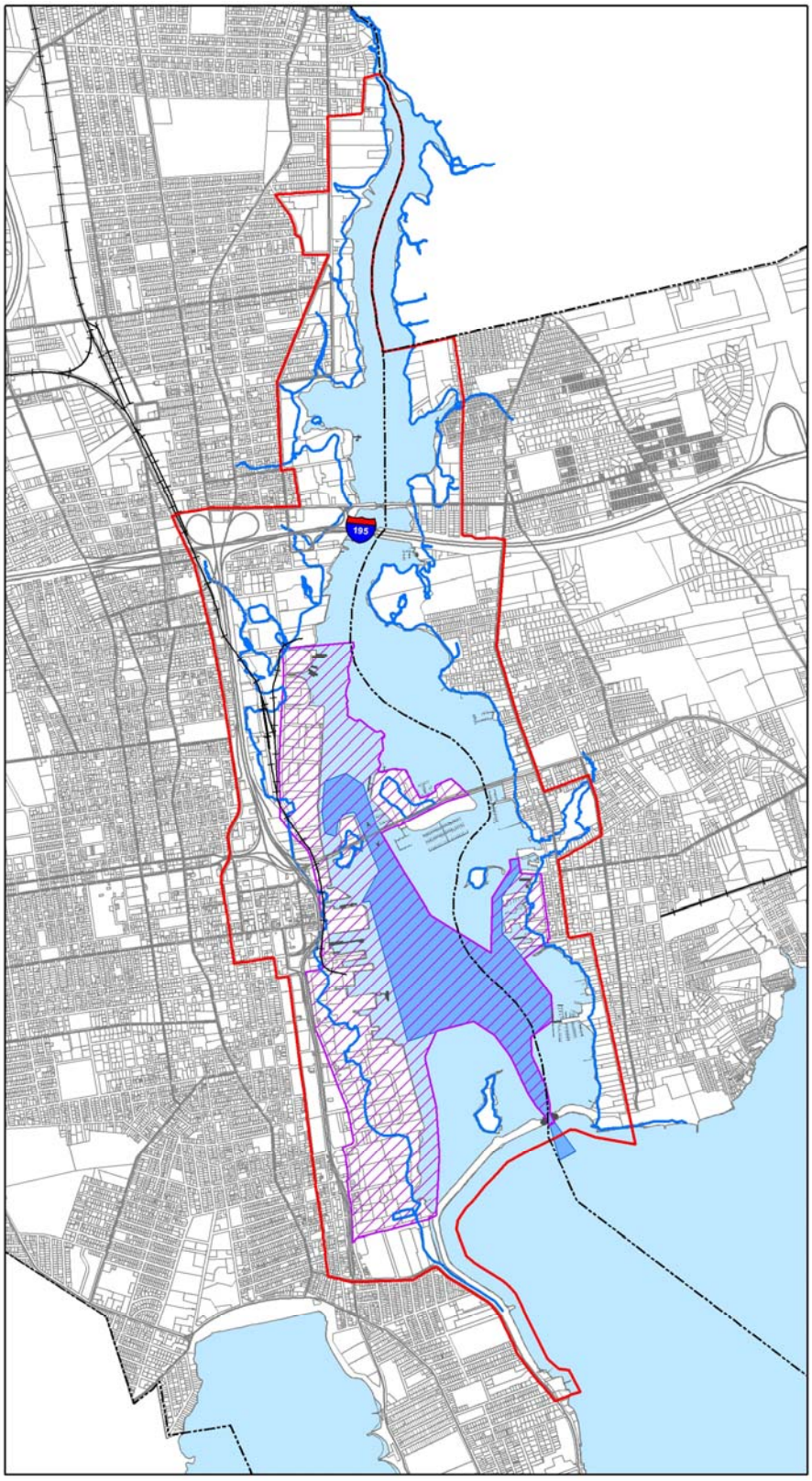
Facility Security Plans should indicate the operational and physical security measures the port facility will take to ensure that it always operates at security level 1 (i.e. have at least the minimum appropriate protective security measures in place at all times). The plans should also indicate the additional, or intensified, security measures the port facility can take to move to and operate at security level 2 when instructed to do so. It should indicate the possible preparatory actions the port facility could take to allow prompt response to the instructions that may be issued at security level 3 (the highest level set when a significant security incident is probable, imminent, or has occurred in the local area).

Coast Guard Sector Woods Hole has recently developed an area Maritime Security Plan that covers Buzzards Bay including the Port of New Bedford. The New Bedford HDC has acquired, and continues the process of obtaining additional, new security response and surveillance equipment and modifying port infrastructure as appropriate and/or required.

Figure 9-1 Regulatory Boundaries

New Bedford / Fairhaven Harbor Plan Update 2008

Approximate Chapter 91 Jurisdiction, Approximate Designated Port Area and Federal Channels, Turning Basins and Anchorage



2008 Planning Area
Approximate Ch. 91 Jurisdiction
Approximate Designtaed Port Area
Federal Channels etc.

N

0 750 1,500 3,000 Feet

Prepared by the
Urban Harbors Institute
of the University of Massachusetts Boston

For the
New Bedford / Fairhaven
Harbor Plan Renewal Committee

On behalf of
Fort Point Associates
Urban Harbors Institute
Apex Companies
and
FXM Associates

Data from
MassGIS
City of New Bedford
Town of Fairhaven
Urban Harbors Institute
Apex Companies

September 2008

APPENDIX A

DREDGE MANAGEMENT PLAN

December 2009

D R A F T

New Bedford Harbor Development Commission
and the
Town of Fairhaven Planning Department

New Bedford / Fairhaven Harbor Dredge Program

DREDGE MANAGEMENT PLAN

(Rev 02-B)

Prepared for:
The New Bedford Harbor Development Commission
and
The Fairhaven Planning Department

Prepared by:
Apex Companies, LLC
New Bedford and Boston Massachusetts
and
Fort Point Associates
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Boston, Massachusetts

D R A F T

New Bedford / Fairhaven Harbor Dredge Program
DREDGE MANAGEMENT PLAN
(Rev 02-B – July 14, 2009)

1.0 Introduction

This Dredge Management Plan (DMP) has been prepared under the auspices of the New Bedford Harbor Development Commission (HDC) and the Town of Fairhaven Planning Department (FPD). The Plan describes the process and framework for the implementation of *Navigational Dredging* in New Bedford/Fairhaven Harbor in the form of the **New Bedford / Fairhaven Harbor Dredge Program**, which at the time of the publication of this revision of this Plan will have just completed Phase III of Harbor Dredging activities. The Plan includes sections that describe the *Purpose, Scope, and Authority* (Section 2.0), *Historical Context* (Section 3.0), *Regulatory Framework* (Section 4.0), *Dredge Program Process* (Section 5.0), *Dredged Material Disposal* (Section 6.0), *Operation and Maintenance of Dredge Disposal Facilities* (Section 7.0), *Productive Reuse Strategy for Disposal Scenarios* (Section 8.0), *Schedule* (Section 9.0). This Plan augments information contained in the **New Bedford/Fairhaven Harbor Plan** (Harbor Plan - 2009 Version), and is intended to be utilized in concert with the Harbor Plan as well as other regulatory and guiding documents that define the dredging and development aspects of the Harbor.

2.0 Purpose, Scope and Authority

The following section describes the Purpose of the Plan, the Scope of application for the Plan, and the Authority under which the Plan will be administered. This Plan is intended to be a living document that is updated periodically as part of the Harbor Dredge Program.

2.1 Purpose

Dredging of any Port and Harbor within the United States is a challenging and difficult undertaking. Dredging in New Bedford/Fairhaven Harbor is a particularly challenging undertaking involving many factors, including contaminated sediments that blanket the bottom of the Harbor, a busy active Port that represents the largest per-dollar fishing Port in the country, a wide variety of Harbor infrastructure that spans centuries of development, numerous Harbor users ranging from small recreational watercraft to full size cargo and bulk products ships, and a broad and diverse clientele The purpose of this Dredge Management Plan is to provide a roadmap for managers that are involved in the maintenance and upgrade of Port and Harbor infrastructure including dredging and dredge-related activities.

2.2 Scope

The Plan provides an overview of the activities that have evolved to allow dredging and navigational servitude maintenance of the waterways that constitute the Harbor and the Port. It is anticipated that the Plan will be utilized by the HDC, City, and Town officials in their planning, design, and implementation of Harbor Dredging activities. The Plan presents the process for dredging that has evolved to date through the coallessing of several different processes, and also presents a framework

for the process of dredging and harbor maintenance moving forward. The DMP is intended to be a living document, and updates to the Plan are encouraged as the process moves forward and more information becomes available and experience is gained by the stakeholders involved in the process.

2.3 Authority

This Plan is prepared to be used as a resource for Harbor, City, and Town Officials and Regulators. Dredging in the Harbor is regulated under a number of different processes, including the USEPA Superfund Process, the US Army Corps of Engineers Navigational Dredging Process, the State Enhanced Remedy Process, and various Federal, State, and Local Programs, including Resource and Environmental Regulatory Programs. Because most of the sediment that blankets the bottom of the Harbor is contaminated, the principal process for dredging discussed in this Plan is the State Enhanced Remedy Process (SER), which deals with the dredging of contaminated sediments and governs much of the navigational maintenance and improvement dredging in the Harbor.

Dredging in the Harbor is managed by the New Bedford Harbor Development Commission (HDC) for areas in New Bedford, and the Town of Fairhaven Panning Department for areas in Fairhaven, with the Town of Fairhaven typically utilizing the contract vehicles and contracting authority of the HDC to conduct actual dredge project work utilizing a Memorandum of Agreement struck between the two communities (see section below for more information concerning MOAs). Most of the dredging and disposal activities that occur in the Harbor as part of the New Bedford/Fairhaven Harbor Dredge Program are overseen by the State Enhanced Remedy Committee (SER Committee), an interagency group of Federal, State, and Local regulators that act to regulate the implementation of dredge projects in the Harbor (see Section 4.0 below for more information). Currently, the SER Committee makes the determination as to whether or not a particular dredge project that is proposed for the Harbor can be regulated under the special SER process, or if that project should be permitted via the normal permitting process.
A series of interagency and interdepartmental Memorandums of Agreement and Memorandums of Understanding have been developed between the various principal stakeholders involved in the Harbor Dredge Program and the SER Process. These agreements include (but are not necessarily limited to):

- MOA between the USEPA and the MADEP;
- MOA between the MADEP and the New Bedford HDC;
- MOA between the Town of Fairhaven and the New Bedford HDC;
- Contract Agreements between the New Bedford HDC and private parties or individuals for disposal of dredge material into CAD Cells in the Harbor that are managed by the HDC; and
- Contract Agreements between the New Bedford HDC and private parties or individuals for dredging at those parities or individuals facilities.

Copies of examples of these agreements are included in Attachment A of this Plan. One example agreement each of the Contract Agreements for dredging and disposal at private parties is included in Attachment A for reference.

3.0 Historical Framework

For hundreds of years, New Bedford Harbor has served as a protected port for maritime trade. In the latter half of the 18th century, New Bedford harbor was one of the dominant whaling ports on the east coast, as well as a bustling shipping port for the schooners and cargo vessels plying the expanding American maritime commerce waterways. With the growth of American industry, businesses sprang up along both the New Bedford and Fairhaven shorelines of the Harbor. Textile mills and manufacturing facilities were built on the edge of the Harbor to take advantage of the access to the working waterfront. With the increase in industry came the development of a supporting infrastructure focused on maritime commerce. Piers and rail-lines to the Harbor edge were constructed to facilitate the flow of goods and services to the waterfront. With the industrial revolution in America came a shift in the type of manufacturing occurring in the Harbor-front factories. A brisk electrical component and transformer industry moved into the New Bedford waterfront area and thrived through the 1950's and 1960's. With this newer type of electronic component manufacturing came new types of waste discharge into the Harbor. Metals and PCB contaminated oils and byproducts made their way into the Harbor through sewer lines and other outfalls, contaminating the sediments on the bottom of the Harbor. By the late 1970's, sediment sampling and testing information collected by federal and state officials indicated that significant concentrations of metals and PCB's existed in the Harbor bottom sediments. At some locations, the PCB concentrations exceeded the thousands of parts per million level, earning New Bedford Harbor the dubious honor of being one of the most contaminated harbors on the east coast.

3.1 New Bedford Harbor Superfund Site (CERCLA SITE)

From the 1970's to the 1990's the U.S. Environmental Protection Agency (USEPA) and the MA Department of Environmental Protection (MADEP) studied the nature and extent of the contamination on the bottom of the harbor, collecting the information required to develop a remedy for the problem. One of the first actions taken was a closing of the shellfish beds in the Harbor, and a ban on the taking of finfish, crabs, and lobsters from the Harbor. Local residents were warned to not come into contact with the Harbor bottom sediments. In the late 1990's, the USEPA began the implementation of emergency cleanup activities by instigating a "hot-spot" removal program, whereby the highest concentration contaminated sediments (those in the hundreds to thousands of ppm) were removed from the upper reaches of the Harbor (in the vicinity of one of the former electronics component manufacturing facilities). In 1998, the USEPA signed the Record of Decision (ROD) for the New Bedford Harbor Superfund Site, which determined that the USEPA remedy for the Harbor would be focused on the removal of contaminated sediments with PCB concentrations in excess of 50 parts per million (ppm) from the Harbor bottom. This designation effectively split the Harbor bottom sediments into two categories; those sediments that exceeded 50 ppm PCB's (slated for removal by the USEPA); and those sediments with PCB concentrations below 50 ppm.

3.2 State and Local Action

Just as the USEPA cleanup of the upper reaches of the Harbor was beginning, local and State officials began to become concerned about the portions of the Harbor that would not receive the USEPA cleanup. Concentrations of PCB's in sediments throughout much of the Harbor exceeded

safe levels. In particular, most of the working Port area sediments were contaminated with between 2 and 50 ppm PCB's, curtailing maintenance dredging and pier and other infrastructure repair and improvement projects. There simply existed no economically viable method for dredging or otherwise dealing with the contaminated sediments that blanketed the bottom of the Harbor. So for over 30 years, maintenance and improvements to the Port infrastructure were put on hold, and sediments began piling up in the channels and fairways of the Harbor, limiting free vessel movement and precluding the efficient use of many of the piers along both sides of the Harbor. Further complicating the situation, the older industrial ports of the south coast area (including the New Bedford Harbor area) suffered from severe economic recession in the later half of the 20th century, as many of the factories and manufacturing facilities that once supported the area closed down or moved operations to other areas. Local officials (supported by the local populace), cognizant of the growing pressures on the economy of the area, decided that the Harbor and the waterfront represented the best resource for future growth for the area.

3.3 History of Dredging in the Harbor to Date

Records of Navigational dredging in the Harbor prior to 2000 are sparse, but indicate a history of modern dredging and shoreline redevelopment from the early 1900's to the early 1960's. Channels, fairways, and slips were dredged for maintenance purposes when sediment buildup began to effect operations. When maintenance dredging began to be required again in the 1970's, the presence of contamination in the sediments in the Harbor became known, and maintenance dredging for navigational purposes throughout the Harbor ceased. Dredging and channel maintenance in the Harbor remained stalled until the New Bedford Harbor Development Commission began Phase I of the New Bedford Harbor Dredge Program in 2001. This first dredge project became the pre-cursor to the full fledged program to dredge the Harbor for maintenance purposes. In the subsequent years, both the New Bedford/Fairhaven Harbor Dredge Material Management Plan (DMMP) and the State Enhanced Remedy (SER) Program were constituted into active programs, which leveraged the Phase I dredge project to create an overarching process for navigational dredging within the Harbor that has thus far resulted in the removal of over 250,000 cubic yards of contaminated material as part of the navigational maintenance dredging program. The program has progressed through Phase III, resulting in the maintenance dredging of nearly 30 properties. A brief summary for Phases I through III of the dredge program is included in the paragraphs below.

New Bedford/Fairhaven Harbor Dredge Program Phase I through Phase III

Phases I, II, and III of the New Bedford/Fairhaven Dredge Program were conducted between 2001and 2009. **Figure A-1** below presents a compilation of the properties and areas of the Harbor that were included in Phases I through III of the dredge program, and the sections below provide summaries of each phase. **Figure A-2A through A-2D** presents diagrams of the potential allowed location for CAD Cells and related maps, as noted via Ammendment #2 to the DMMP Plan.

New Bedford HDC - Phase I Dredging

The City of New Bedford and the New Bedford Harbor Development Commission (NBHDC) began with the expedited dredging of approximately 70,000 cubic yards of PCB-contaminated sediment from a slip on the south side of the State Pier and adjacent navigation channel in New Bedford

Harbor. Preliminary bathymetric surveys performed by the HDC's engineer during the summer and fall of 2001 indicated that there were several locations that would not accommodate large deep-draft vessels within their projected travel and swing radius. The dredging was required by the City of New Bedford to accommodate a cruise ship scheduled to dock at State Pier during the summer and fall of 2002.

Beginning with preliminary bathymetric surveys of the harbor, and a sampling and analysis program to characterize the sediment and provide engineering parameters, the HDC completed the preliminary investigations for the project during the fall of 2001. Permits were filed with the necessary regulatory agencies to complete the dredge work including the submittal of an Expanded Environmental Notification Form and a Single Environmental Impact Report under MEPA, and other agencies having permitting authority including: USACE, MADEP, and coordination with MADMF, MACZM and New Bedford Conservation Commission. Design engineering for the dredging, dewatering and temporary storage of the sediments was completed in the winter of 2001/2002 and a dredging contractor was procured in the Spring of 2002. A plan was implemented that involved the innovative reuse of contaminated sediments. The sediments were stabilized with concrete additives and used as landscape berm material at an adjacent brownfield railyard. Dredging of the harbor began in May 2002 and was completed in early September 2002. In order to ensure compliance with permit requirements and project plans and specifications, the HDC had a Resident Engineer oversee the work and act as Owner's Representative for Construction Oversight and Quality Control.

Evolution of the Dredge Process to Enable Future Phases

Concurrent with the Phase I dredge project, MACZM undertook (and subsequently completed) its Dredge Materials Management Plan (DMMP) for New Bedford/Fairhaven Harbor, which resulted in the allowance of Confined Aquatic Disposal (CAD) Cells for the disposal of contaminated dredge materials generated from navigational dredge projects in the Harbor for the first time. The availability of a local disposal option for dredge sediments that did not involve the shipping of materials to out-of-state landfills or treatment for upland re-use created a cost-effective disposal option for contaminated sediments generated from navigational dredging projects.

Also concurrent with the effort to develop a viable in-harbor disposal scenario, the stakeholders involved with all of the dredging in the Harbor, including the HDC, the Town of Fairhaven, the US Environmental Protection Agency (USEPA), the MA Department of Environmental Protection (DEP), the US Army Corps of Engineers, the State and Local Resource Agencies, the National Oceanic and Atmospheric Administration (NOAA), and the local and regional interested groups and parties recognized that a new process for regulating and overseeing dredging in the Harbor would be necessary as well. Even with a viable disposal option, forward progress on navigational dredging could be streamlined through the development of a regulatory process that looked at the whole navigational dredging program holistically. Originally developed through NOAA's *Portfields* initiative, a steering committee that included the stakeholders involved with dredging, harbor sediments, and environmental issues was convened for the purpose of creating a special process focused on Navigational Dredging in the Harbor. The development of a new process for navigational dredging revolved around a provision in the New Bedford/Fairhaven Harbor Superfund Remedy Record of Decision (ROD) which was known as the State Enhanced Remedy (SER)

Provision. This provision extended Superfund authority to the removal and dredging of non-Superfund contaminated material within the Harbor (see Regulatory Framework below for additional information on the SER process). The process that grew out of the initial *Portfield* sessions became known as the SER process, and the stakeholders involved in navigational dredging in the Harbor adopted the SER process for ensuing phases of dredging. Following Phase I, Phases II and III were conducted utilizing both the DMMP CAD Cell concept and the SER regulatory process.

New Bedford Harbor - Phase II Dredging

Phase II Dredging involved several separate construction elements that included the development of a CAD Cell in the Harbor for the disposal of contaminated dredge material, and the dredging of several slips, fairways and channels in the Harbor in a sequence of two sup-phases of work.

Part 1 of the Phase II Dredge Project began in 2003 with the investigation and design of dredge areas adjacent to Maritime Terminal, White's Pier, and a section of the New Bedford Harbor Channel south of the Route 6 Swing Bridge. This phase of the project also included the expedited dredging of approximately 32,000 cubic yards of PCB-contaminated sediment from an area north of Fish Island near Norpel Terminal as well as the PCB-contaminated organic sediment located in the vicinity of a new confined aquatic disposal (CAD) cell to be constructed at a later date. Material removed from the Fish Island area and the top of the future CAD cell was disposed of in an area identified as the "borrow pit" CAD cell located north of Fish Island.

The scope of work included pre-engineering studies, design, and implementation of the sampling and analysis program, including the establishment of preliminary dredge limits with associated volume estimates; research and evaluation of disposal methodologies; and preparation of a concept model for the project. Sediment sampling and analysis was conducted in order to characterize the sediments to be dredged, and bathymetric surveys and detailed bottom characterization was conducted utilizing marine geophysical techniques.

For the first time, this project included the use of innovative techniques under the State Enhanced Remedy (SER) process. The process allowed stakeholders to have direct input into the project development, design and implementation via monthly progress meetings held to keep stakeholders up to date on progress and to obtain input and direction on the process. Through the SER process, coupled with the DMMP plan, the HDC and the FPD were able to incorporate the use of an existing "borrow pit" on the floor of the harbor as the initial Confined Aqueous Disposal (CAD) cell in the Harbor. The PCB contaminated sediments from the dredged areas were placed in the 40,000 cubic yard Borrow Pit CAD Cell to be capped with clean material upon consolidation and settlement. The Borrow Pit CAD served as a pilot for future phases of CAD Cell development in the Harbor. SER committee approvals, design, and procurement of a contractor for Part 1 was completed in 2004, and this phase of the dredging was completed in February of 2005.

Part 2 of Phase II involved the creation of a constructed CAD Cell (named CAD Cell #1) in the Harbor. Dredging for the new CAD Cell began in January 2005. Removal of approximately 20,000 cubic yards of organic material from the top of CAD Cell #1 was complete by March 1, 2005, with the material placed in the existing Borrow Pit CAD Cell. In an effort to ensure compliance with the relevant Performance Standards dictated by the SER Process, a resident engineer was assigned to

perform water quality monitoring and continuous bathymetric surveys during dredging, as well as post-dredging bathymetric surveys for comparison to the design specifications.

CAD Cell #1 involved the construction of an 85,000 cubic yard Confined Aquatic Disposal (CAD) Cell north of Fish Island. CAD Cell #1 was constructed because all of the PCB contaminated sediments scheduled to be dredged as part of Phase II would not fit into the Borrow Pit CAD Cell. As part of a beneficial re-use scheme devised as part of the SER process, uncontaminated material (sand) removed during the construction of CAD Cell #1 was transported to an area outside of the New Bedford Harbor hurricane gates to be utilized as part of a cooperative underwater pilot capping study. This area is part of the EPA Superfund Site Operable Unit #3 (OU #3). The pilot capping project included the precision placement of the 85,000 cubic yards of material in shallow water over a 19 acre PCB contaminated area. Bathymetric surveys were continually performed during the capping project and were utilized to evaluate the cap thickness and placement technique.

Dredging of the CAD cell and placement of the material in the pilot cap area began in June 2005. Removal of the approximately 85,000 cubic yards from CAD Cell #1 and placement in the OU #3 pilot capping area was completed in July 2005. As with the navigational dredging elements, the pilot capping project included water quality monitoring and continuous bathymetric surveys during dredging and material placement as well as post-dredging and placement bathymetric surveys for comparison to the design specifications. Ongoing monitoring of the OU #3 cap is performed by the EPA. Thus far this monitoring has included underwater camera work, cap sampling for PCBs, cap thickness monitoring through regular bathymetric surveys, sub-bottom profiling and biological monitoring.

Upon completion of the excavation of CAD Cell #1, approximately 12 different facilities throughout the harbor in New Bedford and Fairhaven were dredged and the contaminated sediments were disposed of in the 85,000cy CAD cell. The dredging and placement in this CAD cell were completed in March 2007.

New Bedford Harbor – Phase III Dredging

The HDC and the FPD are currently involved in the Phase III Dredge Project. This phase of the program includes the construction of a new approximately 100,000cy CAD Cell #2 in the harbor.

Pre-design surveys, sediment characterization, and sampling tasks to design the new CAD Cell, (CAD Cell #2), situated in the Popes Island North (PIN) area of the Harbor, were completed in the 2007/2008 season. For this and planned future CAD cells, an expansion of the Dredge Material Management Plan boundary was necessary to increase the available disposal area design footprint as identified in the Final Environmental Impact Report, last modified in 2004. A Notice of Project Change (NPC) was filed with the MEPA Office of the EOEEA to expand the area available for situating future CAD cells. The increased area provided considerable design flexibility for constructing additional, smaller capacity CAD cells with lower associated construction costs that are better suited for existing funding mechanisms. Although the State Enhanced Remedy (SER) process provided significant benefits with fast-track streamlining of regulatory oversight and permitting within New Bedford Harbor, construction activities impacting areas outside of the Superfund jurisdiction required additional agency permits and approvals. Before construction of CAD Cell #2

could begin, submission was made to the USACE in March 2008 for a Suitability Determination to establish which sediments generated as part of the construction of a new CAD Cell must be disposed in an existing CAD Cell within the Harbor and which sediments dredged to create the CAD Cells could use open ocean disposal of acceptable material at the CCBDS. The Suitability Determination request included sediment sampling and testing information from a sampling program conducted in the proposed construction area. The USACE determination that sediments below a depth of 3 feet could be disposed of at CCBDS established essential volume criteria for designing CAD Cell #2 and for applying for a USACE Programmatic General Permit (PGP) to guide open-ocean disposal of these materials. A PGP was issued in 2008 by the USACE for the disposal of up to 1 million cubic yards of clean CAD Cell material at the CCDS provided a suitability determination is sought and approved for each CAD Cell constructed.

Plans and specifications were incorporated into a bid package for the procurement of a series of dredge contractors to construct CAD Cell #2, and Top of CAD Cell #2 contract was awarded and construction began in May of 2008 and completed in July 2008. More than 34,000 cubic yards of PCB-contaminated dredge materials determined to be unsuitable for open-ocean disposal by USACE were removed from the top of CAD Cell #2 and disposed into CAD Cell #1.

To complete the construction of CAD Cell #2, a construction dredge contractor was procured to complete the dredging of CAD Cell #2 to its full depth. Of the more than 100,000 cubic yards excavated during construction of the Bottom of CAD project, the majority of this suitable material excavated was sent to the CCBDS under terms of the PGP. A few thousand cubic yards of remaining dredge material was utilized for partial capping of the Borrow Pit CAD Cell, marking the first event where capping of a CAD Cell in the Harbor had occurred. The valuable experience gained from this preliminary capping exercise provides important information for future capping activities within New Bedford Harbor and elsewhere.

With a completed CAD Cell #2 open in the Harbor and ready to receive harbor sediment generated from navigational dredging, the HDC and FPD selected a series of dredge contractors to remove the sediment from the various maintenance projects adjacent to the public and private facilities in the New Bedford and Fairhaven that made up the Phase III dredge project. Seventeen separate dredge locations were dredged as part of this project, with the contaminated sediment deposited into both CAD Cell #1 (to use up remaining capacity) and CAD Cell #2. In November 2008, the Invitation for Bid for Phase III dredging was let as two Parts. Unlike most of the areas designated for dredging, two distinctly different dredge scenarios were called for: what was considered to be “normal” dredging around piers, in driveways, slips and fairways in the middle and lower portions of the Harbor (contracted as Part A); and dredging in the northern portions of the Harbor, which presented extraordinary logistical challenges associated with accessing the CAD Cell disposal area due to low bridges (contracted as Part B). The contracts were split to facilitate the selection of a contractor with the specialized equipment suitable for transport of material through low-clearance bridges. Part B of the contract was completed in May of 2009, and the dredging of the individual facilities in the middle and lower portions of the Harbor and disposal of the dredged material into CAD Cell #2 (Part A of the contract) is currently underway and is expected to be completed in August of 2009.

New Bedford Harbor – Phase IV Dredging

The next phase in the program is expected to begin during the second half of 2009 with project design and engineering tasks. This phase of the program will include a third CAD cell and continued dredging of facilities and locations in the harbor. It is anticipated that as many as another dozen individual properties may be included in the Phase IV dredge project.

FIGURE A-1: Summary Map of Phases I, II, and III Dredging

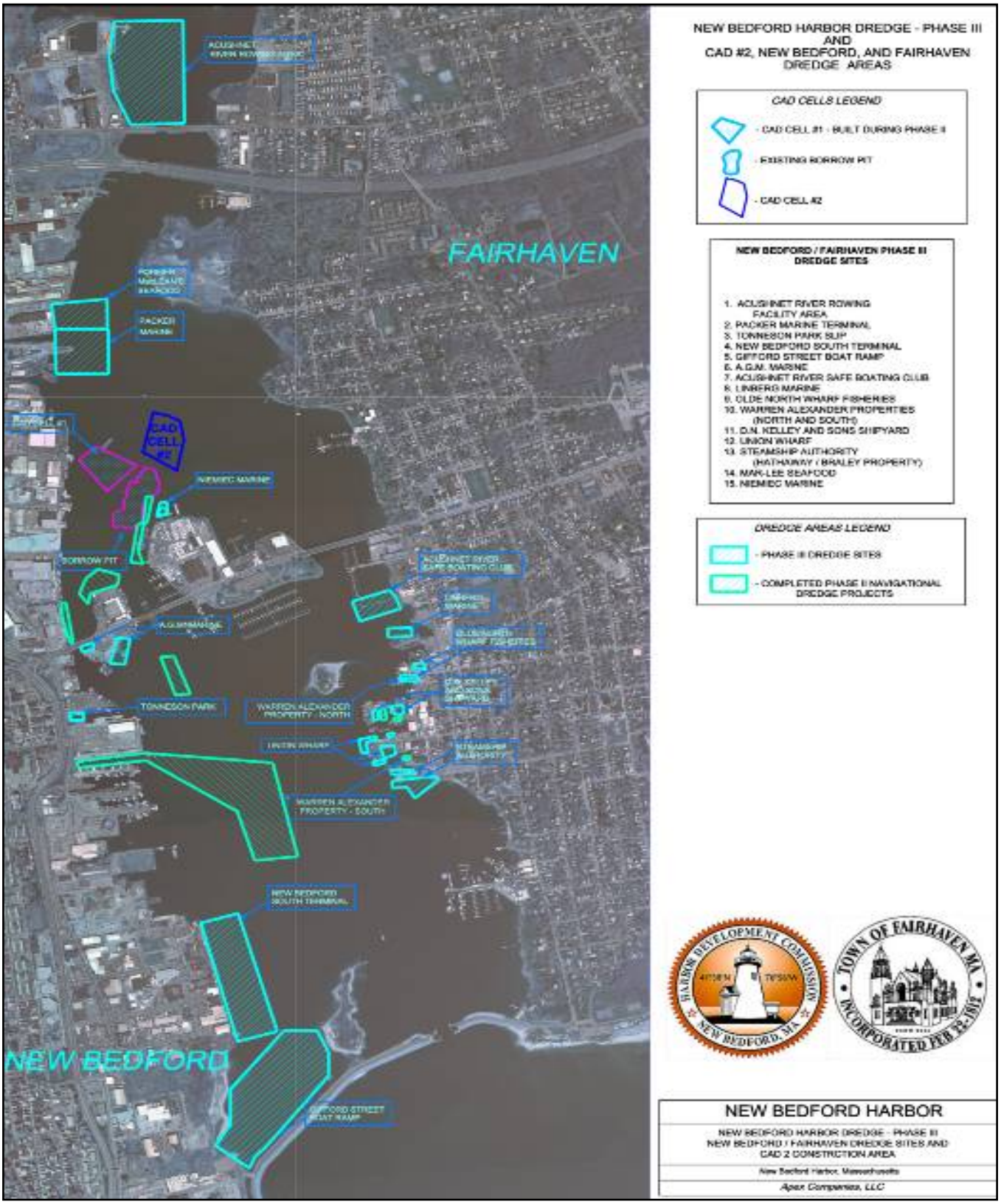
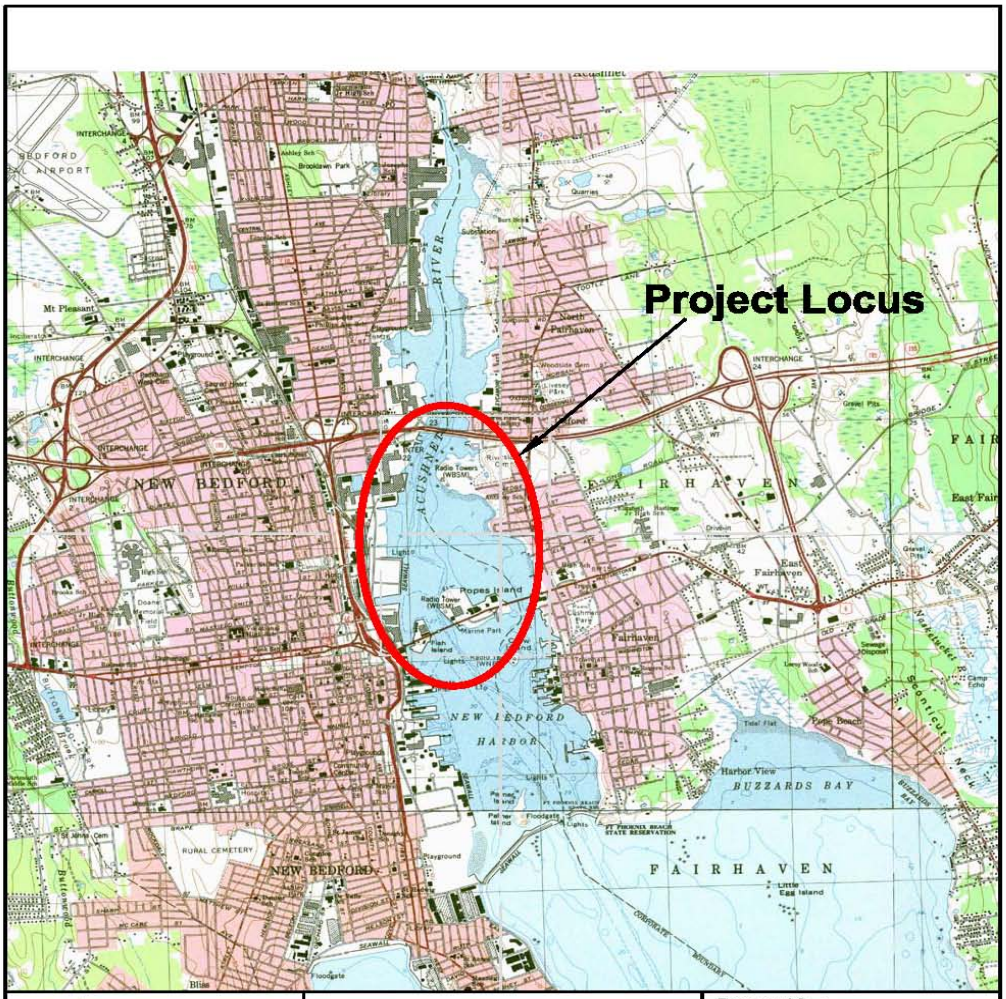


FIGURE A-2A: DMMP Area Locus Map



Apex Companies, LLC

115 BROAD STREET
SUITE 200
BOSTON MA 02110
(617) 728-0070

Project Locus Map

The City of New Bedford Dredged Material Management Plan

Prepared for:
The City of New Bedford Massachusetts

Scale: 1"=4000'
0 2000 4000 6000

FIGURE A-2B: Existing and Proposed DMMP Areas

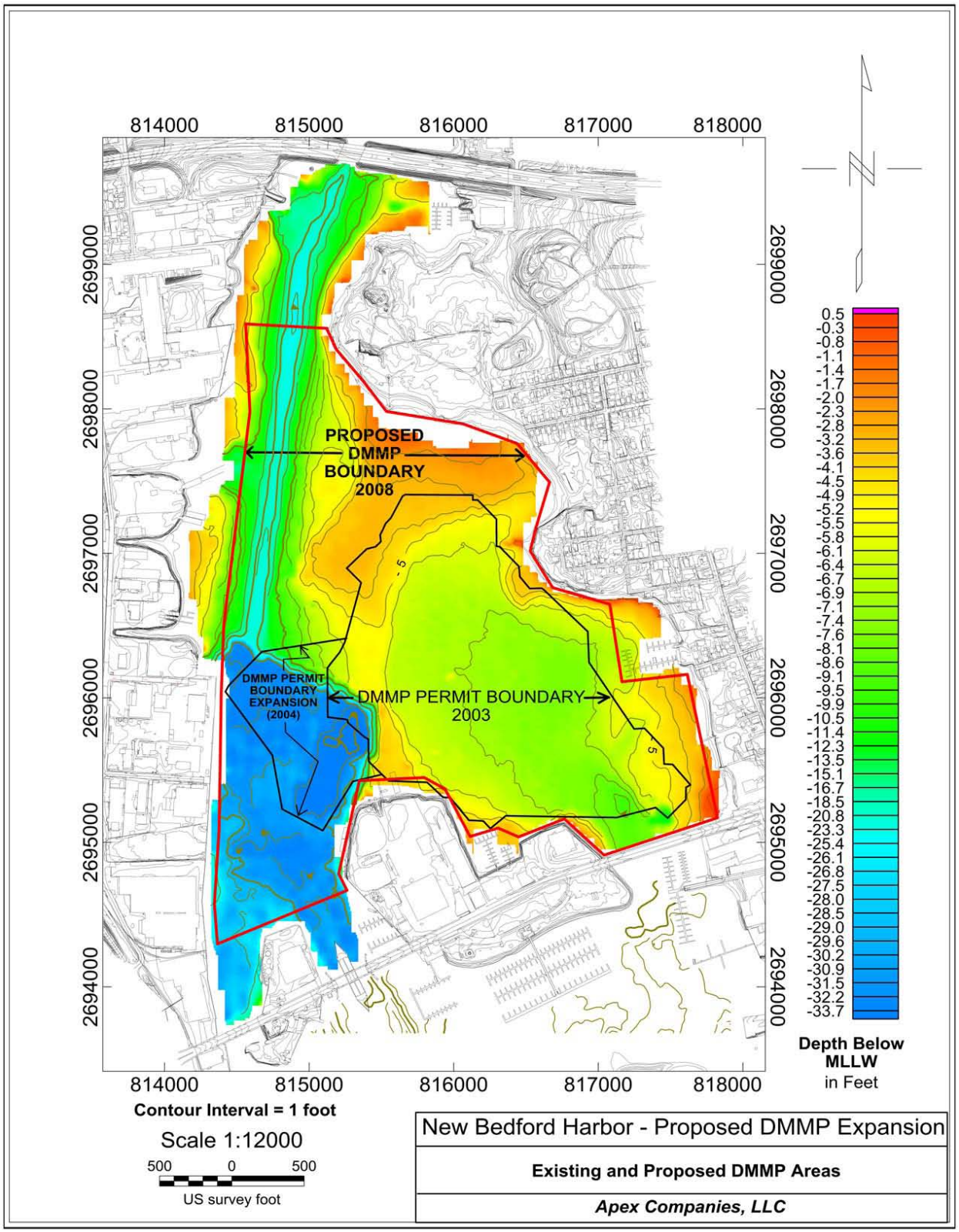


Figure A2-B2: High Number CAD Cell Scenario – Potential Layout If Large Number of CADs

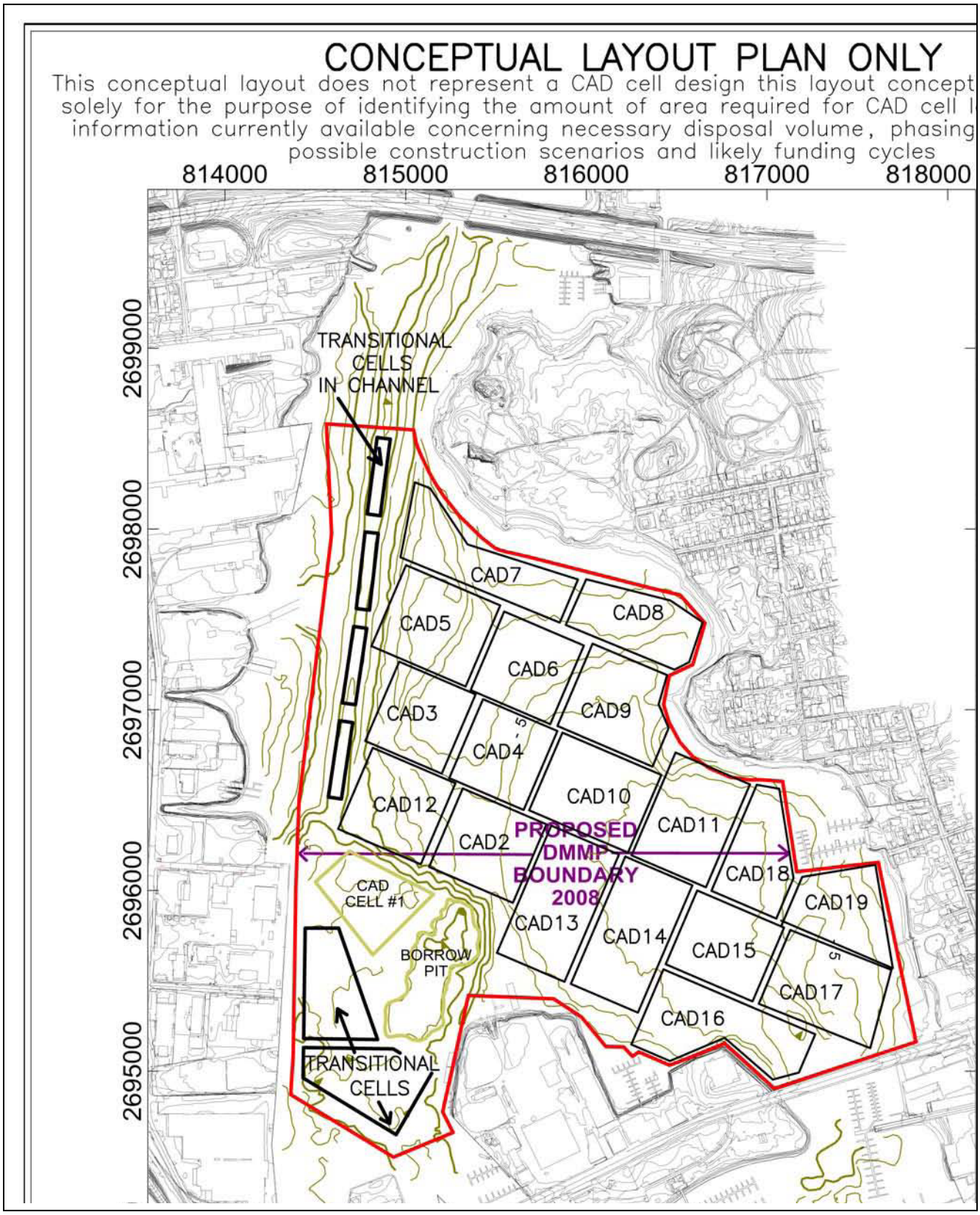


Figure A2-B3:Lesser Number CAD Cell Scenario–Potential Layout If Fewer Number of CADs

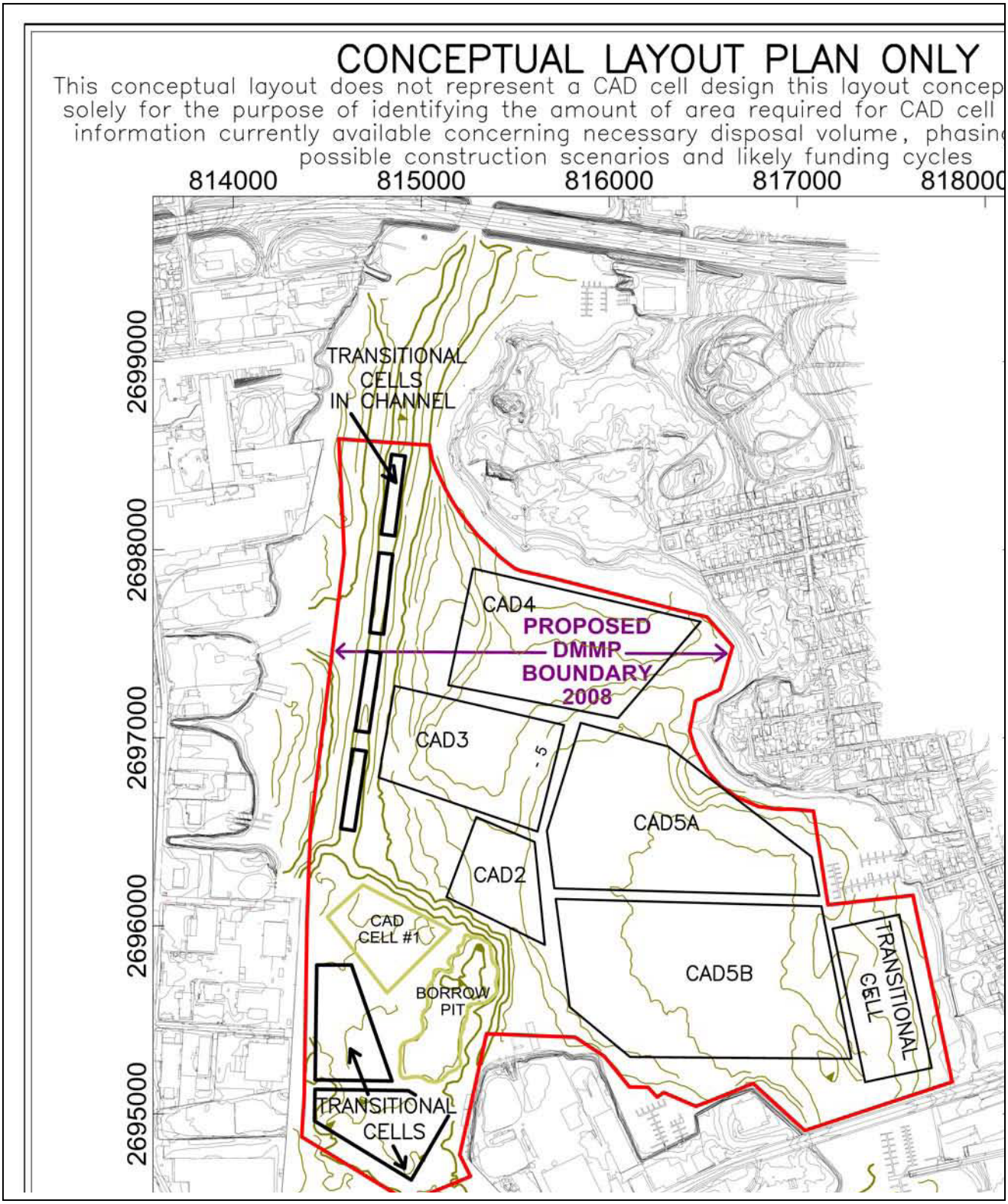


FIGURE A-2C: Estimated Elevation of Top of Rock in DMMP Area

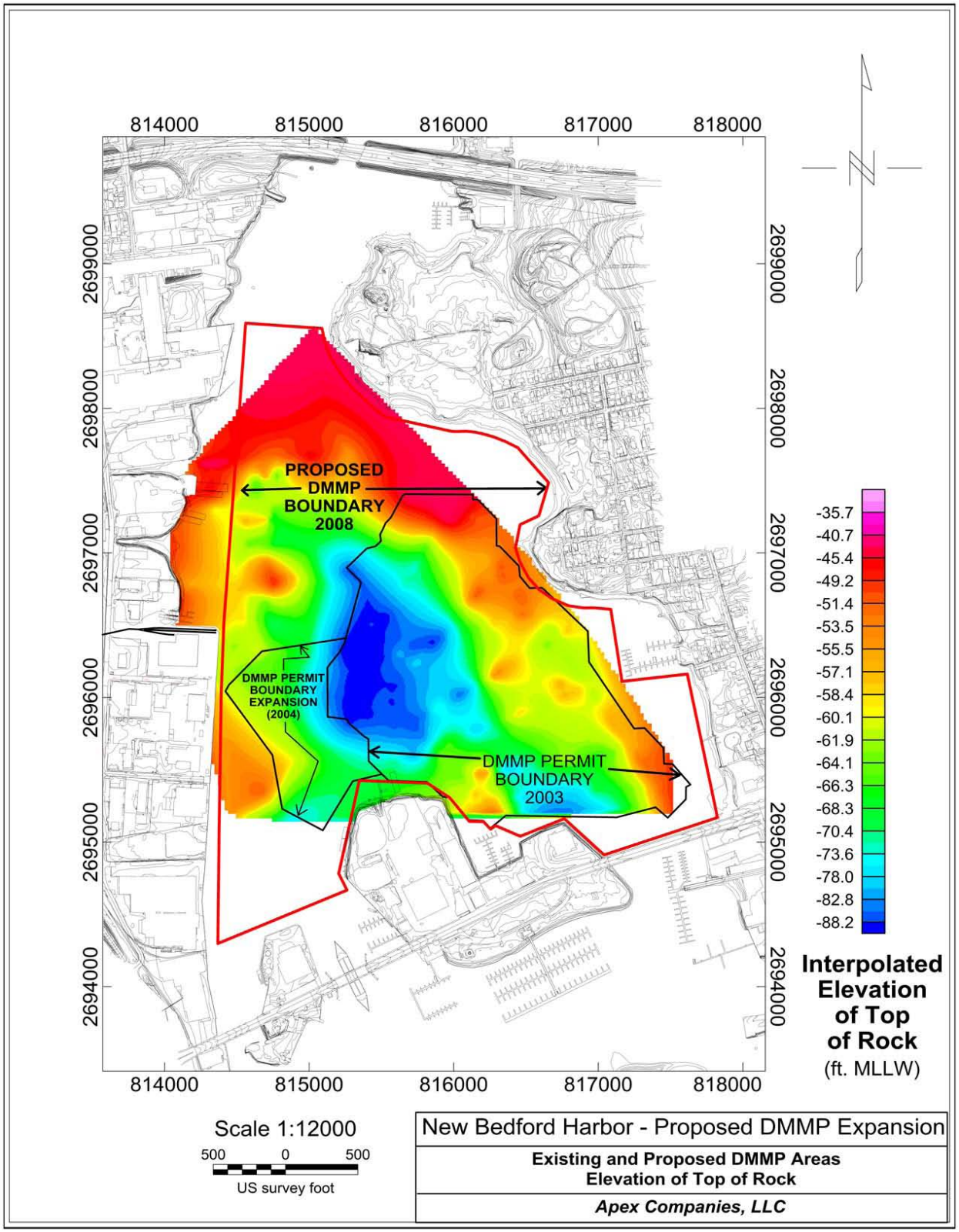
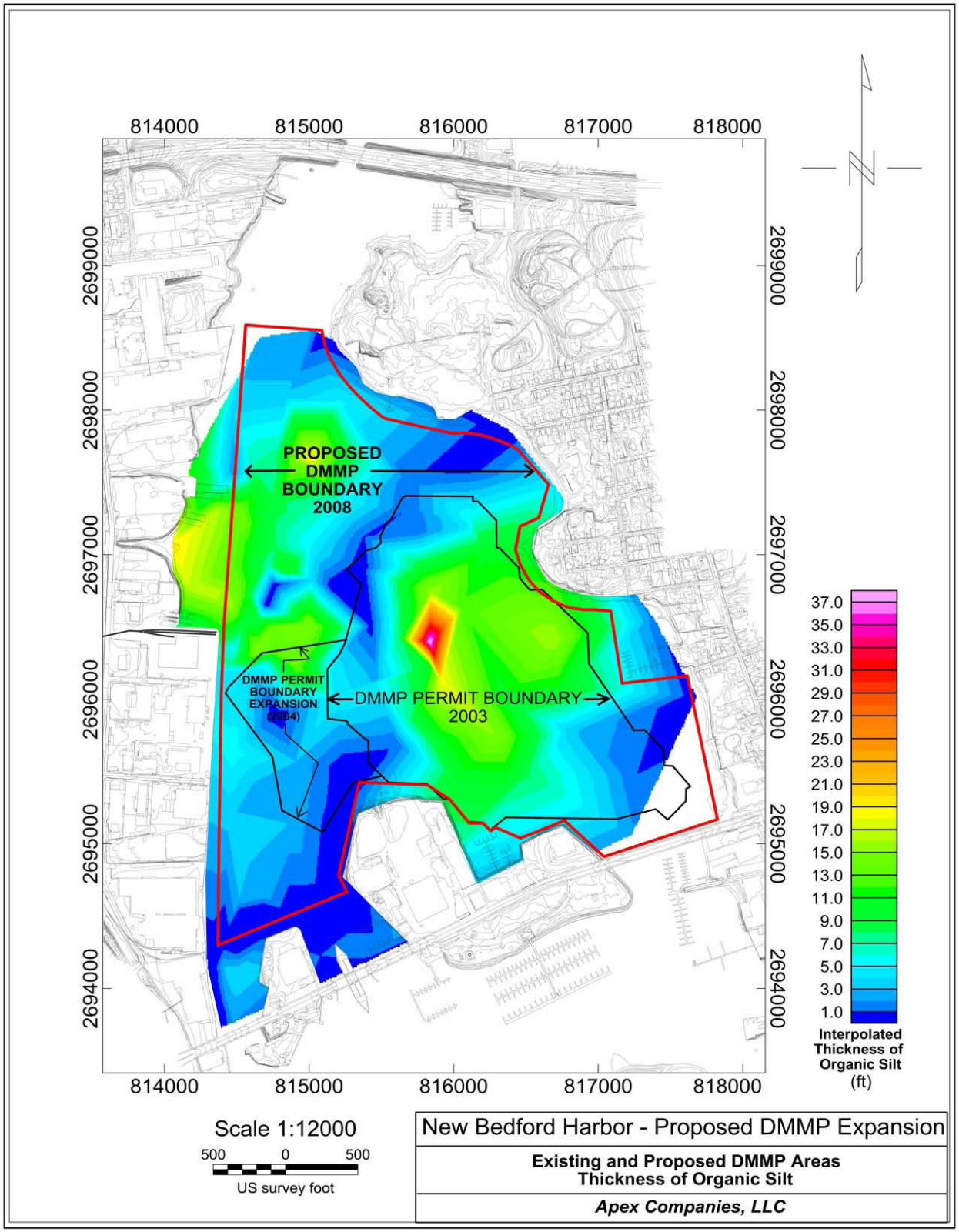


FIGURE A-2D: Average Thickness of Organic Silt in DMMP Area



4.0 Regulatory Framework

Regulatory frame for most of the Navigational Dredge Program in New Bedford/ Fairhaven Harbor is the State Enhanced Remedy (SER) process (see description below).

4.1 The SER Regulatory Process

Because of the presence of contamination blanketing most of the Harbor bottom from the Hurricane Barrier north to the mouth of the Acushnet River, City, Town, and State officials needed to craft a mechanism by which they could jump-start Harbor maintenance and improvement projects in order to both save existing maritime commerce, and attract new maritime-related businesses to the Port. The crux of the problem lie in the fact that most of the sediments in the Harbor were contaminated with PCB's and metals at levels that precluded the dredging and disposal of the sediments in anything that resembled an economic fashion. So State and local officials partnered with the USEPA in adopting a provision they called the "State Enhanced Remedy" (or SER). The intent of the SER was to streamline the regulatory process for dealing with contaminated sediments encountered outside of the areas designated for USEPA cleanup. The provision was created specifically to address the issue that all future maintenance or improvement projects in the Harbor would be forced to deal with - the presence of contamination in sediments at levels that virtually precluded the advancement of necessary maintenance and improvement projects. The State Enhanced Remedy provision was designed to essentially allow the Port to emulate the Superfund process in the way it would deal with contaminated sediments that were within the boundaries of the overall Superfund Site, but outside the areas that the USEPA was going to clean up. The concept was formalized and authorized through inclusion (as a provision) in the 1998 USEPA Record of Decision (ROD) for the New Bedford Superfund Site. Local and State officials now had the authority they needed to move forward with dredging and other infrastructure maintenance and improvement projects.

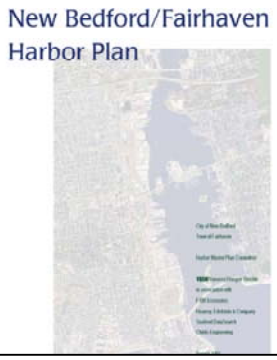
However, the SER provision inserted into the ROD was vague about exactly how the authority that was present within the provision was to be implemented. Implementation of Superfund authority has a long and successful history at Superfund Sites, where a well defined process for implementation has been developed through the years that includes required documentation, submittals and approvals, sampling and laboratory testing procedures, QA/QC, and regulatory oversight. But the SER had no such history. New Bedford would be the first Port in the Commonwealth of Massachusetts to utilize a State Enhanced Remedy. The process simply had not been invented yet. And yet, the local and State officials dealing with the reality of the need for immediate action along the waterfront realized that if the SER were to be successful, it would need four essential components:

1. A defined authority as to which specific areas within the Harbor could be included under the SER umbrella;
2. A process by which regulatory input would be incorporated into each project;
3. A set of "Guiding Documents" that would specify the procedures and standards by which work under the provision would occur (see **Figure A-3**); and
4. Approved disposal options for the contaminated sediments from dredging projects.

FIGURE A-3: SER Process Guideline Documents

New Bedford Harbor SER Dredge Project Process

Guiding Documents



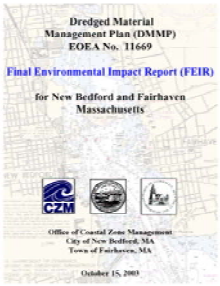
New Bedford / Fairhaven Harbor Plan

EPA Superfund Record of Decision For New Bedford Harbor (SER Provision)

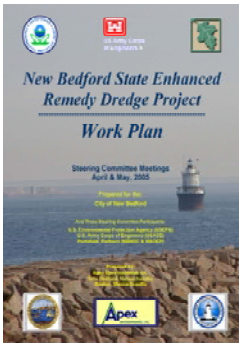
EPA Superfund ROD

MOA's

Memorandums of Agreement between the Parties



MA-CZM DMMP (Dredge Material Management Plan)



Performance Standards

- Safety & Health
- Environmental
- Water Quality
- Marine Resources
- Technical

At the time the Phase I dredge project planning was occurring, there had been no precedent for navigational dredging of known contaminated sediments in the Harbor. The principle stakeholders (the HDC and the City of New Bedford) decided that the best path forward was to conduct an initial project that could (once completed) provide standards for future SER actions. Dredging was required at the State Pier to return the slip adjacent to the pier to its original design depth to accommodate large vessels that were looking to berth at the pier. The City decided to make the State Pier Dredge Project the precursor project for the SER process and the Phase I project to dredge the fairway, driveway, and slip adjacent to the south side of State Pier in New Bedford began in 2001.

The concept to lay the groundwork for the SER process involved the use of the normal permitting process for the Phase I project; and out of that process, distill the set of Performance Standards that would be a critical piece in the eventual implementation of the State Enhanced Remedy. The State Pier Dredge Project was initiated in the fall of 2001, with a pre-application meeting with the regulatory stakeholders. By May of 2002, permits were in place, and what was to be deemed the "New Bedford Harbor Dredge Project – Phase I" began the construction phase. The project involved the dredging of 70,000 yards of contaminated sediments from the south side of State Pier and the approaches to the Pier. The sediment was initially dewatered in-scow, and was then transported by barge to an off-loading area at the Harbors edge. There, it was transferred to trucks for upland placement (as berms associated with a site cap) at a Brownfields reuse site (an abandoned rail site that was in the process of revitalization) adjacent to the Harbor. Though the upland disposal option provided several technical and regulatory challenges, it significantly simplified the overall permitting process for the project and allowed the project to move ahead quickly.

With the successful completion of the State Pier dredge project, the City and the New Bedford Harbor Development Commission were now armed with a set of Performance Standards that could form one of the cornerstones of the State Enhanced Remedy process. But one of the other barriers to full implementation of the State Enhanced Remedy still had to be overcome: the need for a viable, cost-effective disposal option for contaminated sediments dredged from the bottom of New Bedford Harbor. Without a viable in-water or Harbor-side disposal option, it was unlikely that significant dredging would proceed in the Harbor under any process. Both from a space, and from a cost perspective, placement of nearly 2 million cubic yards of contaminated material in upland disposal locations was simply not a viable option.

The acceptance of the New Bedford/Fairhaven Harbor DMMP by the Secretary of Environment in 2003 provided the necessary preferred disposal option in the form of CAD Cells. In the summer of 2002, the National Oceanic and Atmospheric Administration (NOAA), which had developed a program known as the *Portfield Program* to assist urban contaminated harbors with their environmental and maintenance issues, chose New Bedford to be one of its Pilot Ports – and initiated discussions with the local community, the stakeholders of New Bedford and Fairhaven, and the Regulatory community, concerning the prospect of developing a stand-alone dredge program in the Harbor that could address the navigational needs of the Port while being protective of the environment and serving the local needs. From the initial Portfield meetings, a process was developed by which projects would be vetted by a State Enhanced Remedy (SER) Committee that contained members of the major stakeholder entities in the Harbor (namely the HDC and the FDP),

and in the Regulatory community. The committee would meet monthly (when there is project work to consider) to review and approve of project elements as it moves forward, allowing for direct involvement between project stakeholders and the regulators and shortening typical review-and-approval timeframes. While each project tends to be unique, a general process of flow has been developed that allows for the implementation of the SER. The general project process flow involves:

- Until such time when the Harbor Remedy (as noted by the SER) is complete, Projects in the Harbor requiring dredging are processed through the State Enhanced Remedy (SER).
- Individual projects requiring dredging are brought to the principal stakeholder authority: (the HDC in New Bedford, and the Planning Department in Fairhaven);
- The HDC and FPD package the projects into phases of work: the content of each phase of dredging is based upon the priority of the need, funding availability, logistics, etc.
- Once the phase of work is set, investigations and surveys are conducted to conceptualize the number, size, and volume of dredge locations.
- Dredge material disposal scenarios are evaluated and selected based upon merit and cost/benefit.
- Once the design phase of the project begins, a series of guiding documents are developed, roughly following the EPA Superfund Project process. The documents include a work plan, sampling and analysis plans, health and safety plans, etc. A more complete list of the plan documents that are prepared as part of the SER process are included in Section 5 below.
- On a monthly basis, project information, documents, and designs are presented in the SER meetings to the SER Committee for review and approval.
- The project process and designs are developed in accordance with the *Performance Standards* that were distilled out of the Phase I dredge project and adopted for the SER process. The SER Committee monitors compliance with the Performance Standards via the monthly meetings and presentations by the principal stakeholder engineers.
- Once the project designs are completed and plans and specifications are developed and reviewed by the SER committee, the project moves into the construction phase.
- A contractor or contractors are procured to conduct the dredging, and the principal stakeholder's (the HDC) resident engineer conducts oversight and monitoring activities to ensure that the contractors meet both the project specification requirements and the SER Performance Standards.
- At the completion of the project, a Post-Dredge Report is completed that includes as-built surveys of the dredged areas, all of the monitoring and progress information collected as the project advanced, and results of post-dredge testing and analysis.

At the date of the writing of this version of this Plan, Phase II (completed) and Phase III (expected to be completed in summer 2009) were conducted under the auspices of the SER process. Through the SER process, full permitting activities were not required – the SER Committee provided the project oversight and approvals necessary for any work that was conducted fully within the Harbor. Permits were required (and were sought and obtained for both Phase II and Phase III) to take clean CAD Cell construction material out to the Cape Cod Disposal Site (CCDS) in accordance with the SER rule that material that is sent "offsite" (outside the portion of the Harbor that has been designated as a Superfund Site) seek conventional permit approvals.

Performance Standards Adopted by the SER Process

The Performance Standards adopted by the SER Process were distilled out of the regulatory requirements that accompanied the permits from the various regulatory agencies for the Phase I dredge project. The regulatory requirements attached to each of the permits granted to the Phase I project were compiled into one overarching set of Performance Standards that are used to guide the dredge work conducted under the SER process. The following presents the Performance Standards utilized by the SER to regulate the SER process dredging.

SER Performance Standards for Navigational Dredging in New Bedford/Fairhaven Harbor

I MADEP 401 Water Quality Program Standards:

1. Anti-degradation provisions of the Massachusetts Surface Water Quality Standards protect all waters, including wetlands. The Contractor shall take all steps necessary to assure that the proposed activities will be conducted in a manner, which will avoid violations of said standards.
2. Prior to the start of in-water work, the SER Project Manager (SER PM) shall be notified of any proposed change(s) in plans that may affect waters or wetlands.
3. As proposed, silt-curtains and absorbent booms shall be deployed to enclose the area being dredged. The contractor's plan for deployment of the silt curtains/absorbent booms shall be submitted to the SER PM for review prior to the start of in-water work. Should the deployment of silt-curtains prove not feasible or be unsuccessful, the SER PM will be notified prior to any dredging without silt curtains.
4. Water Quality Monitoring:
    a. **When the dredging operation is contained within a silt-curtained area,** the following water-quality monitoring program shall be carried out daily for the first three days of dredging and once a week thereafter:
        i. A reference location shall be established outside of and approximately 200-feet from the silt-curtained area and a monitoring location shall be established outside of and within 15-feet of the silt-curtain.
        ii. Turbidity shall be measured, using an optical backscatter sensor, at both the reference and monitoring locations, at established depths: near the water's surface, at the mid-point of the water column and near the bottom. The three values obtained shall be averaged, such that a single, representative turbidity value is calculated for the monitoring site and a single, representative value is calculated for the reference site.
        iii. Turbidity shall be measured at both the monitoring and reference site prior to the start of dredging, and once every two hours during dredging.
        iv. An exceedance of the project turbidity standard shall be attributed to project activities when the average turbidity at the monitoring site exceeds the average reference site turbidity plus the permissible turbidity increase, as outlined in the following table:

Reference Site Turbidity (NTUs)	Permissible Turbidity Increase
<10	Reference plus 20 NTUs
11-20	Reference plus 15 NTUs
>21	Reference plus 30% of reference

v. If, in two consecutive monitoring events, the average turbidity at the monitoring site exceeds the average turbidity at the reference site by more than the permissible turbidity increase, then water samples, composited over the entire water column, from both the monitoring and reference sites shall be collected and submitted for analysis of Total Suspended Solids, dissolved PCBs, arsenic, cadmium, copper, chromium, lead, mercury, nickel, and zinc. When samples are submitted to the laboratory, a 36-hour turn-round time shall be requested. Additionally, the Proponent, or their contractor, shall take operational action(s) designed to limit such exceedances, such as increasing the dredge cycle time, inspection and any necessary repair, of the silt curtains, deployment of an additional row of silt curtains or other mitigation measures. Turbidity monitoring shall continue on the schedule outlined in Section 6.a.iii, until compliance is reestablished.

vi. If compliance can not be reestablished within 48 hours, dredging shall cease and Department and any other interested local, state, or federal agency staff, in consultation with the Proponent, their contractors and/or consultants shall review the operational actions undertaken, the results of the analyses of the water samples and evaluate the biological significance of the available data and determine the requirements for additional mitigation, if any.

b. **When the dredging operation is not contained within a silt-curtained area,** the following water-quality monitoring program shall be carried out daily for the first three days of dredging and twice a week thereafter:

i. A reference location shall be established approximately 200-feet up-current from the dredge and a monitoring location shall be established 200-feet down-current from the dredge at the edge of the mixing zone.

ii. Turbidity shall be measured, using an optical backscatter sensor, at both the reference location and the monitoring location, at established depths: near the water's surface, at the mid-point of the water column and near the bottom. The three depth values obtained shall be averaged, such that a single, representative turbidity value is calculated

for the reference location and a single, representative turbidity value is calculated for the monitoring location.

iii. Turbidity shall be measured at both the reference location and at the edge of the mixing zone prior to the start of dredging, and once every two hours of dredging.

iv. An exceedance of the project turbidity standard shall be attributed to project activities when the average turbidity at the edge of the mixing zone exceeds the reference site turbidity plus the permissible turbidity increase, as outlined in the following table:

Reference Site Turbidity (NTUs)	Permissible Turbidity Increase
<10	Reference plus 20 NTUs
11-20	Reference plus 15 NTUs
21-30	Reference plus 10 NTUs
>31	Reference plus 30% of reference

v. If, in two consecutive monitoring events, the average turbidity at the edge of the mixing zone exceeds the average turbidity at the reference site plus the permissible turbidity increase, then water samples, composited over the entire water column, from both the reference location and the edge of the mixing zone shall be collected and submitted for analysis of Total Suspended Solids, dissolved PCBs, arsenic, cadmium, copper, chromium, lead, mercury, nickel, and zinc. When samples are submitted to the laboratory, a 36-hour turn-round time shall be requested. Additionally, the Proponent, or their contractor, shall take operational action(s) designed to limit such exceedances, such as increasing the dredge cycle time, inspection and any necessary repair, of the silt curtains, deployment of an additional row of silt curtains or other mitigation measures. Turbidity monitoring shall continue on the schedule outlined in Section 6.b.iii, until compliance is reestablished.

vi. If compliance cannot be reestablished within 48 hours, dredging shall cease and the Department and any other interested local, state or federal agency staff, in consultation with the Proponent, their contracts and/or consultants shall review the operational actions undertaken, the results of the analyses of the water samples and evaluate the biological significance of the available data and determine the requirements for additional mitigation, if any.

5. As proposed, dredging of contaminated, silty sediment shall be done using a closed, environmental, clamshell bucket. Where pilings or other debris are found to interfere with environmental bucket closure or equipment operation, a conventional clamshell bucket may be used to extract the pilings/debris. Sediment removal during such activity shall be minimized to the greatest extent practicable. Should dredging with the environmental bucket become unfeasible or unsuccessful, the SER PM must be notified prior to any contaminated sediment dredging not using the environmental bucket, and the contractor must also continue to meet the project water quality standard performance standards.
6. Water discharged from the barge shall be appreciably free of suspended sediment and meet the water quality criteria established in Section 4 (above). Any free liquid flowing from the barge in the harbor shall be passed through a sand media filter or equivalent filtration system (which must be approved by the project Resident Engineer) prior to discharge.
7. Diesel-powered equipment shall be fitted with after-engine emissions controls such as oxidation catalysts or particulate filters.
8. Within 30 days of the completion of the initial dredging, a bathymetric, survey of the dredge footprint, depicting post-dredge conditions, shall be sent to the MADEP SER Project Manager.
9. Disposal of any volume of dredged material at any location in tidal waters is subject to approval by the Department and the Massachusetts Coastal Zone Management office.

II MADEP Chapter 91 Waterways Standards:

1. Acceptance of these Waterways Conditions shall constitute an agreement by the Proponent to conform to all terms and conditions herein.
2. All subsequent maintenance dredging and transportation and disposal of this dredge material, during the term of this Project shall conform to all standards and conditions applied to the original dredging operation performed under this Project.
3. After completion of the work authorized, the Proponent shall furnish to the Department a suitable plan showing the depths at mean low water over the area dredged. Dredging under this Project shall be conducted so as to cause no unnecessary obstruction of the free passage of vessels, and care shall be taken to cause no shoaling. If, however, any shoaling is caused, the Proponent shall at his/her expense, remove the shoal areas. The Proponent shall pay all costs of supervision, and if at any time the Department deems necessary a survey or surveys of the area dredged, the Proponent shall pay all costs associated with such work.
4. The Proponent shall assume and pay all claims and demands arising in any manner from the work authorized herein, and shall save harmless and indemnify the Commonwealth of Massachusetts, its officers, employees, and agents from all claims, audits, damages, costs, and expenses incurred by reason thereof.
5. The Proponent shall, at least three days prior to the commencement of any dredging in tide water, give written notice to the Department of the time, location, and amount of the proposed work.

Special Waterways Conditions

1. Dredge material shall be transported to suitable disposal facilities; unregulated dumping of dredge materials is not permitted.
2. The Proponent shall develop and implement a Navigation Plan to address and mitigate temporary impacts to navigation during dredging activities.
3. The Proponent shall provide and maintain in good working order appropriate United States Coast Guard (USCG) approved navigation aids to assist mariners in avoiding work areas as required by the USCG.
4. The Proponent shall maintain vehicular access to water-dependent users throughout construction activities.
5. The Proponent shall remove and properly dispose of all temporary structures and debris no later than three (3) months after completion of the dredging and disposal. The dewatering and amendment of the sediments.
6. Modification to this Project: the SER PM, may review on an individual basis, modifications to construction activities and/or temporary structures which represent an insignificant deviation from original specifications, in terms of configuration, materials or other relevant design or fabrication parameters as determined by DEP within all areas of construction. Such review shall be in accordance with the following procedure:
    a. The Proponent shall submit a written request describing the proposed modifications to the work accompanied by plans, for prior review of the DEP. The DEP will consider comments submitted within ten (10) days of the DEP's receipt of the request. The DEP will send any significant modifications to the Resource Agencies for review and comment and to identify any future Performance Standards, if necessary. EPA will also have the opportunity to make a consistency determination if the change is significant, as necessary. The DEP will notify the Resource Agencies of any minor modifications.
7. After completion of the work authorized the Proponent shall furnish the Department a suitable plan showing the depths at mean low water over the areas dredged within 90 days of completion of each phase of the dredging.

4.2 Projects Included Under the SER Regulatory Process

As noted in the Harbor Plan Update, there is strong desire on the part of the stakeholders that are ultimately responsible for the maintenance of the navigational portions of the Harbor (namely the New Bedford HDC and the Fairhaven Planning Department), to include all submerged and intertidal areas in the Harbor north of the Hurricane Barrier as regulated under the SER process. Extending the regulatory umbrella to all areas north of the Hurricane Barrier will ensure that the SER provision will be utilized to its fullest extent, maximizing the amount of contaminated sediment (dredged as a byproduct of navigational dredging) that will be removed from direct contact with the environment and the resource. Therefore, as noted above: Projects requiring dredging in New Bedford/Fairhaven Harbor will be processed through the State Enhanced Remedy Process.

Identification of Individual Properties

At a minimum, the project stakeholders whose mission includes Harbor maintenance, have identified the commercial properties that are in specific need of dredging and should fall under the SER process umbrella. It is anticipated that, at a minimum, all commercial properties will be conducted under the auspices of the SER Process. As part of the Harbor Master Plan update process, stakeholders and users of the Harbor were interviewed to determine infrastructure maintenance and redevelopment nees for the next 5-15 years. The list of dredge projects anticipated over that time frame was distilled by property and lot number of the watersheet adjacent user.

The projects associated with the New Bedford/Fairhaven Harbor Dredge Program are listed on **Table A-4** and the general dredge areas for the program are depicted on **Figure A-4.**

TABLE A-4: Proposed Navigational and Maintenance Dredging Projects

City/ Town	Plot/ Lot	Current Owner	Address	Description	Estimated Volume
NB	N/A	N/A	NB/Fairhaven Harbor	Channels, Turning Basins, Anchorages, Fairways	850000
	N/A	N/A	USEPA	Material From Upper Harbor	300000
NB	N/A	N/A	Harbor North of Route 6 Bridge	DMMP Area	Storage (2,000,000 yards)
NB	60-19	Mitchell Mark S "Trustee"	83 Popes Island	Whaling City Marina	15,000
NB	60-12	Popes Island Harbor Development Corp.	173 Popes Island	Niemic Marine	15000
NB	60-18	Popes Island Harbor Development Corp.	243 Popes Island	Gear Locker Marina	5000
NB	60-11	BLF Realty Trust	226 Popes Island	The Olde New Bedford Yacht Club/Captain Leroy's	3000
NB	60-2	City of New Bedford Marine Park	102 Popes Island	Pope's Island Marina	17000
NB	60-1	Maritime Terminal, Inc.	NS Fish Island	Bridge Terminal/ NORPEL	5000
NB	60-23	M A T Marine Inc.	Fish Island	Empty Lot/For Sale	3000
NB	60-4	Fish Island Nominee Trust	SS Fish Island	AGM Marine Contractors, Inc.	15000
NB	N/A	City of New Bedford	Gifford Street	Gifford Street Boat Ramp	100000
NB	31-263	Shuster, Richard A	4 Wright Street	Shuster Corporation	5000
NB	31-254	R P C Realty LLC	6 Hassey Street	Eastern Fisheries	5000
NB	31-252	Maritime Realty, Inc.	16 Hassey Street	Northern Wind, Inc.	5000
NB	31-251	Tichon Seafood Corp.	8 Hassey Street	Bergies Seafood, Inc.	2500

NB	37-304	D Fillet Inc.	38 Hassey Street	Tempest Fisheries, Inc.	2500
NB	37-329	Pier Side Realty, LLC	50 Hassey Street	Whaling City Seafood Display Auction	5000
NB	37-305	Port Side Realty, LLC	62 Hassey Street	Whaling City Seafood Display Auction	5000
NB	37-303	South Terminal Leasing	7 Conway Street	Tichon Seafood Corporation	10000
NB	42-268	Trio Algarvio, Inc.	26 Green & Wood Pier	MASC Fabricating & Welding, Inc.	7500
NB	42-260	W Trading, Inc.	25 Green & Wood Pier	MASC Fabricating & Welding, Inc.	7500
NB	42-160	Sprague Massachusetts Properties, LLC	1 Pine Street	Sprague Energy	20000
NB	42-84	Commonwealth Electric Co C/O Property Tax Department	180 Macarthur Drive	NSTAR	10000
NB	47-181	Commonwealth Electric Co C/O Property Tax Department	180 Macarthur Drive	NSTAR	10000
NB	47-212	City of New Bedford	Leonard's Wharf	Leonard's Wharf	10000
NB	47-180	City of New Bedford Harbor Development Commission	Homers Wharf	Homer's Wharf	10000
NB	47-204, 47-179, 47-225	City of New Bedford	ES Macarthur Drive	Coal Pocket Pier and Steamship Pier	18000
NB	47-203, 53-217	Commonwealth of Massachusetts State Pier	ES Macarthur Drive	State Pier	24000
NB	53-120, 53-253, 53-254	City of New Bedford	51 Macarthur Drive	Fisherman's Wharf and Tonneson Park	5000
NB	53-34	Co-Op Wharf Realty Trust	101 Co-Op Wharf	Global Fuels Marine, Inc.	5000
NB	53-116	155 Front Street Realty Corporation	248 Macarthur Drive	Crystal Ice	2500
NB	53-241	178 Front Street Corporation	252 Macarthur Drive	Crystal Ice	2500
NB	53-42, 59-173, 59-217	Maritime Terminal, Inc.	276 Macarthur Drive	Maritime Terminal, Inc.	5000

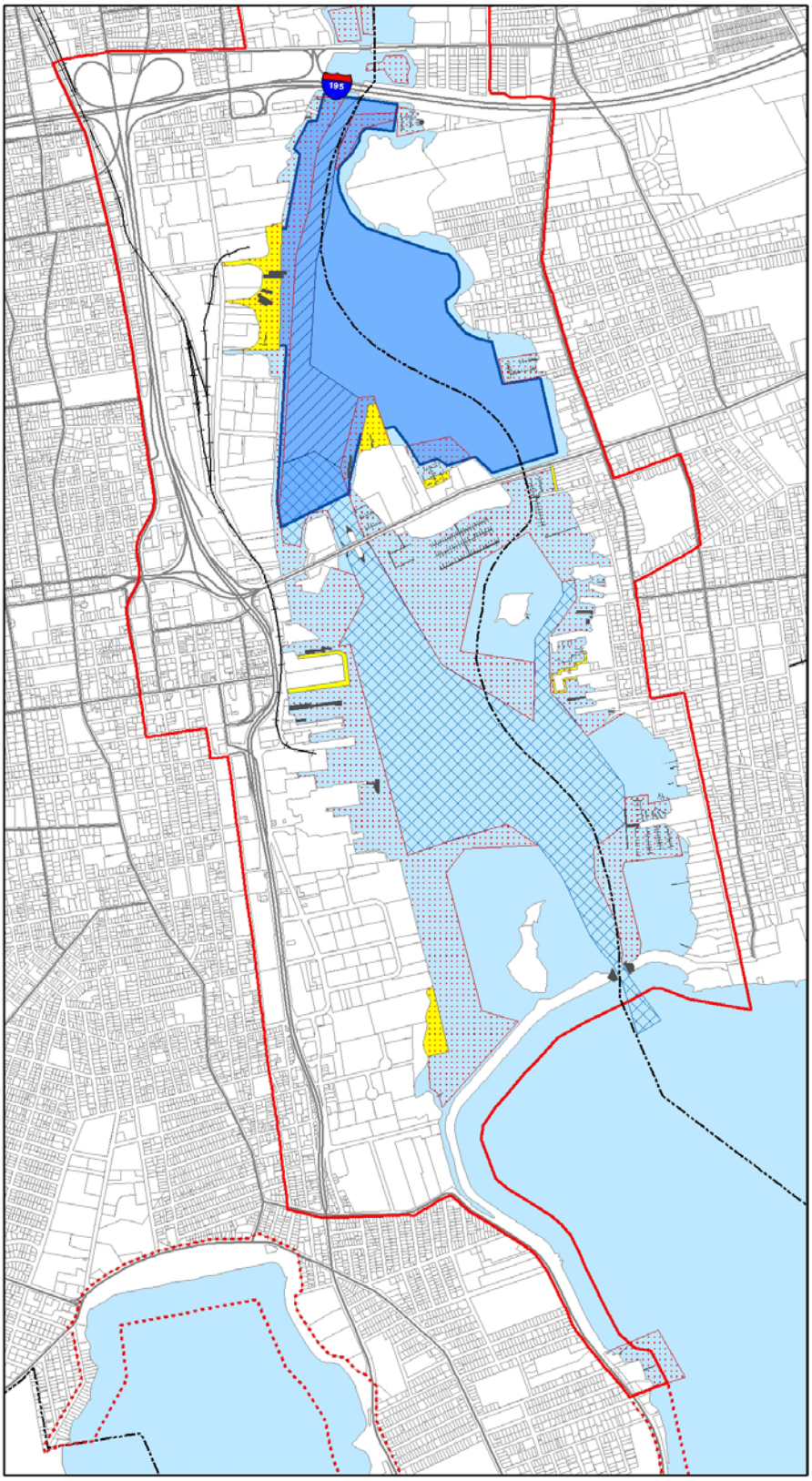
NB	59-41, 66-134	American Seafoods International, LLC	40 Herman Melville Blvd	American Pride Seafoods (American Seafoods Group, Southern Pride Catfish and Frionor)	10000
NB	66-165	New Bedford Land Company, Inc.	Herman Melville Blvd.	Mass Tow Boat	7000
NB	66-128, 66-147	M A E Realty, LLC	SS Antonio L Costa Blvd.	Eastern Fisheries	10000
NB	66-125	Sea Watch International, LTD	15 Antonio L Costa Blvd.	Sea Watch International	2000
NB	72-284	U S EPA c/o Harbor Development	NS Hervey Tichon Ave.	US EPA Dewatering Facility	5000
NB	72-248	Marine Hydraulics	256 Herman Melville Ave.	Marine Hydraulics, Inc.	7500
NB	72-292	Cook, Robert C.	286 Herman Melville Ave.	New Bedford Welding Supply	5000
NB	72-297	Dolinsky, Marvin L.	300 Herman Melville Ave.	ABCO Electric, Task International	5000
NB	72-299	Acushnet River Shipyard, Inc.	302 Herman Melville Ave.	Evergreen Sheet Metal/Acushnet River Shipyard, Inc.	7500
NB	72-293	City of New Bedford Harbor Development Commission	352 Herman Melville Ave.	Tisbury Towing/ Packer Marine	10000
NB	79-5	PAL Realty, LLC	10 N Front Street	Former MacLean's Seafood	20000
NB	79-2	Revere Copper Products	26 N Front Street	Revere Copper Products	10000
NB	79-4	Revere Copper Products	24 N Front Street	Revere Copper Products	10000
NB	79-1	B S Realty Limited Partnership	94 Kilburn Street	Old Mill Building (Various Occupants) – Boat Ramp	6000
NB	86-3	North Wharf Trust	2 Washburn Street	Kyler's Catch Seafood Market	10000
NB	86-25	City of New Bedford	ES Washburn Street	Right of Way	5000
NB	86-20	North Wharf Trust	Washburn Street	No Occupants/Old Piers	5000
NB	93-265	USA c/o Army Corps of Engineers	Sawyer Street	Vacant	5000
NB	93-263	Aprak Realty Trust	Sawyer Street	Abandoned Building/ Under Demolition	5000
NB	93-265	USA c/o Army Corps of Engineers	Sawyer Street	Vacant	5000

NB	93-120	City of New Bedford Park Dept	103 Sawyer Street	USEPA De-Sanding Facility	5000
NB	N/A	N/A	Harbor North of Coggeshall Street Bridge	Future Rowing Course	110,000
F	05-015, 05-016, 03-001, 03-001A,	Rodman Candle Works Realty, LLC	38-48 Fort Street	Fairhaven Shipyard	40000
F	07-014	Wood's Hole Martha's Vineyard Steamship Authority	2 Water Street	Steamship Authority	40000
F	07-012, 07-013	Kelley South, LLC	4 Water Street	Warren Alexander Property	2500
F	07-011	Kelley South, LLC	7 Union Wharf	DN Kelley and Son	2500
F	07-009	Town of Fairhaven	2 Union Wharf	Union Wharf	15000
F	07-001	Kelley Dock & Marine Co, Inc.	24 Water Street	D N Kelley and Son	20000
F	09-002A	E&W Properties, LLC	42 Water Street	Harbor Hydraulics + Machine	5000
F	09-002	Olde North Wharf	4 Washington Street	Olde North Wharf/ Harbor Blue Seafood	5000
F	09-001, 09-116A	L&L Realty Co., Inc.	50 Middle Street	Linberg Marine	20000
F	11-012	Town of Fairhaven	Pease Park	Pease Park Boat Ramp	10000
F	11-008, 11-009. 11-010	Acushnet River Safe Boating Club	80-82 Middle Street	Acushnet River Safe Boating Club – Coast Guard Auxiliary	20000
F	12-016A, 12-016, 12-017. 12-018. 12-019. 12-020, 12-020A, 12-020B, 12-021, 12-022, 12-023, 12-024	Sky View Lines, LLC/Town of Fairhaven	110 Middle Street	Harbor front Center (Former Holiday Inn Express and Marina)	20000
F	13-066	Jerco, LLC	2 Elm Avenue	Cozy Cove Marina	4000
F	17-016	Two River Ave, LLC	2 River Avenue	Moby Dick Marina	10000
	17-001			Residence/Business Docks	4000
				Total:	**1998000**

FIGURE A-4: Dredge Areas Identified on the Individual Dredge Property List

New Bedford / Fairhaven
Harbor Plan Update 2008

Potential Waterfront Development Shoreline Facilities (WDSFs) and Dredge Areas



- Secondary Planning Area
- 2008 Planning Area
- Potential Dredge Area*
- State/Other Channel
- Army Corps Dredge Project Areas
- Potential WDSFs
- Boundary for CAD Cells (2008)

* Based on individual properties scheduled for dredging

N

0 500 1,000 2,000 Feet

Prepared by the
Urban Harbors Institute
of the University of Massachusetts Boston

For the
New Bedford / Fairhaven
Harbor Plan Renewal Committee

On behalf of
Fort Point Associates
Urban Harbors Institute
Apex Companies
and
FXM Associates

Data from
MassGIS
City of New Bedford
Town of Fairhaven
Urban Harbors Institute
Apex Companies

December 2009

5.0 Dredge Program Process

The process for the New Bedford/ Fairhaven Harbor Dredge Program under the SER process is similar to the CERCLA Superfund Regulatory Process. The process involves the development of project documents including:

- Project Work Plan;
- Public Involvement and Notification Plan;
- Health and Safety Plan;
- Sampling and Investigation Plan;
- Design Documents;
- Plans and Specifications;
- Contractor Oversight Plan;
- Bid Documents;
- After Action Post-Dredge Report; and
- Operation and Maintenance Plan for Dredge Disposal Facilities.

The work plan becomes the summary document that describes the dredge areas, the dredge material disposal scenario(s), the project flow, and the project performance standards. A copy of the Work Plan for the (current) Phase III Dredge Project is available for review.

6.0 Dredged Material Disposal

Under the Dredged Material Management Plan (DMMP), the State Office of Coastal Zone Management (CZM) with input from the City of New Bedford and Town of Fairhaven determined that the construction of Confined Aquatic Disposal (CAD) cells would be the most efficient method of isolation and disposal of PCB-impacted sediment within the Harbor. The DMMP (approved in 2003) allows for the disposal of sediments form navigational dredge projects in the Harbor into CAD Cells. While project stakeholders are not required to utilize CAD Cells for contaminated sediment disposal (other approved methods such as upland disposal at approved landfills is possible), the DMMP noted that the use of CAD Cells in the Harbor for navigational dredging presents the most cost effective solution for this type of dredging.

6.1 Dredge Material Disposal Options

The use of Confined Disposal Facilities (CDFs) was an option noted in the 2002 Harbor Plan for disposal of dredged material. This option has been generally rejected by the principal stakeholders and the community for use for the disposal of contaminated sediments dredged from the Harbor. CDFs are typically shore-side containment areas constructed to hold contaminated materials within watertight bulkheads and then capped with clean fill or a solid construction material such as concrete. This process encapsulates this dredged sediment and would have created new land areas to support port development in the Harbor. For several reasons, including cost and the technical and logistical difficulties associated with the construction of the massive facilities needed to contain all of the contaminated sediment to be dredged from the Harbor and public opposition, the wide-spread use of the CDF disposal option is now generally considered less favorable than use of CAD cells for

the bulk of the contaminated sediment generated by the Navigational Dredging Program. However, the use of smaller Waterfront Development Shoreline Facilities (WDSFs) in concert with CAD cells is considered highly advantageous from both an environmental and economic standpoint.

Upland Re-Use and Disposal

Both Upland Beneficial Re-Use and Upland Disposal have been utilized successfully in the Harbor for the dredging of contaminated materials to date. Upland beneficial Re-Use was utilized for the Phase I navigational dredge project when contaminated sediments from the slip and fairways adjacent to and leading to State Pier were dredged, dewatered, mixed with a stabilizing agent, and placed on a rail-yard brownfield site next to the Harbor as capping material and as landscaping berms. The USEPA has successfully utilized Upland landfill disposal for Superfund level contaminated sediments that have been (and are being) dredged from the Harbor. The USEPA process includes dredging, de-sanding, and dewatering of dredged material and load out into rail cars for delivery to an out-of-State licensed landfill.

CAD Cell Disposal

The CAD Cell disposal option is the option that is preferred for the navigational dredge projects, for a variety of reasons: the DMMP lays out enough specifics concerning the placement, construction, and safety of the CAD Cells that they can be constructed in the Harbor with confidence; CAD Cells have been proven to be the most cost-effective safe alternative for the disposal of navigational dredge sediments in this Harbor; upland Re-Use sites are very rare, and additional upland Re-Use sites have been difficult to find once the railyard brownfield site next to the Harbor was completed; and the approvals for the use of CAD Cells in the Harbor is relatively straight forward as a process for the use of this disposal method was developed as part of Phase II and III of the dredge program. A stick diagram of the construction sequence for a typical CAD Cell is included in **Figure A-5** below. One byproduct of the construction of CAD Cells in the Harbor is the generation of a large volume of non-contaminated sandy material that is removed from the bottom of the Harbor in order to construct a CAD Cell. The project stakeholders have a strong preference that alternatives to the offshore disposal of this potentially re-useable resource be identified.

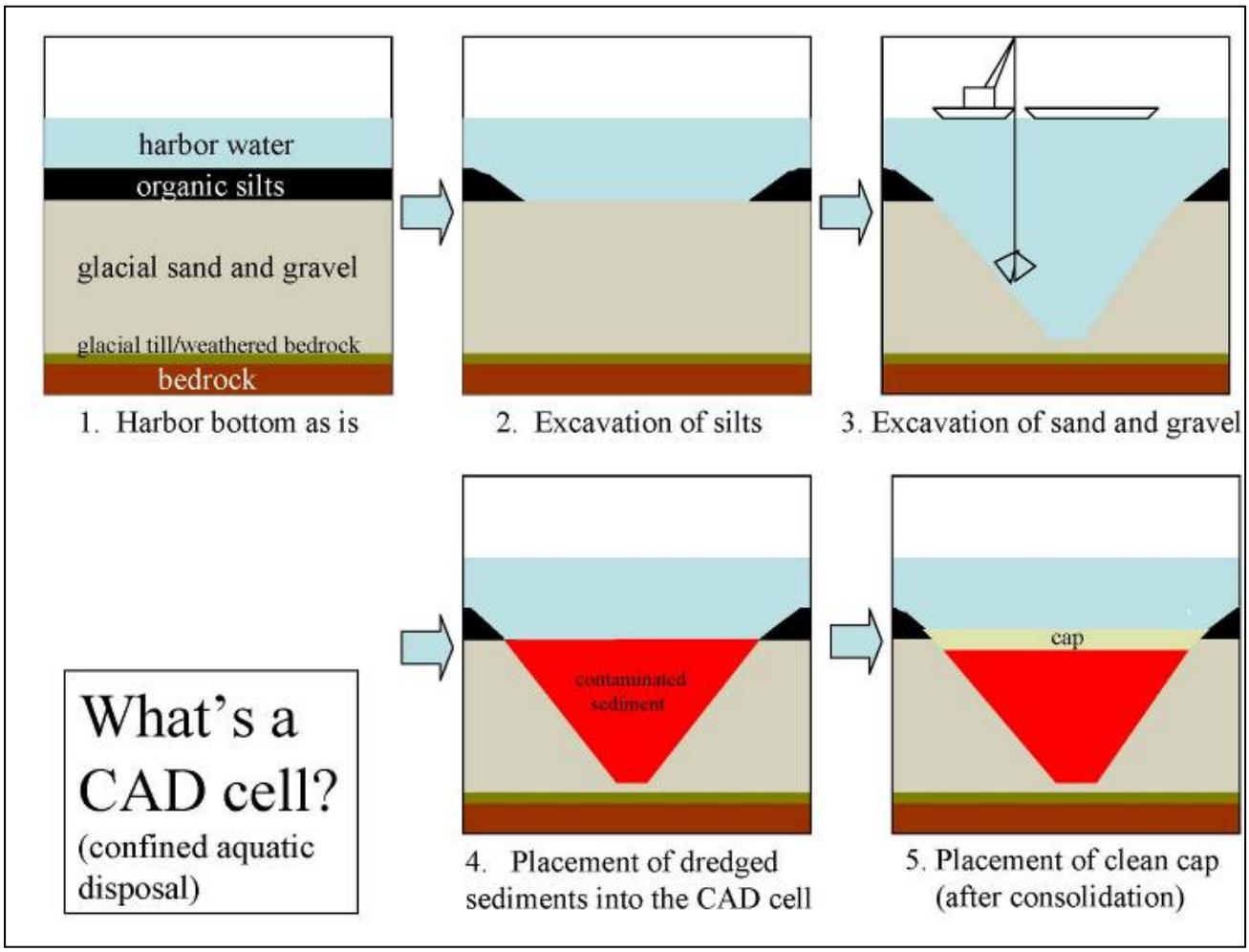
6.2 Beneficial Reuse of Clean CAD Cell Material

While currently there is a permit to take clean CAD material offshore to the CCDS – up to 1 Million Yards (a USACE permit to dispose of clean CAD material at the CCDS), all stakeholders involved in the navigational dredging in New Bedford/ Fairhaven Harbor have indicated strong preference for the beneficial reuse of clean material generated by the dredge project as a byproduct of the construction of CAD Cells within the Harbor. Numerous potential re-use opportunities for the material have been identified, including re-use of the material in on-shore construction projects such as road construction, landfill capping material, and site development, as well as in WDSFs.

In the course of construction of CAD Cells within the Harbor, non-contaminated fine to course grained sediments are excavated. Currently, a large proportion of these sediments have been determined to be suitable to ship off-shore for placement at licensed ocean disposal sites such as the Cape Cod Bay Disposal site. All stakeholders involved in dredging projects within the Port

recognize that significant benefit could be derived, both from an environmental perspective as well as from a Port logistic perspective, if consistent beneficial re-use of the non-contaminated material derived from the CAD Cell construction could be employed.

Figure A-5: Typical CAD Cell Construction Sequence



From D. Dickerson - USEPA – cleanup of contaminated sediments – see USEPA Region I website for full reference.

Clean aquatic sediments dredged during construction of future CAD cells can be used, where possible, as fill within the City of New Bedford and the Town of Fairhaven including use as fill behind new waterfront bulkheads proposed in this Plan. PCB impacts to sediment within the Harbor are generally contained within the top few feet of fine grained, organic sediment. In order to construct a CAD cell, this fine grained material is removed and disposed, and the cell is created within the deeper more densely packed "parent" sands and silts. This clean material was deposited here long before the area was settled, and therefore generally does not contain anthropogenic impacts. In general, this material is sandy, silty, and/or gravelly material that is free of organic silts and meets general regulatory standards as non-contaminated. Thus, the non-contaminated material that is removed from the main body of CAD Cells in the Harbor has great potential for reuse.

In 2005, EPA requested that clean material dredged during construction of CAD Cell #1 be used to cap PCB-impacted sediment located outside of the Hurricane Barrier (OUs-1 and 3), thereby isolating the PCB impacts from biota and from direct contact by humans, while simultaneously facilitating construction of the CAD cell by utilizing the clean sediment generated during its construction. The Harbor Plan supports the use of clean sediment generated during CAD cell construction by EPA during future capping projects, as necessary.

In addition to capping re-use, the non-contaminated material generated from CAD Cell construction could be incorporated into a variety of other re-use scenarios. Asphalt batch plants require materials similar to some of the material generated during the construction of the CAD Cells. Beach nourishments projects throughout the region have been stalled because of difficulties in obtaining appropriate nourishment sediment. The non-contaminated materials generated through CAD Cell construction represent ideal materials for use in beach nourishment projects. Likewise, land-side development projects in the area regularly import fill from gravel pits outside the area. Portions of the CAD material generated could be utilized in land-side construction, both as fill material for landscape grading, and as sub-grade material.

The steps required to utilize the CAD cell derived beneficial material include the following:

- Characterization of the sediments to be removed to construct the CAD Cells (grain-size and salt content of paramount importance);
- Matching the grain-size of the materials to be removed with the materials that are required by the land-side, shore-side or beach nourishment re-use;
- Creating a re-use plan that marries the removal of material from the CAD Cells with the projects that could utilize the material, synchronizing schedules and volumes;
- Obtaining any necessary permits or approvals necessary for the land-side, shore-side development or beach nourishment to allow the re-use of the CAD Cell generated material.

While all of these steps are required prior to re-use occurring, the most critical element is the synchronization of the CAD construction with the potential re-use needs. The critical path elements in synchronizing these events involve: 1) the identification of potential re-use projects; 2) determination of the volume of material those projects require; and 3) the determination of the timing of permits that might be required for a shore-side or beach nourishment project. The time horizon to complete these activities for a shore-side or beach nourishment project in some cases may exceed the time required to design and build the CAD Cell from which the beneficial re-use material would come. In the past, this timing issue has prevented the re-use of CAD generated material. Moving forward, the City, Town and the SER stakeholders have made instigating the re-use potential assessment for CAD generated material as an early action-item in the process of developing new CAD cells.

One interesting potential re-use scenario utilizing the clean materials that will be generated from CAD Cells built in the Harbor has been proposed by Massachusetts DEP. Taking the concept of the Waterfront Development Shoreline Facility (WDSF) one step further, the DEP has suggested that the City and Town look into creating a WDSF to use as a material recycling cell for clean material dredged from the CAD Cells to be built in the Harbor. The concept involves the bulk-heading of a shoreline area in the general form of a WDSF, however instead of simply filling the facility up with

clean material from CAD Cells and then capping and finishing the grade as soon as possible, the cell would be left open and clean sand material would be placed into the cell and allowed to dewater and (eventually) de-salt (from the process of rainwater dissolution). The material could then be re-used in a broad variety of upland construction projects that needed granular fill. Material could be "mined" from the cell to be used for upland construction, for road-grade, to be mixed with asphalt, or in concrete. This would increase the number of potential re-use scenarios available for the clean CAD Cell dredge material. In order to maximize the use of material while at the same time promoting the Ports overall goals for bulk-headed WDSFs, the bulkheads could be constructed in large individual cells, which could then be used in sequence for the staging of material from the CAD Cells prior to its re-use in upland or beach nourishment projects.

7.0 Operation and Maintenance of Dredge Disposal Facilities

An Operation and Maintenance Plan (O&M) of CAD Cells constructed in that Harbor is being developed. The O&M plan is being developed and scheduled for completion by the end of 2009. Long-term O&M of the CAD Cells will be conducted under the auspices of the New Bedford Harbor Development Commission (NBHDC) with assistance from the Fairhaven Planning Department. O&M for the already constructed dredge material placement site at the railyard brownfield site constructed under Phase I of the New Bedford/ Fairhaven Harbor Dredge Program is incorporated as part of the overall O&M for the railyard site. O&M of future Waterfront development shoreline facilities, capped areas, and/or upland disposal scenarios will be developed as part of the design and construction process for the future disposal facility.

It is anticipated that the Plan will include performance standards, monitoring standards, and mitigation procedures for the CAD Cells. O&M is expected to focus on the monitoring of the material in the CAD Cell and the integrity and character of any cap that may have been placed over a CAD Cell upon completion. As it is the desire of the project stakeholders to bring areas of the Harbor where CAD Cells are constructed back into productive re-use as soon as possible, it is anticipated that both re-colonization (from a habitat perspective) of the bottom, and re-use (from a navigation perspective) of the Harbor bottom for mooring infrastructure, will be monitored as part of the O&M Plan developed for CAD Cells in the Harbor.

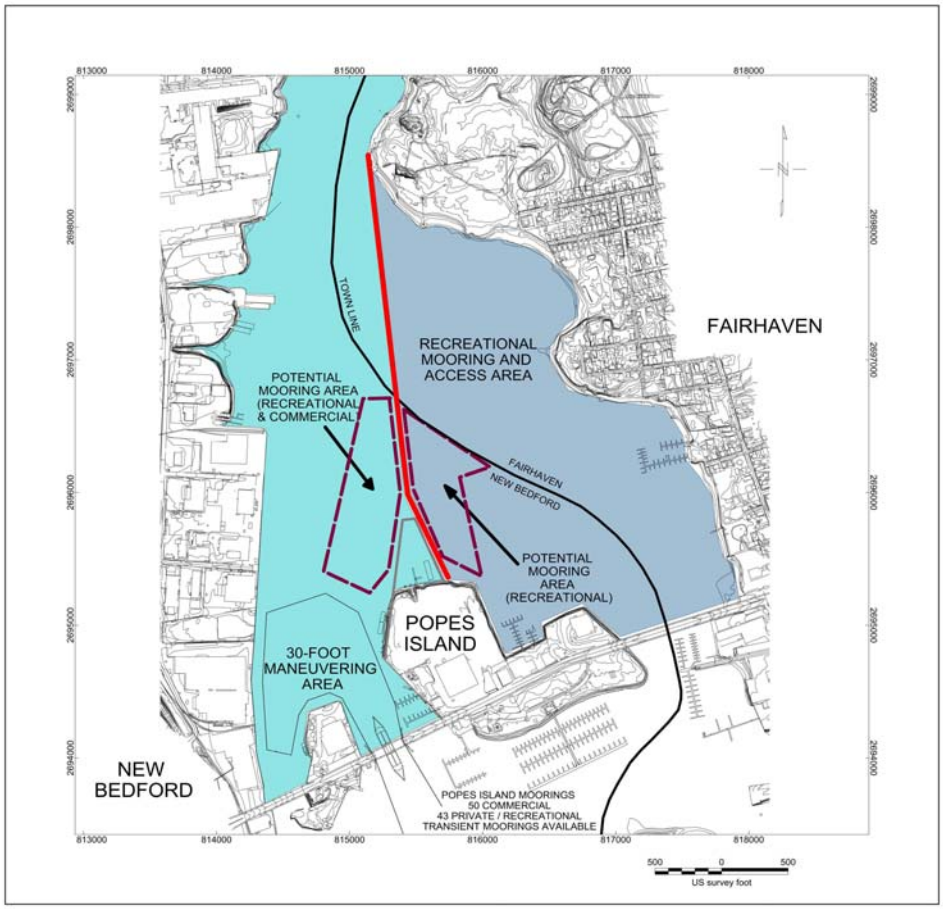
8.0 Productive Reuse Strategy for CAD Cell Areas

It is the strong desire of the Harbor stakeholders to bring all portions of the Harbor back into productive reuse following individual project elements completion. This includes the placement of moorings in the permitted DMMP CAD Cell areas as quickly as possible after the completion of an individual dredge phase or upon the completion of CAD Cell filling and capping.

It will take some time (tens of years) to build and fill all of the CAD Cells allowed within the permitted DMMP area. Areas between CAD Cells and areas within the DMMP area that do not yet house CAD Cells can be utilized for moorings in the interim. Regular moorings can be used in these areas. Additionally, as part of the O&M Program for the CAD Cells, the HDC, the Town of Fairhaven, and their consultants plan on conducting a Pilot Test on a handful of moorings placed on top of a filled and capped CAD Cell within the Harbor. The Pilot Test will track the bottom

characteristics for several different design moorings placed on the cap under controlled conditions. It is expected that the Pilot Test will result in the identification of the mooring designs that are most likely to successfully be supported by the cap without impinging on the cap. Once identified, it is expected that these mooring types will merit approval for early use after a CAD Cell has been capped. In this manner, it is expected that much of the area currently designated in the DMMP for potential CAD Cells will be able to be utilized for the mooring of recreational and light commercial vessels prior to, during, and after the CAD Cells have been constructed. The plan promotes the concept of utilizing the DMMP CAD Cell area for the mooring of vessels, as long as the moorings do not interfere with the active construction or filling of a CAD Cell that is under construction or in the process of being filled. The Plan recognizes that additional discussion with regulatory agencies, particularly those involved in the SER process, will be required prior to full implementation of the mooring plan in the DMMP area. Additionally, the Plan encourages research into additional mooring opportunities within the DMMP boundary, including exploring other options such as floating slips that would allow more dense placement of recreational boats, in a shorter timeframe, and with less potential impacts to the CAD Cells. A figure showing the potential area North of Popes Island that could become utilized as a mooring field is included in **Figure A-6**. The City of New Bedford has commissioned a Harbor mooring study, which is currently being conducted, and the results of that study should be incorporated into this Dredge Management Plan once complete.

Figure A-6: Productive Re-Use of Capped CAD Cells – Prospective Mooring Areas Map



From CLE Report on Mooring Fields and Water-sheet Use

9.0 Timelines and Sequencing

Because of the magnitude and expense of all the dredging need, the stakeholders have applied to divide the Dredge Program into Phases. As noted above, Phase I-III are complete and Phase IV is in the planning and design phase (see estimated work sequence time chart and engineers estimate potential costs chart below). Phases V, VI, and VII (and any other subsequent phases needed) are still in the conceptualization stage and scheduling, sequencing, and funding for those phases of work are yet to be finalized. A brief engineer's estimate of the timing of Phases V through VII is included in the charts below.

Phase IV Work Projections:

Phase IV is expected to include the dredging of a number of footprints in the Harbor adjacent to piers and wharfs, turning basin and channel areas adjacent to a portion of North Terminal and State Pier, and moorings adjacent to travel channels. It is expected that the volume of material to be dredged from the Harbor in support of maintaining these areas will be in the approximate range of 100,000 and 150,000 cubic yards, the final number of properties to be dredged and volume generated may depend upon a number of factors, including logistics, space for disposal in a CAD Cell, needs of the individual properties, availability of finding, and logistics.

The potential properties anticipated to be included in Phase IV include:

- East Face EPA Dewatering Facility Slip at North Terminal (New Bedford);
- North Face Bridge Terminal Slip Deepening (New Bedford)
- Mooring area at Gifford Street adjsecnt to the Gifford Street Channel (New Bedford);
- USEPA Dock Basin at Sawyer Street (New Bedford);
- Rowing Facility Basin Widening and Entrance Channel Deepening (New Bedford);
- Ease Face of State Pier Fairway (New Bedford);
- South Terminal Fairway Deepening (New Bedford);
- MarLee Basin (New Bedford);
- Moby Dick Marina (Fairhaven);
- Fairhaven Shipyard South Travel Lift Channel (Fairhaven);
- SeaPort Marina (Fairhaven);
- Acushnet River Safe Boating Club (ACSBC) / Coast Guard Auxilliary;
- Linberg Property L2 (Fairhaven);
- CAD Cell #3 – For disposal of materials dredged as part of Phase IV - sufficient in size to contain the dredged sediments for the properties noted above.

CAD Cell #3

The volume of material that will be generated from the Phase IV navigational dredging will significantly exceed the currently available space capacity in the existing CAD Cells in the Harbor, necessitating the construction of a new CAD Cell for the purpose. The new CAD Cell (CAD Cell #3) is expected to be constructed in the DMMP area to the North of Popes Island. It is anticipated that the capacity of CAD Cell #3 that will be required to encapsulate the volume of material to be dredged as part of Phase IV navigational dredging will be in the 100,000 cubic yard to 200,000 cubic yard range. Siting of the CAD Cell and determination of the required disposal capacity to support the Phase IV dredge project will be conducted as early scope items as part of the Phase IV work process.

Synergy with USEPA

At the time of the writing of this version of this Plan, it is anticipated that the USEPA Superfund Project will require disposal space in the new CAD Cell #3 to be constructed as part of Phase IV. The disposal capacity would be utilized by the USEPA to dispose of material dredged by the Superfund program from the middle and lower portions of the Harbor (south of the Coggeshall Street Bridge). It is currently anticipated that the capacity required to support USEPA cleanup initiatives in this portion of the Harbor is approximately 300,000 cubic yards. It is expected that the USEPA space capacity would be constructed on a parallel track with the construction of the CAD Cell #3 capacity required to conduct the Phase IV navigational dredging in order to maximize the synergistic cost savings to both projects. Several early action items need to be completed in order to allow for the USEPA project to advance in parallel with the Phase IV dredge project: the successful completion of a change to the Record of Decision for the Superfund Project (an Explanation of Significant Difference – ESD) to allow for the disposal of material from the Superfund project into CAD Cells; and the appropriation of funding to allow for the design and construction of the new CAD Cell.

Synergy with US Army Corps of Engineers (USACE)

In addition to the potential synergy between the HDC/FPD navigational dredge project and the USEPA environmental cleanup project, there exists an opportunity for synergy between the HDC/FPD CAD Cell creation program and the proposed USACE navigational dredging of the main channels and turning basins in the Harbor. The USACE is confronted with the same issue that all dredge projects in the Harbor are confronted with: a large proportion of the material to be dredged north of the Hurricane Barrier is contaminated. One potential solution that would mitigate the contaminated material disposal issue for USACE project is to construct CAD Cell capacity for the USACE in conjunction with the CAD Cells the HDC/FPD are constructing for navigational dredging. The USACE is currently conducting investigations and assessments concerning its potential dredging of the Harbor, and the results are not yet available. Once completed, the USACE will have an approximate volume of contaminated material that will require disposal. At present, preliminary estimates, based on rough calculations, put the volume of contaminated material that might be generated if the USACE were to dredge the main channel and turning basins in the Harbor

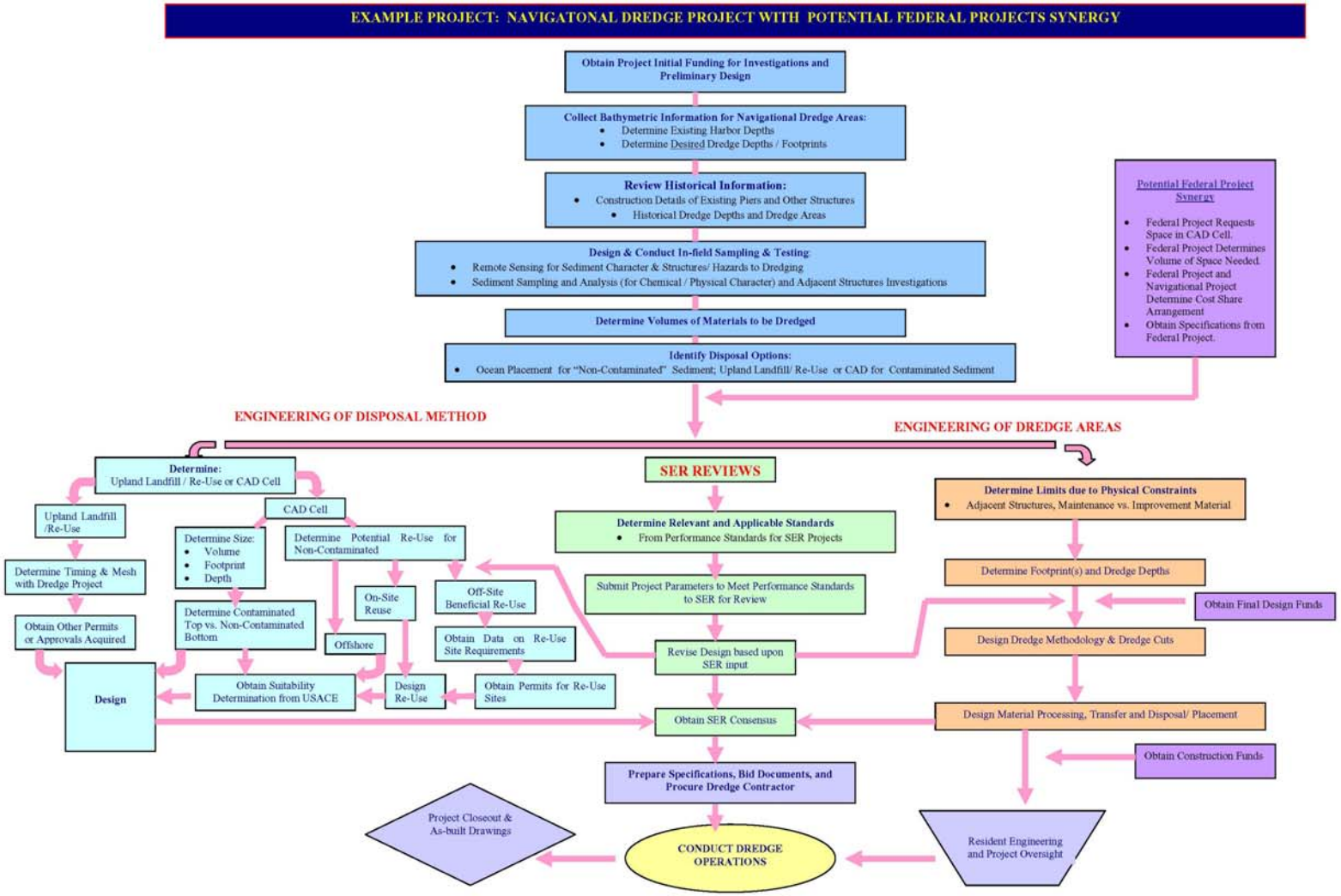
at between 600,000 and 800,000 cubic yards – though this estimate could change once the USACE completes its study. At present, because the exact potential for synergy with the USACE project is not fully estimated, a conceptual place-holder for a partial volume of material that the USACE may generate as part of its operations is carried in Phase IV. This volume may represent capacity dredge materials generated as part of the USACE channel dredging or it may represent capacity to allow the USACE to dispose of the contaminated top portions of a CAD Cell or Cells the USACE may itself build. It should be noted that it is also possible that depending upon sequencing, scheduling , and budgeting, work the USACE may wish to have completed could also be moved into future phases of the dredge program.

Phase IV Proposed Scope Items:

The Scope of Work for Phase IV dredging is expected to involve the following sequence of activities:

- Review of existing information (surface and subsurface) for the properties and the CAD Cell #3 area;
- Bathymetric survey for initial design of the properties included plus the CAD Cell #3 area;
- Meetings with stakeholders for the properties to determine design specifications and stability of adjacent structures;
- Design of footprints for the properties;
- Calculation of volumes to be dredged for the properties;
- Interface with USEPA and USACE project personnel to coordinate synergistic design elements (as needed);
- Interface with the SER committee for regulatory compliance of the project;
- Collection of initial maintenance dredge samples (using drop sampler and vibra-core sampler) for chemical screening of the properties;
- Analytical testing of samples collected following protocols established by the SER process;
- Sizing and placement of CAD Cell#3 – sufficient to handle the material generated from the properties;
- Design work for CAD Cell #3;
- Preparation of Plans & Specifications for the construction bidding process;
- Selection of a dredge contractor to construct CAD Cell #3;
- Selection of a dredge contactor to construct the Phase IV navigational dredge project;
- Construction of CAD Cell #3 and then construction of the navigational dredge project;
- As-builts, closeouts, and monitoring.

The sequence and duration of the Phase IV dredge project is dependent upon the scope of the work, and whether or not USEAP and USACE synergistic work elements are incorporated into this phase of work. A conceptual schedule showing an example level of synergistic CAD Cell construction is presented in the table below, along with a corresponding funding sequencing chart that conceptualizes an engineer's ballpark estimate of potential costs for the conceptual level of work.


EXAMPLE PROJECT: NAVIGATONAL DREDGE PROJECT WITH POTENTIAL FEDERAL PROJECTS SYNERGY
Obtain Project Initial Funding for Investigations and Preliminary Design
Collect Bathymetric Information for Navigational Dredge Areas:
• Determine Existing Harbor Depths
• Determine Desired Dredge Depths / Footprints
Review Historical Information:
• Construction Details of Existing Piers and Other Structures
• Historical Dredge Depths and Dredge Areas
Design & Conduct In-field Sampling & Testing:
• Remote Sensing for Sediment Character & Structures/ Hazards to Dredging
• Sediment Sampling and Analysis (for Chemical / Physical Character) and Adjacent Structures Investigations
Determine Volumes of Materials to be Dredged
Identify Disposal Options:
• Ocean Placement for "Non-Contaminated" Sediment; Upland Landfill/ Re-Use or CAD for Contaminated Sediment
Potential Federal Project Synergy
• Federal Project Requests Space in CAD Cell.
• Federal Project Determines Volume of Space Needed.
• Federal Project and Navigational Project Determine Cost Share Arrangement
• Obtain Specifications from Federal Project.
ENGINEERING OF DISPOSAL METHOD
ENGINEERING OF DREDGE AREAS
Determine:
Upland Landfill / Re-Use or CAD Cell
Upland Landfill /Re-Use
Determine Timing & Mesh with Dredge Project
Obtain Other Permits or Approvals Acquired
CAD Cell
Determine Size:
• Volume
• Footprint
• Depth
Determine Potential Re-Use for Non-Contaminated
Determine Contaminated Top vs. Non-Contaminated Bottom
On-Site Reuse
Offshore
Off-Site Beneficial Re-Use
Obtain Data on Re-Use Site Requirements
Design
Obtain Suitability Determination from USACE
Design Re-Use
Obtain Permits for Re-Use Sites
SER REVIEWS
Determine Relevant and Applicable Standards
• From Performance Standards for SER Projects
Submit Project Parameters to Meet Performance Standards to SER for Review
Revise Design based upon SER input
Obtain SER Consensus
Determine Limits due to Physical Constraints
• Adjacent Structures, Maintenance vs. Improvement Material
Determine Footprint(s) and Dredge Depths
Obtain Final Design Funds
Design Dredge Methodology & Dredge Cuts
Design Material Processing, Transfer and Disposal/ Placement
Obtain Construction Funds
Prepare Specifications, Bid Documents, and Procure Dredge Contractor
Project Closeout & As-built Drawings
CONDUCT DREDGE OPERATIONS
Resident Engineering and Project Oversight

Phases V through VII Work Projections

The project work scope and sequencing for future Phases of dredging in the Harbor is less defined than is Phase IV at the time of the writing of this version of this Plan. Phase V may include construction of additional CAD Cell space to support USACE material dredged as part of navigational channel dredging. Phase V may also include inclusion of Waterfront Development Shoreline Facilities (WDSFs) for beneficial re-use of non-contaminated material generated as part of the construction of a CAD Cell. Navigational dredge properties that could be included in Phase V are: extending North Terminal deepening as for north as the south corner of the former Revere Copper Facility in conjunction with WDSF construction: dredging in the Designated Port Areas (DPAs) of both New Bedford and Fairhaven; and additional dredging to lengthen and deepen the rowing course in the Upper Harbor. Phase VI dredging may include more expansion of North Terminal and dredging of fairways and driveways once USACE dredging of the main channel and turning basins has begun. Phase V or VI may also involve the extension of South Terminal and associated dredging to allow for better utilization of that pier. Phase VII may involve the dredging of additional Harbor areas to expand for additional dockage, for marina expansion, and/or for the creation of new marina or wharf configurations as suggested in the long-term concepts laid out in the 2009 update of the Harbor Plan. As the content of the future phases of the dredge program are speculative at the time of the writing of this version of this Plan, it is expected that periodic updates to this plan will be required as future scoping and phasing details become clearer.

As noted in the sections above, it is expected that this plan will be updated as future phases of work are developed under the New Bedford/Fairhaven Harbor Dredge Program. The final number of phases, and the ultimate scope that is incorporated into each phase, will undoubtedly change as the needs of the Harbor change.

December 2009

ATTACHMENT A

Memorandums of Agreement
and
Memorandums of Understanding
for
Harbor Dredging

New Bedford / Fairhaven Harbor Dredge Program

December 2009

MEMORANDUM OF UNDERSTANDING

between

the NEW BEDFORD HARBOR DEVELOPMENT COMMISSION

and

the TOWN OF FAIRHAVEN, MASSACHUSETTS

for the

IMPLEMENTATION OF THE STATE ENHANCED REMEDY

The City of New Bedford, through its New Bedford Harbor Development Commission (NBHDC), and the Town of Fairhaven, Massachusetts, share a commitment to enhance and protect the land and waterways of the Commonwealth of Massachusetts through the implementation of sound environmental practices coupled with innovative, common-sense initiatives. To that end, the NBHDC and the Town of Fairhaven, with MassDEP have implemented the State Enhanced Remedy (SER) provision of the U.S. Environmental Protection Agency (USEPA) 1998 Record of Decision (ROD) for the New Bedford Harbor Superfund Site.

The City of New Bedford and the Town of Fairhaven, through the New Bedford/Fairhaven Harbor Plan, have a defined vision for the future of New Bedford Harbor which includes the maintenance and redevelopment of Harbor areas, including the dredging of portions of New Bedford/Fairhaven Harbor. The NBHDC and the Town of Fairhaven have worked to utilize Confined Aquatic Disposal (CAD) Cells within the harbor in order to efficiently dispose of material dredged during navigational dredging projects.

1. General Provisions

This Memorandum of Understanding outlines provisions for the operation and maintenance of the CAD Cells in a manner consistent with the visions of the NBHDC and the Town of Fairhaven. Through this Memorandum of Understanding, the NBHDC and Town of Fairhaven commit to cooperative design, construction, and operation and management of existing and future CAD Cells located within New Bedford Harbor in order to implement navigational dredging in an efficient manner in accordance with the SER, as described in the 1998 ROD for the New Bedford Superfund Site. The goals of implementation of this agreement are to:

- Outline the principals involved with allowing (or disallowing) disposal of material within the CAD Cells;
- Outline the procedures necessary for disposal of material within the CAD Cells;
- Dictate the processes necessary in order to adequately track quantities of material disposed within CAD Cells,
- Implement guidelines for environmental protection during disposal events at the CAD Cells;
- Provide a mechanism by which administrative fees are implemented and distributed;
- Outline plans for adequate capping and closure of CAD Cells within New Bedford Harbor; and
- Outline plans to monitor the CAD Cells periodically to evaluate CAD Cell volumes, capping placement and stability.

2. Definitions

Whereas the NBHDC is a duly authorized agent of the City of New Bedford, and promulgated as a Commission tasked with the management, maintenance, and development of New Bedford Harbor by the Commonwealth of Massachusetts; and

Whereas the Town of Fairhaven is a municipality within the Commonwealth of Massachusetts.

Now, therefore in consideration of the intentions and desires of the NBHDC and Town of Fairhaven; the NBHDC and the Town of Fairhaven agree to implement operation of the existing and proposed CAD Cells within the Dredge Materials Management Plan (DMMP) boundaries located within New Bedford Harbor, located north of Route 6 and south of Route 195 in accordance with the conditions and principals outlined herein.

3. Management and Coordination

Implementation of this Memorandum of Understanding requires the integration of several strategies: the design of the CAD Cells, construction of the CAD Cells, the procedures that will be enforced to control disposal within the CAD Cells, monitoring of the disposal events at the CAD Cells, procedures for determining tipping fees for the CAD Cells, the maintenance of the CAD Cells, and closure

and monitoring of CAD Cells. Balancing these important strategies with the need for expedient and cost-effective specific project initiatives is an important goal of the management and coordination plan for operation of the CAD Cells.

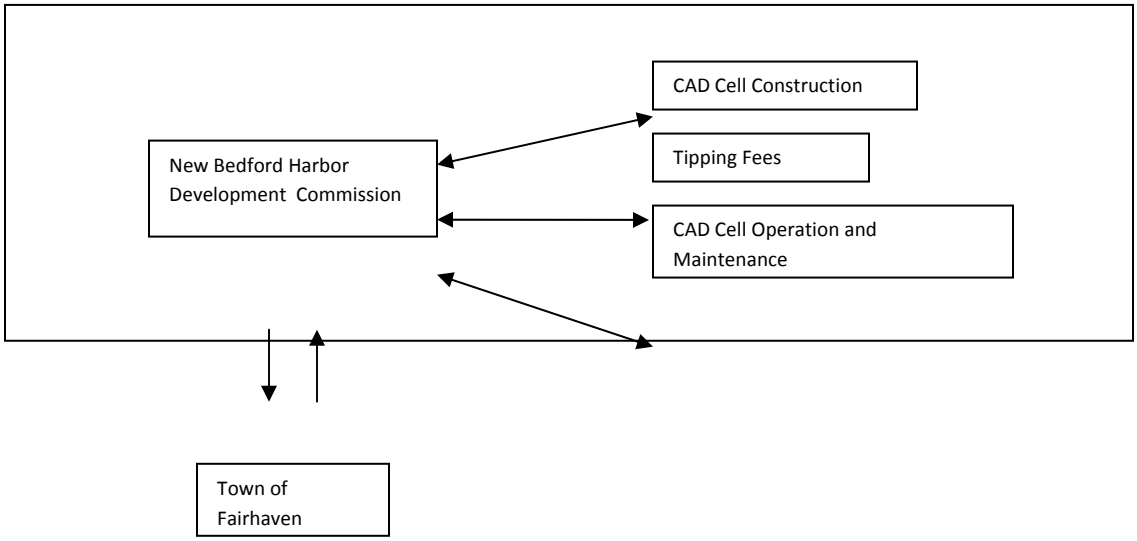
Role of the NBHDC

The proposed framework for the implementation of this Memorandum of Understanding will involve a high level of oversight by the NBHDC and its project staff. The NBHDC (and its agents), as chief proponent of Harbor maintenance and infrastructure improvement projects, will: promote, plan, conduct studies for, design, construct, operate, maintain and monitor CAD Cells. As the duly authorized agent of the NBHDC, the Executive Director of the NBHDC will act as point-of-contact for the activities and actions undertaken associated with construction and operation of the CAD Cells. The NBHDC will use its contracting ability to contract for engineering, construction, and for maintenance of the CAD Cells. The NBHDC will also utilize its contract management capacity in managing contracts with the Department of Conservation and Recreation (DCR).

Role of the Town of Fairhaven

The Town of Fairhaven will be involved in major decision-making associated with design, construction, operation and maintenance of the CAD Cells. The Town of Fairhaven may provide oversight and review of project documents, and may provide guidance with regard to implementation details associated with construction, design, operation or maintenance of the CAD Cells. The Town of Fairhaven will utilize the resources of the NBHDC to complete administrative work associated with design, construction, and operation and maintenance of CAD Cells.

The overall project management flow for construction, operation and maintenance of the CAD Cells will follow a process through which the NBHDC will act as an operational lead for projects.



4. Tipping Fees

Tipping fees will be calculated based upon CAD Cell construction costs. CAD Cell construction costs may vary from project to project; however, for CAD Cell 2, the tipping fee will be $38 per cubic yard. Of that $38, one (1) dollar will be reserved for NBHDC administrative costs associated with coordination and management of contracts associated with design, construction, operation, and maintenance of the CAD Cells, as well as costs associated with management of contacts with DCR. The NBHDC reserves the right to increase or decrease the tipping fee as construction costs for future CAD Cells increase or decrease.

The NBHDC has determined that in order to ensure that this document is enforced, that NBHDC will need to have representation onsite during dredging and disposal operations. To cover the costs of this representation, NBHDC will charge $4 per cubic yard in addition to the tipping feel outlined above. The NBHDC reserves the right to increase or decrease the NBHDC representation fee as monitoring and oversight costs increase or decrease. The NBHDC representation fee may be reduced or waived if the Party utilizes an engineer for oversight of dredging and disposal acceptable to NBHDC.

5. Material to be Disposed of Within CAD Cells

Material deposited within the CAD Cells will be material generated during navigational dredging projects within either the City of New Bedford or the Town of Fairhaven. Material can consist of organic material, peat, silt, clay, sand, gravel, cobbles, or boulders of varying sizes and mixtures, generated during dredging operations. Debris, consisting of metal, wood, rubber, plastic, or other man-made object or material will not be allowed to be disposed of within the CAD Cells. Material located outside of New Bedford Superfund site operational units OU-1, OU-2, and OU-3 will not be allowed within the CAD Cells, unless the material was generated in association with Superfund Cleanup or in association with the SER cleanup of New Bedford Harbor. Material generated within other towns or cities within the Commonwealth of Massachusetts or from other states of the United States of America, or from foreign countries will not be allowed within the CAD Cells.

In order to maximize volume within the CAD Cells, it is imperative to consolidate material as much as possible prior to disposal of that material within the CAD Cells. Therefore, a minimum hold time after dredging into any dump scow shall be observed in order to maximize consolidation of dredged material prior to disposal into the CAD Cell. The hold time shall be measured from a time after the last quantity of dredged material has been placed into the dredge scow or barge, and shall end prior to dumping of the scow or barge into a CAD Cell. During the hold time period, the standing water shall be removed from within the dump scow as it collects. The minimum hold time established within this document is 48 hours. At its discretion NBHDC, or its representative, may reduce the hold time on a scow-by-scow basis; however, if NBHDC or its representative does not have resources at its disposal by

which to observe the material within the scow and make a determination with regard to hold time, the 48 hour minimum hold time will be observed.

6. Procedures for Disposal Within a CAD Cell

DEFINITIONS

Anticipated Dredge Volume	Difference between the pre-dredge survey and the dredge design footprint.
CAD Cell Disposal Clean-Up Limit	Boundary surrounding CAD Cell within which all dredge material must be placed.
CAD Cell Upper Elevation Limit	Shallowest elevation material can be placed within a CAD Cell.
Final Dredge Volume	Difference between the pre-dredge survey and the final dredge survey.
NBHDC Representation Fee	Fee due to NBHDC to pay the costs for NBHDC representation, utilized to ensure that the Party complies with the requirements of this document.
Party/Parties	Business, organization, or individual disposing or interested in disposing of material within a CAD Cell.
SER Performance Standards	Performance standards instituted by the State Enhanced Remedy Group. Standards include requirements for water quality monitoring during disposal operations and dredging operations as well as contingency planning for exceedances of water quality standards.
Tipping Fee	Fee due to NBHDC that reimburses NBHDC for the costs of constructing the CAD Cell.
Unpaid Balance	Remaining balance due to NBHDC after calculation of calculation of total fees due to NBHDC and subtraction of initial fees paid to NBHDC prior to construction.

REQUIREMENTS PRIOR TO DREDGE/DISPOSAL

- Parties interested in disposing of material within a CAD Cell shall first solicit permission to dispose of material within the CAD Cells from the NBHDC.

- The NBHDC will approve solicitations at its discretion and will receive tipping fees. If the solicitation is approved, the NBHDC will reserve a volume of space within the CAD Cells for the Party.

- The Party will be required to sign a contract with NBHDC, stipulating that the Party shall comply with the requirements of this document, and shall agree to pay all tipping fees and NBHDC representation fees, including the Unpaid Balance, due after completion of dredging and disposal.

- Parties will be required to hire an independent third-party contractor to conduct a pre-dredge survey of their dredge area(s) and of the CAD Cell(s) into which they are permitted to dispose dredged material. The independent third party will calculate the Anticipated Dredge Volume based upon the pre-dredge survey of their dredge area(s) and the proposed dredge footprint. The proposed dredge footprint, the pre-dredge survey(s), and the Anticipated Dredge Volume shall be forwarded to NBHDC or its representative.

- Parties must submit a certified check to the NBHDC for an amount equal to 75% of the Anticipated Dredge Volume in cubic yards times the tipping fee plus the NBHDC representation fee (currently $42 per cubic yard).

- Fees will be non-refundable. Any unused volume within the CAD Cells will belong to the Party until such time as the NBHDC purchases the space from the Party, the Party utilizes the space, or the NBHDC approves the transfer of the space from one Party to another Party.

REQUIREMENTS DURING DREDGE/DISPOSAL

- Parties disposing of material within the CAD Cells shall operate in compliance with the SER Performance Standards, incorporated into this document by reference.

- Parties disposing of material within the CAD Cells shall ensure that debris, consisting of metal, wood, rubber, plastic, or other man-made object or material is not disposed within the CAD Cells.

- Parties disposing of dredged material within the CAD Cells shall allow the material to settle within the scow after dredging for a minimum of 48 hours, unless NBHDC or its representative determines that a reduced hold time is warranted.

- Parties disposing of material within the CAD Cells shall transmit to NBHDC or its representative the coordinates of each proposed disposal at least 24 hours prior to its planned disposal time.

- An approximately 30 foot buffer will be designated around the boundary of each CAD Cell by NBHDC or its representative. This boundary will be designated the "CAD Cell Disposal Clean-Up Limit"; all dredged material disposed within a CAD Cell must be deposited within this boundary. The NBHDC will utilize the pre-dredge and post-dredge surveys of the CAD Cell(s) to determine if material was deposited outside of the CAD Cell Disposal Clean-Up Limit. Any material found to be located outside of the CAD Cell Disposal Clean-Up Limit shall be removed and replaced within the appropriate CAD Cell by the Party, such that the material complies with the CAD Cell Disposal Clean-Up Limit requirements.

- An Upper Elevation Limit will be designated for each CAD Cell by NBHDC or its representative. No material shall be placed shallower than the Upper Elevation Limit for that CAD Cell. The NBHDC will utilize the pre-dredge and post-dredge surveys of the CAD Cell(s) to determine if material was deposited shallower than the Upper Elevation Limit for the CAD Cell. Any material found to be located shallower than the Upper Elevation Limit of the CAD Cell shall be removed and repositioned within the CAD Cell by the Party, such that the material complies with the Upper Elevation Limit requirements.

- The Party must agree to allow the NBHDC representative permission to access its property to inspect dredging operations, to confirm compliance with the SER Performance Standards, or to conduct confirmatory surveys associated with dredging volume calculation.

REQUIREMENTS AFTER DREDGE/DISPOSAL

- Parties will be required to hire an independent third-party contractor to conduct post-dredge surveys of their dredge areas and of the CAD Cell(s) into which they were permitted to dispose dredged material. The independent third party will calculate the Final Dredge Volume based upon the pre-dredge survey and the post-dredge survey. The post-dredge survey and the Final Dredge Volume shall be forwarded to NBHDC or its representative.

- 75% of the Anticipated Dredge Volume will be subtracted from the Final Dredge Volume; the difference will be multiplied by the sum of the tipping fee and the NBHDC representation fee (currently $42 per cubic yard) to determine the Unpaid Balance due to NBHDC.

- NBHDC will issue an invoice for the Unpaid Balance.

7. Capping and Closure of CAD Cells

Once a CAD Cell has been filled (as determined by periodic bathymetric surveys), the NBHDC will oversee the design and construction associated with capping of the CAD Cell, in order to isolate sediments within the CAD Cell from New Bedford Harbor. Capping will consist of placement of two feet or more of sediment over the disposed material. NBHDC will perform operation and maintenance of the caps, which will involve periodic bathymetric surveys, coring, and sampling of the caps to evaluate cap integrity over time.

8. Siting and Constructing Additional CAD Cells

As additional capacity is required, the NBHDC and the Town of Fairhaven will jointly work to appropriately site and construct new CAD Cells. As only a limited capacity currently exists within the DMMP area, it is paramount that each CAD Cell is sited such that it does not interfere with the siting and construction of future CAD Cells. Whenever possible, it is preferable to utilize economies of scale to create CAD Cells as large as is economically viable, both in order to minimize fixed costs such as mobilization/demobilization costs during construction of the CAD Cells and to utilize the available capacity within the DMMP as efficiently as possible.

Utilizing the process outlined herein, the NBHDC and the Town of Fairhaven anticipate that the implementation of this Memorandum of Understanding will represent an unprecedented opportunity for coordination and cooperation, resulting in the advancement of long-held goals for the benefit of the people of the City of New Bedford, the Town of Fairhaven, and the Commonwealth of Massachusetts.

This Memorandum of Understanding is entered into this _____ day of _____, 2008, and remains in effect unless amended by individual consent.

_____

Ms. Kristin Decas, Executive Director

New Bedford Harbor Development Commission

_____

Mr. Bill Roth, Town Planner

Town of Fairhaven

_____

Mayor Scott W. Lang

City of New Bedford

Example Agreement for CAD Cell Use:

"CONTRACT FOR SERVICES:

USE OF CONFINED AQUATIC DISPOSAL (CAD) CELLS

IN NEW BEDFORD/FAIRHAVEN HARBOR"

The following represents an example agreement between the New Bedford Harbor Development Commission (HDC - the manager of the CAD facilities), and a third party, for the use of a Confined Aquatic Disposal (CAD) Cell for the disposal of dredged materials. Specific identity information concerning the third party for this particular agreement has been blacked out for privacy reasons.

December 2009

HARBOR DREDGING AGREEMENT

This HARBOR DREDGING AGREEMENT ("Agreement") is made within the County of Bristol, the Commonwealth of Massachusetts, on the _____ day of May, 2005 between THE TOWN OF FAIRHAVEN ("Town"), acting by and through its Board of Selectmen, the NEW BEDFORD HARBOR DEVELOPMENT COMMISSSION ("NBHDC"), and [redacted] a Massachusetts corporation with a principal place of business at [redacted]

PURPOSE: To allow [redacted] to participate in the project between the Town and the NBHDC undertaking the dredging of the waters in New Bedford Harbor

WHEREAS, the Town and the NBHDC have executed an Intermunicipal Agreement for Harbor Dredging Services ("Intermunicipal Agreement") in connection with certain grants awarded to the Town and the City;

AND WHEREAS, the City, by and through its Harbor Development Commission, is currently engaged in the dredging of New Bedford Harbor and has entered into contracts for the services of various engineers, consultants and contractors to undertake said dredging;

AND WHEREAS, [redacted] wish to participate in the dredging undertaken pursuant to the Intermunicipal Agreement to permit access to its waterfront operations;

BE IT THEREFORE RESOLVED AND AGREED:

I. <u>Payment to the Town</u>

1. [redacted] agrees to pay the Town (i) for dredging services in New Bedford harbor at the approaches to its waterfront operations under the terms set forth herein; and (ii) for the Town's costs, including but not limited to attorney's fees arising from or related to this Agreement, such costs not to exceed $15,000.00.

2. The initial estimated payment to be made by [redacted] shall be [redacted] based upon the estimated cost under the Intermunicipal Agreement to dredge approximately [redacted] cubic yards of material at the approaches to [redacted] waterfront operation.

3. [redacted] shall make the initial estimated payment to the Treasurer of the Town upon execution of this Agreement.

4. The Town Treasurer shall place and hold the initial estimated payment in a separate agency account from which payment shall be made to the Town pursuant to paragraph IV of this Agreement.

II. Performance of Dredging Work

1. The dredging work subject to this Agreement shall be performed at the waterway approach to [redacted] waterfront operation. Except as set forth in Section III, the manner, time, precise location, and quantity of dredging performed shall be determined through consultation between the engineers and contractors for the City, representatives of [redacted] and the Town. The Town shall bear no responsibility to [redacted] regarding any error in the location of any dredging or the necessity for any further dredging due to any error.

2. At no time shall the quantity of dredging exceed the net amount of cash available in the agency account to pay for such dredging at the per unit cost to the Town under the Intermunicipal Agreement.

3. If, for any reason, the Town has reason to believe that the amount of cash available in the agency account is insufficient to cover dredging work being performed, the Town shall have the right to cease all such dredging work until such time as [redacted] has made a further estimated payment into the agency account sufficient to cover any anticipated costs for dredging.

III. Scheduling of Work

Except as the Town may otherwise agree, the dredging at the approach to [redacted] waterfront operation shall not begin until dredging has been completed in and around the Pease Park ramp area. The Town retains the right, upon written notice to [redacted] to undertake dredging in areas other than the Pease park ramp area prior to dredging at the approach to [redacted] waterfront operation. Such notice shall contain a reasonable estimate as to when dredging, after such consultation as may be necessary under Section II(1) above, is expected to begin on behalf of [redacted]

IV. PAYMENT TO THE TOWN

1. The Town shall submit to the Town Treasurer, with a copy to [redacted] a monthly invoice/request for payment for its costs and dredging performed on behalf of [redacted] Said invoice/request shall indicate the location and amount of any work and the specific amount of any billing due to [redacted]

2. Payment shall be made to the Town by the Town Treasurer from the agency account no less than ten days or more than forty days from the submission of any invoice/request by the Town.

3. In the event that there are insufficient funds in the agency account to cover any invoice/request submitted by the Town, the Town Treasurer shall immediately notify the Town and [redacted] of any deficiency and, unless [redacted] disputes any amount pursuant to the terms of this

Agreement, [redacted] shall immediately deposit such funds as necessary to cover any deficiency into the agency account.

4. Upon completion of the work contemplated herein and full and final payment therefore, as acknowledged in writing by the Town, the Treasurer shall release the balance of the agency account to [redacted]

V. INDEMNITY AND RELEASE

1. The parties acknowledge that the City and/or the Harbor Development Commission is the contracting parties with respect to all engineers, consultants, or contractors utilized in the performance of work contemplated hereunder.

2. [redacted] hereby acknowledges review and approval of the proposed dredge area (attached to this document as Attachment A). Such review and approval acknowledges that [redacted] has been presented with an opportunity to review the potential impacts to its structures from the proposed dredging. For its review, [redacted] has either hired an independent engineer to review potential impacts to its structures from the proposed dredging and has forwarded guidance from same engineer to the representative of the Town of Fairhaven or the New Bedford Harbor Development Commission for incorporation into the dredge design, or has personally reviewed and approved the proposed dredging, or has waived the right to conduct a review. [redacted] hereby releases the Town of Fairhaven or its representative and/or the New Bedford Harbor Development Commission or its representative from any and all claims relating to potential future impacts to [redacted] permanent structures as a result of dredging conducted in accordance with the plans and specifications prepared by the New Bedford Harbor Development Commission or its representative in accordance with Attachment A.

3. [redacted] hereby release the Town from any and all claims relating to the performance of work contemplated hereunder. The within release shall not apply to claims against the Town regarding the amount of any payment herein.

4. [redacted] hereby assumes the entire responsibility and liability for any and all injury to or death of any or all persons, including their employees, and for any and all damage to property caused by, resulting from or arising out of any act, omission, or neglect on the part of [redacted] or of any subcontractor or of anyone directly or indirectly employed by any of them, or of anyone for whose acts any of them may be liable in connection with operations under this Agreement.

5. [redacted] shall the indemnify the Town, and its principals, officers, agents and employees, and hold it and them harmless, from any and all injuries and claims arising from the work performed under this Agreement, and from the Town's cost in defending against such claims, regardless of the nature of the injury or claim, except to the extent that such injury or claim is the result of a specific act of negligence or breach of this Agreement by the Town or its principal, officer, agent or employee.

6. No official, employee, agent or representative of the Town shall be individually or personally liable on any obligation of the Town under this contract.

VI. Assignment

The Town hereby assigns to [redacted] its rights against the City of New Bedford and its engineers, consultants, or contractors in any claim or dispute arising from an alleged failure to properly provide or perform dredging services at the approach to [redacted] waterfront operations.

VII. Amendments/Modification

1. No officer, official, agent, or employee of the Town shall have the power

to amend, modify or alter this Agreement or waive any of its provisions or to bind the Town by making any promise or representation not contained herein except by an amendment, in writing, executed in the same manner as this Agreement is executed. [redacted] may not rely on any conduct, statements, action, inaction or course of conduct of the employees or officers of the other party as having changed, modified or amended this Agreement.

2. The Town shall not be construed as having waived any provision of this Agreement unless the waiver is executed in writing as an amendment to this Agreement. No waiver by the Town of any default or breach shall constitute a waiver of any subsequent default or breach. Forbearance or indulgence in any form or manner by the Town shall not be construed as waiver nor shall it limit the legal or equitable remedies available to it.

VIII. DISPUTES

1. Each party shall provide written notification of any claim or dispute to the other party. No action shall be taken in connection with any claim or dispute less than sixty (60) days following written notification.

2. Any dispute between the parties shall be resolved by a court of competent jurisdiction sitting Bristol County, and any suit brought in any other jurisdiction shall be dismissed by the complaining party upon request of the Defendant, unless said suit involves a cross-claim or third party action and the court has jurisdiction over the main action. [redacted] and the Town hereby designate, in the case of the Town, the Town Clerk as its agent upon whom service of process may be made; and in the case of [redacted] any officer of the corporation as its agent upon whom service of process may be made. Nothing contained herein shall be construed to waive or limit the parties' rights of jury trial.

[redacted]

December 2009

_____

By:_____

December 2009

CONTRACT FOR SERVICES:
USE OF CONFINED AQUATIC DISPOSAL (CAD) CELLS
IN NEW BEDFORD/FAIRHAVEN HARBOR

BETWEEN
NEW BEDFORD HARBOR DEVELOPMENT COMMISSION
and
[redacted]

THIS CONTRACT is made and entered into this _____ day of July, 2008 by and between the New Bedford Harbor Development Commission, 106 Co-Op Wharf, New Bedford, Bristol County, Massachusetts 02740, hereinafter referred to as "NBHDC"; and [redacted] a public instrumentality created by the Massachusetts legislature with its principal office at [redacted] hereinafter referred to as "[redacted] This Contract establishes an Agreement to govern the disposal of dredge materials by the [redacted] into CAD Cells owned and operated by NBHDC.

WITNESSETH THAT:

NOW, THEREAFTER, in consideration of the mutual covenants and agreements hereinafter contained, the parties do hereby agree as follows:

ARTICLE I - AUTHORITY

The NBHDC grants the [redacted] the right to deposit up to 23,000 cubic yards of material dredged from its Fairhaven Facility into CAD Cells managed by the NBHDC located north of Pope's Island within New Bedford/Fairhaven Harbor. To offset the cost of the construction and management of the CAD Cells, the NBHDC has established a pro-rated tipping fee on a per-cubic-yard of capacity basis for placement of material within the existing CAD Cells, which is currently [redacted]. The use of the CAD Cell capacity stipulated herein is subject to an accurate accounting of the volume of the material dredged and deposited into the CAD Cells to be provided by the [redacted] This Agreement is subject to the requirements stipulated by the State Enhanced Remedy (SER) Committee (as promulgated by the Performance Standards accepted as part of the SER Committee approved work plans for dredging in New Bedford Harbor), and is subject to the terms and conditions stated below.

ARTICLE II – STEAMSHIP AUTHORITY'S RESPONSIBILITIES

A. [redacted] shall sign below and forward this executed Agreement to reserve space for up to (but not more than) 23,000 cubic yards of material into the CAD Cell 1, which includes 6,000 cubic yards of space previously reserved [redacted]

B. [redacted] shall obtain written permission from [redacted] to utilize its reserved space and provide documentation of this formal understanding between the two parties to NBHDC. If [redacted] is unable to procure rights to use space reserved by [redacted] NBHDC will offer the [redacted] up to (but not more than) 17,000 cubic yards of capacity within CAD Cell #1.

C. [redacted] shall provide payment of [redacted] to the NBHDC by no later than [redacted] to reserve rights to dispose of 23,000 cubic yards into the CAD cells. Payments tendered unto the NBHDC by the [redacted] will be expended by the NBHDC to construct CAD Cell 2 and are non-refundable. Ownership of CAD cell space reserved by the [redacted] will be retained until such time as the space is utilized by the [redacted] or the NBHDC approves the transfer of the space to another New Bedford Harbor stakeholder.

D. The [redacted] shall perform a pre-dredge survey and a final pay survey at its property by an independent third party surveyor prior to and after dredging in order to calculate the quantity of materials dredged and placed within CAD Cells operated by the NBHDC. The quantity of materials dredged and placed within CAD Cells will be subtracted from the 23,000 cubic yards of space reserved by [redacted] to determine the actual space utilized. Should additional funds be owed the NBHDC due to an unanticipated excess of volume deposited into the CAD Cells, the NBHDC will issue an invoice indicating the balance of funds due to the NBHDC, based upon the [redacted] cubic yard tipping fee and the excess volume.

E. [redacted] shall submit requests for additional disposal capacity in excess of 23,000 cubic yards in writing, should the [redacted] find that it requires more disposal volume than is granted by this authorization. The granting of such request would be at the sole discretion of the NBHDC. The NBHDC is able to offer immediate capacity of 23,000 cubic yards of capacity for [redacted] material in CAD Cell #1. Disposal of additional volume would be confined to CAD Cell #2, which is currently under construction in the Harbor and will not be available for use until completion scheduled for sometime later this year, or other CAD cells to be constructed thereafter.

F. [redacted] shall designate a representative authorized to act in the [redacted] behalf with respect to this disposal agreement.

G. The Steamship Authority shall place dredged material within the CAD Cells as directed by the NBHDC and/or its authorized representative. Note that a 30-foot buffer zone has been designated around the edge of each CAD Cell. Material erroneously placed outside of the 30-foot buffer zone by the Steamship Authority or its contractors or agents must be removed and placed into either CAD Cell #1 or CAD Cell #2 (as directed by the NBHDC or its representative) at no cost to the NBHDC.

H. [redacted] shall perform all of its services in conformity with applicable laws, ordinances, codes, rules, regulations and other legal requirements, including without limitation, those pertaining to fire, safety, environmental and health matters. [redacted] shall be responsible for its acts or omissions and those of the [redacted] agents or employees.

ARTICLE III – TERMS AND CONDITIONS

In depositing material within the CAD Cells operated by the NBHDC [redacted] agrees to indemnify and hold the NBHDC and/or its agents and authorized representatives harmless from any and all damages, losses or expenses, including, without limitation, attorneys' fees, sustained or incurred by the NBHDC and/or its agents and authorized representatives, as a result of any and all claims, demands, suits, causes of action, proceedings, judgments and/or liabilities arising out of any act or failure to act on the part of Steamship Authority and/or any of its contractors and/or subcontractors in connection with the dredging of the [redacted]. This includes, but is not limited to, any and all claims, demands, suits, causes of action, proceedings, judgments and/or liabilities arising out of any act or failure to act on the part of Steamship Authority with regard to the transportation of dredged materials to the CAD Cells operated by the NBHDC, with depositing material within the CAD Cells operated by the NBHDC, or with damages caused through disposal of unapproved material within the CAD Cells operated by the NBHDC.

ARTICLE IV – ACCEPTANCE

This Agreement is hereby accepted, including all Terms and Conditions as specified herein, by the undersigned, a duly authorized representative of the Steamship Authority. The Agreement shall be binding upon and shall insure to the benefit to the parties hereto, their successor and assign.

IN WITNESS THEREOF, the parties hereto have made and executed this Contract the day the year first written above.

New Bedford Harbor Development Commission

Dated:_____

By:_____

[redacted]

Dated:_____

By:_____

[redacted]

[redacted]

Dated:_____

By:_____

Authorized Representative, [redacted]

July 21, 2008

[redacted]

Re: Dredge Materials Disposal Agreement:

Use of New Bedford/Fairhaven Harbor CAD Cell #1, and

Required Tipping Fees

Dear [redacted]

The New Bedford Harbor Development Commission (Commission) understands that the [redacted] wishes to make use of the sub-aqueous New Bedford/Fairhaven Harbor Confined Aquatic Disposal (CAD) Cells for the disposal of approximately 23,000 cubic yards of material that the [redacted] plans to dredge from its Fairhaven, MA facility. The Commission hereby grants the [redacted] the right to deposit up to 23,000 cubic yards of material dredged from its Fairhaven Facility into CAD Cells managed by the Commission located north of Pope's Island within New Bedford/Fairhaven Harbor. Please note that this approval is subject to the requirements stipulated by the State Enhanced Remedy (SER) Committee (as promulgated by the Performance Standards accepted as part of the SER Committee approved work plans for dredging in New Bedford Harbor), and is subject to the terms and conditions stated below.

Utilization of CAD Cells

At present, the Commission is able to offer immediate capacity of up to (but not more than) 23,000 cubic yards of capacity for [redacted] material in CAD Cell #1,

assuming [redacted] receives permission from [redacted] to utilize its 6,000 cubic yards of reserved space (see below). If [redacted] is unable to obtain permission from [redacted] to utilize its reserved space, the Commission is able to offer up to (but not more than) 17,000 cubic yards of capacity within CAD Cell #1.

Should [redacted] find that it requires more disposal volume than is granted by this authorization, the Commission would consider increasing the allowable disposal volume for the Steamship Authority (though that volume would likely be granted in CAD Cell #2, which is currently under construction in the Harbor and will not be available for use until it is completed some time later this year). Should additional capacity become necessary, the [redacted] should request such capacity in writing, and the granting of such request would be at the sole discretion of the Commission.

Tipping Fee

The Commission has determined that the tipping fee for placement of material within the existing CAD Cells operated by the Commission is currently $38/cubic yard. In order to reserve space for 23,000 cubic yards of material in the CAD Cells, the Commission requests that [redacted] sign below and forward this signed agreement with a check for $874,000 to the Commission by no later than [redacted]. The Tipping Fee covers the Commission's cost of the construction and management of the CAD Cells pro-rated on a per-cubic-yard of capacity basis.

Please note that these funds will be non-refundable, as they will be utilized by the Commission in construction of CAD Cell 2; however, ownership of the space reserved by [redacted] will be retained until such time as the space is utilized by [redacted] or the Commission approves the transfer of the space to another New Bedford Harbor stakeholder.

[redacted]

As [redacted] may already be aware, 6,000 cubic yards of storage within CAD Cell #1 has been previously reserved by [redacted]. In order for [redacted] to utilize the space in CAD Cell #1 reserved by [redacted], the Commission will require a letter from [redacted] relinquishing its right to deposit dredged material within CAD Cell #1 in exchange for an equal volume of space reserved in CAD Cell #2.

Volume Quantity Accounting

The use of the CAD Cell capacity stipulated herein is subject to an accurate accounting of the volume of the material dredged and deposited into the CAD Cells. To that end, this approval is contingent upon the [redacted] conducting a pre-dredge survey and a final pay survey at its property by an independent third party surveyor prior to and after dredging in order to calculate the quantity of materials dredged and placed within CAD Cells operated by the Commission. The quantity of materials dredged and placed within

CAD Cells will be subtracted from the 23,000 cubic yards of space reserved by [redacted] to determine the actual space utilized. Should additional funds be owed the Commission due to an unanticipated excess of volume deposited into the CAD Cells, the Commission will issue an invoice indicating the balance of funds due to the Commission, based upon the $38 per cubic yard tipping fee and the excess volume.

Dredged material must be placed within the CAD Cells as directed by the Commission and/or its authorized representative. Note that a 30-foot buffer zone has been designated around the edge of each CAD Cell. Material erroneously placed outside of the 30-foot buffer zone by [redacted] or its contractors or agents must be removed and placed into either CAD Cell #1 or CAD Cell #2 (as directed by the Commission or its representative) at no cost to the Commission.

Terms and Conditions

In depositing material within the CAD Cells operated by the Commission, [redacted] agrees to indemnify and hold the Commission and/or its agents and authorized representatives harmless from any and all damages, losses or expenses, including, without limitation, attorneys' fees, sustained or incurred by the Commission and/or its agents and authorized representatives, as a result of any and all claims, demands, suits, causes of action, proceedings, judgments and/or liabilities arising out of any act or failure to act on the part of [redacted] and/or any of its contractors and/or subcontractors in connection with the dredging of the [redacted] Facility. This includes, but is not limited to, any and all claims, demands, suits, causes of action, proceedings, judgments and/or liabilities arising out of any act or failure to act on the part of [redacted] with regard to the transportation of dredged materials to the CAD Cells operated by the Commission, with depositing material within the CAD Cells operated by the Commission, or with damages caused through disposal of unapproved material within the CAD Cells operated by the Commission.

Sincerely,

[redacted]
New Bedford Harbor Development Commission

ACCEPTANCE:

This agreement is hereby accepted, including all Terms and Conditions as specified herein, by the undersigned, a duly authorized representative of the [redacted]

Accepted by:

_____

Date: _____

Name of Authorized Representative

_____

Title of Authorized Representative

_____

Representing

December 2009

WORK PLAN

NEW BEDFORD HARBOR DREDGE – PHASE III

CAD CELL #2 DESIGN ACTIVITES

and

ADDITIONAL CITY OF NEW BEDFORD DREDGE AREA INVESTIGATIONS

New Bedford and Fairhaven, Massachusetts

April, 2007

Prepared for:

The New Bedford Harbor Development Commission

New Bedford, Massachusetts

and

The Town of Fairhaven, Massachusetts

Prepared by:

Apex Companies, LLC
New Bedford, MA
And
Boston, MA

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Past Studies and Surveys

APPENDIX B

Since approval of the 2002 New Bedford/Fairhaven Harbor Plan, several studies have been completed which explored new opportunities for the Port and/or followed up on specific recommendations from that original Plan. These studies have been reviewed and their recommendations/findings thoroughly considered in developing the 2009 update of the Harbor Plan. A brief summary of the findings and recommendations from some of the more significant reports are included in this Appendix.

The reports were:

NPS Management Plan for New Bedford Whaling National Historic Park	2002
Potential Economic Effects of Dredging New Bedford Harbor	2004
Study for Relocation of Route 6 Bridge	2004
Port of NB Business Alliance Fishing Vessel Dock Space Survey	2004
Hicks-Logan-Sawyer: Vision Plan and Regulatory Strategy	2005
Streamlined Dredging Case Study: New Bedford	2006
New Bedford Master Plan Forums	2006
New Bedford HDC Harbor Plan Update/Status Report	2006
Summary of Harbor Master Plan Scoping Workshop	2006
Fairhaven Mills Site Public Charrette – Final Report	2006
New Bedford Tourism Summit Report	2007
Student MBA Project - Ideas to Improve Business Climate & Infrastructure	2007
Woods Hole Ferry Pilot Project	2007
Commercial Fishing Fleet Berthing Plan	2008
Master Plan for Development of Hicks-Logan	2008
Upper Harbor Economic Development Plan - Visioning Workshop	2008
HDC Mooring Study	2008
Acushnet Avenue Commercial Corridor	2008
Hick-Logan-Sawyer Master Plan/Growth District	2008
Route 18 Access Improvement	2008
Downtown Land Use & Retail Plan	2008
New Bedford Harbor Economic Development Study	2009

National Park Service Management Plan for the New Bedford Whaling National Historic Park

Date: September 3, 2001

Intent: Produce a management plan for the New Bedford Whaling National Historic Park that reflects multiple community perspectives and broader community concerns. The plan will be implemented over a period of 10-15 years and underscores the community's commitment to share stewardship of the park's resources through partnerships with the National Park Service.

Completed by: National Park Service (NPS)

This management plan presents strategies for NPS involvement in resource protection and visitor services in New Bedford, defines NPS development proposal and associated costs, addresses carrying capacity, and verifies park boundaries. The planning process also identifies strategies to coordinate resource protection, exhibit development, and programming among park partners in an effort to provide a seamless visitor experience.

The only waterfront attractions discussed in the plan are the Schooner Ernestina and the Waterfront Visitor Center. The plan merely describes these two facilities but does not offer specific strategies for either one. It is assumed that any of the overarching goals of the plan include the Waterfront Visitor Center and the Schooner Ernestina and that the plan envisions these attractions will continue to function as follows:

- Waterfront Visitor Center- The city's Office of Tourism and Marketing operates this Center and hosts special-interest groups, bus tours, and walking tours throughout the year. They provide brochures, maps, and other orientation materials. The facility is equipped with audiovisual equipment and offers interpretive sales publications.

- The Schooner Ernestina- Operated, restored, and preserved by the Schooner Ernestina Commission, this historic sailing ship offers programs that celebrate diversity, creativity, value, and dignity. The vessel hosts numerous dockside programs, and during the sailing season, groups venture out on one-day, overnight, and multi-day sails. While berthed in its homeport of New Bedford or during visits to other ports, Ernestina participates in waterfront events. An interpretive exhibit is usually available for public viewing while the ship is dockside in fair weather.

Potential Economic Effects of Dredging New Bedford Harbor

Date: September 4, 2004

Intent: To assess the potential economic effects attributable to proposed dredging of New Bedford Harbor navigational channels, maneuvering areas, fairways, and related business investment over the next ten years.

Completed by: FXM Associates, Economic Planning & Research

This study evaluates the potential economic benefit of the proposal to dredge portions of New Bedford/Fairhaven Harbor between the Hurricane Barrier and the North Terminal, a major portion of which is within the harbor's Designated Port Area (DPA). The following assumptions were made:

- Existing and new harbor freight uses will continue or develop in designated areas (i.e. Freight Ferry RO/RO Terminal, Maritime Terminal, Bridge Terminal, State Pier, Fish Island, Pope's Island North, and the proposed future facilities (North Terminal and New Bedford Harbor Terminal).
- Primary commercial fishing vessel berthing area will continue to be at Fisherman's Wharf, Steamship Wharf, Leonard's and Homer's Wharves. Portions of Fairhaven's central waterfront will continue to provide ship repair and other marine services.
- Future recreational boat uses will be accommodated in the upper harbor along the Hicks-Logan waterfront, an expanded Pope's Island Marina, new mooring fields near Crow Island, and new cross-harbor water taxi/launch service linking New Bedford and Fairhaven with major marinas.

The study confirmed prior reports that have consistently cited that reduced and diminishing water depth in the main navigation channel, maneuvering areas, driveways, and berthing areas are serious constraints not only to current and prospective large cargo vessel activity in the harbor, but also affecting commercial fishing interests, dry and liquid bulk barge operations, vessel repair facilities, cruise ship callings, and other commercial and recreational uses. Examples include:

- **Maritime Terminal and Bridge Terminal** – Because of water depth limitations, most refrigerated break bulk vessels cannot be fully loaded and Maritime International can not fully utilize its maximum freezing capacity, thus limiting production. Inadequate water depths at the Maritime and Bridge Terminals cost shippers $60-100,000 per trip ($1.2 to $2 million annually for a projected 20-vessel export market) and cost producers $400-700,000 in lost sales per trip ($8 million to $14 million in lost sales annually).

- **MacLean Seafood** – With improvements to the waterfront and dredging in this area (SE corner of Hicks-Logan), MacLean would be able to accommodate 6 to 7 fishing boats, significantly increasing the efficiency and capacity of their operations. They estimate that they could process an additional 7 to 8 million pounds of seafood annually, adding 13 to 14 jobs and up to $1m in new revenue annually to local trucking companies.

- **D.W. White/Pope's Island** – With adequate water depth created by proposed harbor dredging, the NW side of Pope's Island could again handle salt and other bulk products carried by ocean cargo vessels. This could add 20 or more new high paying jobs and $6.8 million in business sales annually..

- **Kelly's Boat Yard and Fairhaven Shipyard -** Current limited water depths require both yards to schedule boat haul-outs at high tide, reducing their capacity by 25% with an estimated sales loss of $4.5m annually.

This report estimated that the total direct, indirect and induced economic effects of navigational, fairways and berthing dredging in New Bedford/Fairhaven Harbor could result in an additional $100 million in business sales and 600 jobs in Bristol County ; $170 million in additional business sales, 1,200 jobs, $44 million additional household income, and $3.6 million in additional state tax receipts annually within Massachusetts overall; and an additional $19 million in net new federal tax receipts (US overall) each year. The net new taxes at the federal level are largely due to the fact that a major business venture (Norpel/Maritime International export movement of seafood) could not be feasibly accomplished at any other US port.

Conceptual Alternative Study for the Relocation of the Route 6 Bridge over New Bedford Harbor

Date: December 2004

Intent: To study the alternatives for the replacement/relocation of Route 6 and the New Bedford/Fairhaven bridge.

Completed by: STV, Inc and Vanasse Hangen Brustlin, Inc

The Harbor Plan identified a need to relocate Route 6 further north within the harbor to relieve a major obstacle to port development, to expand harbor capacity, and to improve Route 6 cross-harbor roadway connections. As currently configured, the existing moveable bridge limits the viability and marketability of substantial areas of waterfront land within the designated harbor area and many of the harbor's deep-water berths. (The designated harbor area is considered to be the area south of the proposed relocated Route 6.) The area north of the relocated Route 6 would continue to be used primarily for recreational boating. This study addresses the design, planning and environmental issues related to a relocated Rt 6 bridge.

The three conceptual design alternatives for the relocated bridge consisted of approximately 5200 feet of roadway measured from the intersection of Herman Melville Boulevard in New Bedford to the tie in to the existing viaduct on Rt 6 east of Pope's Island. Approximately 4800 feet of this would consist of new viaduct with the remainder being road at grade.

The report recommends a high-level moveable bridge as the best option with a 22-foot vertical clearance at MHW. Each of the three designs have a horizontal clearance of 80 feet. The majority of recreational boats passing through the bridge require a vertical clearance of between 15 and 50 feet and thus many would need the bridge to be opened to pass through. There would be three marinas (Bayline Marine, Brightman's Marina and Moby Dick Marina) remaining north of the relocated bridge. Additional marinas are expected to be added along the Hicks-Logan waterfront as this district is redeveloped.

For 3 proposed alternatives, the new bridge would have an estimated cost (construction, maintenance and operating cost for 50 year life cycle) of between $68 to $75 million. The preferred alternative would cost $74.3m.

Fishing Vessels - Dock Space Survey

Date: November 11, 2004

Intent: Survey of owners and captains of about 100 commercial fishing vessels to establish a baseline of information on the extent of the shortage and condition of dock space for the New Bedford fishing fleet.

Completed by: Port of New Bedford Business Alliance Inc.

Baseline survey. There were 42 respondents (about 2.5 boats per respondent) or roughly one-third of the New Bedford fleet completed this survey to determine dock space adequacy for fishing vessel berthing within the harbor. Of the vessels included in the survey, 57 were at publicly owned wharves and 43 at private facilities. The survey confirmed a severe shortage of dock space, consistent with prior HDC's published statements that recognized the problem.

For all vessels covered in the survey, over two thirds rated their berthing situation as poor or very poor (slightly better on average at private berths). At private facilities, over half of the vessels were berthed dockside while at public berths one in six were dockside. At public facilities, over half the vessels were rafted out three or more deep. At private facilities, only one in six were rafted out more than two. Nearly four in five vessels indicated that conditions had been getting worse on average over the past seven years (prior to 2004). Over 90% of the respondents indicated the federal fishing regulations had increased demand for berthing space with fishing vessels now averaging 226 days in port each year.

Previously proposed actions. The report noted that the 2002 Harbor Plan proposed extensions of both Homer's and Leonard's Wharves to add approximately 24 additional berths for the larger vessels in the fleet (would accommodate more smaller vessels). A temporary solution was explored late 2003 which would add about 12 berths by installing 250' of barges along the NStar bulkhead. The report indicated that neither of these initiatives have moved forward.

Recommendations. Several of the actions proposed by this report related to the fishing vessel owner's general concerns about the lack of municipal government's action in moving to resolve the dock space shortage problems. In addition to recommended actions intended to force the City to move forward with plans to expand dock space, the report recommended the creation of an independent Port Authority, completion of a comprehensive survey to more precisely determine needs, and exploring the possibility of using dock space on the State Pier. Other concerns expressed during the survey included: (1) lack of security, (2) existing safety hazards, (3) boat damage, and (4) access/provisioning/transport hardships.

Hicks-Logan-Sawyer Smart Growth Waterfront District:
Vision Plan and Regulatory Strategy.

Date: June 2005

Intent: Provide a clearly defined vision for the future development/restoration of the Hicks-Logan-Sawyer District

Completed by: Goody Clancy

This 95-acre site lies immediately north of the Designated Port Area (DPA), with its eastern edge defined by the Acushnet River. The Vision Plan's goals include redevelopment of Brownfields while also enhancing public safety and improving access to the waterfront. Emphasis is placed on environmentally sound development, redevelopment and long-term occupation of the district.

The District's assets include its location as a waterfront and city gateway, city and water views, distinctive old mill buildings, and a large spring-fed pond. An intermodal transportation center within the district also adds an important dimension. Challenges include contamination of several sites (4 identified Brownfield sites), virtually no streetscape amenities, lack of public space and generally poor pubic infrastructure (some utility pipes date back to the 19th century). The "Harbor Master Plan" designated the area along the waterfront south of I195 as an "urban industrial park". Traditional industrial users are unlikely to be attracted to this location due to oversupply of industrial parkland in SE Massachusetts.

The waterfront is identified as a defining part of HLS's identity. Marine-related activities in the District currently include four large fish processing businesses and a marine engineering company. Waterfront and seaport access are important assets but other part of the Port already at least partially meet local market demand for marine industrial businesses. The Vision Plan identified a need to remain flexible in land use so that the area will be welcoming to and attractively accommodate unforeseen opportunities.

Mixed use development appears to have the greatest potential, but this should support, or at least not conflict with, marine industrial activities within the adjacent DPA. At minimum, care needs to taken with the transition areas. The Plan recognizes that port-related and marine businesses would continue to operate in the district. Appropriate industry such as marine technology could comfortably coexist with other commerce, entertainment and the arts and even serve to attract visitors. The Plan, for example, recognizes the value and appropriateness of the MacLean Seafood facility expansion in the southeast corner of the district.

Further north into the HLS, a large variety of uses could still be appropriate as long as they are compatible with residential and recreational uses. The Plan sees potential for significantly more public waterfront access with a continuous walkway along the

water's edge, revival and expansion of marinas for recreational boats, and redevelopment of historic waterfront mill structures. Throughout the District, ground floor uses should be active and help to animate the street. Other waterfront uses could include parks, housing, restaurants and retail shops. Waterfront activities will attract people to the District from around the region. An appealing waterfront is key.

To unlock the development potential of the HLS District, there is a need to invest in the public realm such as streets, sidewalks, parks and other public spaces and improve the aesthetics at the edge of the industrial port. The HLS Vision Plan calls for promoting sustainable business practices and when possible development should have a positive regional impact.

With a diversity of uses, the new HLS district will help New Bedford meets its goals for waterfront revitalization and recreation, Brownfields remediation, locations for marine technology, job creation, and transit-oriented development.

Streamlined Dredging in Contaminated Ports
Case Study: The New Bedford Harbor Portfields Success

Date: 2006

Intent: Discuss the merits of a "State-Enhanced Remedy" in streamlining the regulatory process for dealing with contaminated sediments removed from the harbor during dredging.

Completed by: Apex Companies

The State Enhanced Remedy (SER) provision was created specifically to address the issues with which all future maintenance or improvement dredging projects in New Bedford harbor would have to deal, i.e. the presence of high levels of contamination in sediments. The SER provision was designed to allow the Port to emulate the Superfund process in the way it would deal with contaminated sediments encountered as part of maintenance and development projects. The concept was formulated and authorized through inclusion in the 1998 USEPA Record of Decision (ROD) for the New Bedford Superfund Site.

Local authorities developed an implementation strategy that involved the completion of an initial project that could (once completed) serve as a template for future action. The State Pier dredging project completed in 2001/2002 provided the opportunity to demonstrate and fine-tune the SER process. Approximately 70,000 cubic yards of contaminated sediment were successfully removed from the slips and fairways adjacent to State Pier, dewatered and moved for upland placement at a Brownfields reuse site. With the merits of this process demonstrated, the City was now armed with a set of Performance Standards that formed one of the cornerstones of the SER. A second cornerstone was completed in 2004 with the publishing of a Final Environment Impact Report (FEIR) which effectively authorized the City of New Bedford to site a series of Confined Aquatic Disposal (CAD) cells in the harbor thus solving a significant dredged material disposal problem. The third and final cornerstone to fully implement the SER was the creation of an effective forum to manage the process. The Portfields Partners coordinated by NOAA agreed to perform this function. The New Bedford/Fairhaven Harbor Plan serves as one of the key guiding documents, providing the authority and standards by which procedures allowed under the SER can be employed.

It is important that the Harbor Plan continue to include specifics concerning dredging needs within New Bedford/Fairhaven Harbor. This guidance, adequately vetted through a public process, provides the Portfields Partners with the necessary authority and direction to justify the dredging project conducted under the SER.

New Bedford Master Plan Forums
Report Outs

Date: July-August 2006

Intent: This report documents the planning, participation, and outcomes of six public forums held to gather input from New Bedford citizens regarding the future of the city. This will serve as a resource for the Comprehensive Master Plan which is still in process.

Completed by: New Bedford Planning Department

In July and August of 2006, six public forums were held in each city ward to gather input from citizens on how they envision the city of tomorrow focused on constructive and positive ways to improve the neighborhoods, schools, and parks.

The main themes of the forums were:

- Quality of both homes and neighborhoods.
- Job creation for the next generation of citizens, both young and old
- Quality of shopping and business environments
- An infrastructure system that complements job creation and neighborhood improvement efforts
- A transportation network linking people to the right places, at the right time
- An education system that prepares children for the future
- A crime free environment for all residents
- Open space and recreational opportunities for all

Following are comments that came out of these forums that relate to the harbor:

City Wide Issues

- Employ the New Bedford "Village" concept at the waterfront
- Include more recreational opportunities in the Harbor Master Plan
- Enhance City Gateways to draw more visitors (signage, landscaping,…)
- Capitalize on NB's resource to attract more visitors (tourism)
- Fund tourism marketing
- Use "Scallop" branding
- Protect the port for industry
- Encourage an environmentally friendly, green community
- Zoning is weak on commercial development
- 2-way traffic on Acushnet Avenue- Coggeshall to Sawyer
- Continue to explore alternatives to NB/Fairhaven Bridge location
- Create a continuous north/south Bike Path: Dartmouth to Fairhaven
- Create a maritime museum north of Coggeshall Street Bridge
- Install cultural flags along hurricane barrier
- Division of park/beach police patrols

Ward Specific Issues

Ward 4-

- Revitalize Palmer's Island (infrastructure investment, more security)
- Create a mixed-use waterfront
  (eliminate strict DPA regulations; encourage retail, residential, recreation
- Draw tourism from State Pier to downtown
- Better utilize State Pier
- Create kiosks at the waterfront
- Expand the National Park
- Expand the working waterfront
- Use theme of authentic working waterfront to attract tourists
- Expand historic walking tours
- Improve outreach to cruise ships
- Create additional revenue generators (besides just parking)

Ward 6

- Clark's Cove
  - Need to recognize it as an important natural resource
  - Clean up area
  - Improve/strengthen shellfish code enforcement/Master Plan
  - Improve odor control (ConCom's Management Plan)
- Install a shellfish warden 24/7
- Remove chain link fence along hurricane barrier
- Construct boardwalks and picnic tables on Monkey's Island Promenade
- Use Fort Taber for whale boat docking space
- Provide housing opportunities to attract the growing marine science industry.
- Teaming up with Sheriff's Department for park/beach patrols/cleanup

New Bedford Tourism Summit Report

Date: March 2007

Intent: Summit drew together hundreds of business and community leaders to consider potential paths for growth of the City's tourism industry.

Completed by: City of New Bedford

Of the recommendations offered by participants of the Tourism Summit, the following related to the Harbor:

1. Generally increase funds and staff efforts on tourism marketing. Much of the marketing should be targetted to Fast Ferry passengers and Martha Vineyard residents
2. Revitalize and reactivate Ernestina, including display of restoration process (This was voted as one of the top issues by summit participants.)
3. Improved shuttle service from ferry terminal to downtown
4. Create a pedestrian-safe crossing of RT 18 to the waterfront
5. Support an open air market for produce and seafood
6. Establish Tourism taskforces – one for harbor? (designated by the Mayor)
7. Cable-access program – promoting the harbor?
8. Determine disposition of New Bedford Lightship
9. Need a downtown hotel
10. Create a “Maritime Cove” where visitors can board fishing vessels, visit lightship, learn more about marine history and current marine industry in harbor.
11. Establish a downtown seafood association market with daily fresh scallops and fish in good-size storefront
12. Sailboat rentals (such as Community Boating in Boston and Fall River)

The Mayor expressed a goal to get Ernestina outside the dike every day. Give people a lifetime opportunity to enjoy the history and the actual ambiance and experience of sailing on that vessel.

Student MBA Project
UMass Dartmouth - Charlton College of Business

Date: January 2007

Intent: To generate ideas for improving the business climate and infrastructure for the North End, South End and central business districts of New Bedford.

Completed by: UMass Dartmouth MBA Students

Ideas that related to the harbor that were presented by students during this initiative included:

- Create a "Little Portugal" in the North End, drawing upon the strengths of existing business arrangements and the proximity of the water.
- Complete beautification projects along Interstate 195 and Route 18 with a creative landscaping welcoming visitors approaching the city.
- Add better and more signs to highlight what the city has to offer.
- Build an open-air pavilion in River Front Park to host parties and music events would attract crowds to the area.
- Construct a bike path along the waterfront, possibly connecting with the Fairhaven bike path
- Develop Acushnet Avenue, making it pedestrian-only, creating an entrance to the area.
- Connect the administrative, heritage and waterfront areas. For example, this group suggested creating additional green space to link areas of that district.
- At the intersection of Cove Street and the Hurricane Barrier, create a park that would hide the barrier with gently sloping areas, create an amphitheater, and on the water side add a boardwalk and a floating boat dock for people to enjoy the water.
- Restore the Orpheum Theater and add addition nearby dining opportunities..
- Add trolley service to connect parts of the city that are divided by highways.

Commercial Fishing Fleet Berthing Plan

Date: Spring 2008

Intent: Based on input from the commercial fishing industry and research concerning harbor development, existing uses and infrastructure, and applicable local, state and federal regulations, develop a commercial fishing vessel berthing plan for New Bedford Harbor. A wide array of options will be explored including existing dockage, potential dockage at other harbor locations, dock expansion and other alternatives including floats and moorings.

Completed by: Ocean and Coastal Consulting, Inc.

Between 400 and 500 fishing vessels use New Bedford/Fairhaven Harbor as their homeport or as a transient port of call. With only 68 dockside berths, congestion creates serious berthing challenges, particularly with vessels spending more time in port due to current fishing restrictions.

This study is exploring alternatives to increase the number of berths in the harbor (New Bedford side only) available for use by commercial fishing vessels. The primary focus is to meet the current needs of the fishermen with a plan that can be implemented in the short term. Three alternatives are under consideration: (1) new development in the harbor, (2) expansion of existing HDC facilities, and (3) offshore moorings/floats within the harbor. The consultant for this initiative considered the extension of Leonard's and Homer's Wharves with concrete or steel floats to be the best alternative.

Several configuration options have been proposed. Issues include possible impact on abutters' operations and the need to deauthorize a small portion of the federal maneuvering area to accommodate a greater expansion. New berths created would range from 23 to 44 depending on the configuration option chosen. Cost per berth ranged from $95,000 to $184,000 not including any required dredging.

Upper Harbor Economic Development Plan
Visioning Workshop

Date: February 15 and 16, 2008

Intent: Complete planning that will provide a foundation for responsible growth and development in New Bedford's upper harbor.

Completed by: Goody Clancy

New Bedford's upper harbor north of Coggeshall Street is home to one of the most intact collections of historic mill buildings and environmental beauty to be found anywhere. While the working waterfront's piers and wharves located in the lower portion of New Bedford Harbor have always been valued as critical to New Bedford's whaling and fishing industries, historically the upper river has been ignored as a significant asset for public access and future development. Planning for this area will focus on how key assets: the river, historic mills, and adjacent neighborhoods, can be linked for sustainable and responsible economic and community growth. New development can balance mill redevelopment for new industries, public access to the water, and a stronger natural environment.

The City of New Bedford, MassDevelopment, and the New Bedford Economic Development Council (NBEDC) have partnered to undertake this comprehensive and community based planning effort. This plan will be developed in two phases. The first is the community-visioning workshop, which will provide an initial understanding of key issues and opportunities presented by the redevelopment of the Upper Harbor Development District.

To begin this process a public visioning workshop was held in February 2008. This analysis will inform the second phase of this planning effort: the development of a comprehensive district plan that reflects the visioning process towards the goal of implementation.

New Bedford Harbor Economic Development Study

Date:	**2009**
Intent:	**To assist with the economic development of the New Bedford waterfront**
Completed by:	**HR&A (under contract to MassDevelopment)**

This initiative offered an economic development plan for the waterfront area that runs roughly from the old Aerovox factory in the North End to the NStar building near the downtown.

The plan — intended to complement various city plans including the master plan, harbor development plan, downtown plan, the Route 18 plan and others — focused on Acushnet River areas considered key to the future economic development of the City.

Target areas included the former Aerovox and Cliftex mills; the Fairhaven Mills; the waterfront area of Hicks Logan; the State Pier and the former NStar plant. The initiative also explored the overall economy of New Bedford, especially the maritime economy.

This study has provided information that will be useful in future re-zonings efforts and allow for better planning. A summary of this study has been included in Chapter 4 of the Harbor Plan.

APPENDIX C

Compliance Document

New Bedford/Fairhaven Municipal Harbor Plan: Compliance with Standards for Plan Approval

301 CMR 23.05 Standards for Plan Approval

A municipal harbor plan or portion thereof shall be approved only upon a written determination by the Secretary that the following standards have been met. The New Bedford/Fairhaven Municipal Harbor Plan fully complies with these standards as documented below.

301 CMR 23.05 (1) The Plan must be consistent with all CZM Policies as applicable. In evaluating the Plan for such consistency, The Secretary shall take into account all relevant guidance as to the interpretation and application of such policies as may be available in documents comprising the CZM Plan and other policy-related materials issues by CZM such as federal consistency determinations.

The following policies have been identified with assistance from MCZM staff as relevant to the preparation of the New Bedford/Fairhaven Municipal Harbor Plan.

HABITAT POLICY #1 - Protect coastal resource areas including salt marshes, shellfish beds, dunes, beaches, barrier beaches, salt ponds, eelgrass beds, and fresh water wetlands for their important role as natural habitats.

Through support for the EPA Harbor Cleanup and planned subsequent Harbor Restoration under the auspices of the New Bedford Harbor Trustees, the Harbor Plan strongly supports the protection and enhancement of natural habitats within the harbor area. The Harbor Plan further supports the public acquisition of the southern portion of Marsh Island in Fairhaven for public use and enjoyment and habitat preservation. The northern portion of the Island was acquired with support from the Trustee Council several years ago. The Trustee Council has also provided funds to the Buzzards Bay Coalition for restoration of a previously existing salt marsh on the Island. All navigational dredging within the Harbor area that is supported by the Plan is being further analyzed by the State Enhanced Remedy (SER) Committee in conjunction with the Harbor Plan Dredging Initiatives to ensure that impacts on shellfish beds and other important natural resources and habitats are fully considered.

WATER QUALITY POLICY #1 - Ensure that point-source discharges in or affecting the coastal zone are consistent with federally approved state effluent limitations and water quality standards.

The New Bedford/Fairhaven Harbor Plan recommends continued implementation of a combined sewer overflow (CSO) improvements program to substantially reduce inner harbor contaminants. CSO improvements will be focused in New Bedford's North Terminal and are the subject of ongoing planning involving the City of New Bedford and the federal EPA. Implementation of this program is being coordinated with EPA's Harbor Cleanup program. The combination of the removal, through Harbor Cleanup dredging of contaminated Harbor sediments, and the CSO improvement program has and is anticipated to continue to substantially enhance water quality within the inner harbor.

WATER QUALITY POLICY #2 - Ensure that nonpoint pollution controls promote the attainment of state surface water quality standards in the coastal zone.

The Harbor Plan supports substantial improvements to public and private facilities throughout the harbor area providing opportunities to upgrade nonpoint source pollution controls. Improvements to public and private facilities including fishing piers and State Pier are envisioned to be undertaken in compliance with current stormwater policies and guidelines. Repairs to existing fishing piers and efforts to remove derelict vessels from the Harbor will further contribute to reducing the leaching of contaminants into the harbor.

PORTS POLICY #1 - Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes, marine productivity and public health.

The City of New Bedford and the Town of Fairhaven are continuing to work with state and federal officials through the SER Committee to minimize adverse effects of dredging, in accordance with all applicable state and federal regulations. Through the implementation of CAD Cell strategies, the City and Town are significantly improving the quality of the surface sediment layer on the Harbor's bottom, relieving degraded conditions and supporting marine productivity and public health. This Harbor Plan update strongly supports this initiative and encourages its continuation. The dredging plans are continuing to evolve. The New Bedford/Fairhaven Harbor SER Committee will continue its ongoing efforts to advance navigational dredging priorities in a manner consistent with minimizing effects on water quality, physical processes, marine productivity and public health.

PORTS POLICY #2 - Obtain the widest possible public benefit from channel dredging, ensuring that designated ports and developed harbors are given highest priority in the allocation of federal and state dredging funds. Ensure that this dredging is consistent with marine environment policies.

Almost the entire New Bedford waterfront and a large piece of the central Fairhaven waterfront are situated within Designated Port Areas (DPAs). Many of the navigational dredging projects endorsed by the Harbor Plan are located in these DPAs. Some additional projects are located outside the DPA but within the developed harbor, as defined by the Hurricane Barrier. DPAs are priority areas for use of state dredging funds through the Seaport Bond Bill (or the Environmental Bond Bill). Dredging projects endorsed by the Harbor Plan are being further assessed through the SER process.

PORTS POLICY #3 - Preserve and enhance the capacity of Designated Port Areas (DPAs) to accommodate water-dependent industrial uses, and prevent the exclusion of such uses from tidelands and any other DPA lands over which a state agency exerts control by virtue of ownership, regulatory authority, or other legal jurisdiction.

The New Bedford/Fairhaven Harbor Plan makes a strong commitment to enhancing the capacity of the Designated Port Area to support water-dependent industry in accordance with this policy. The Plan endorses the current boundaries of the DPA with the exception that minor adjustments to these boundaries may be appropriate on the extreme perimeters of the area where there would be little or no appreciable impact on the water-dependent marine industry currently located in the port or with realistic potential of locating here in the foreseeable future. The Plan supports substantial infrastructure improvements on land and water to enhance the capacity of the DPA to serve the evolving needs of water-dependent industrial uses. Key projects supported by the Plan that expand the capacity of the DPA include: dredging, public pier and wharf repairs including expansion of berthing for commercial fishing vessels, modernization of the State Pier, expansion of the water-side port infrastructure in the North Terminal, at south end of the South Terminal, on the northwest corner of Pope's Island and at Fairhaven's Union Wharf, enhancing access to the working waterfront through Route 18 redevelopment and intermodal connections to North Terminal and State Pier, and replacement of the New Bedford/Fairhaven bridge to enhance the harbor's capacity to support deep draft vessel activity. In addition, Supporting DPA uses developed within the New Bedford DPA will be allowed only in accordance with Chapter 91 regulations at 310 CMR 9.00.

PROTECTED AREAS POLICY #3 - Ensure that proposed developments in or near designated or registered historic districts or sites respect the preservation intent of the designation and that potential adverse effects are minimized.

The Harbor Plan study area includes land and structure within several historic districts subject to local state and federal jurisdictions. The Harbor Plan continues to support the National Park Service's initiatives defined in their stated goals, mission statement and General Management Plan for the New Bedford Whaling National Historical Park. In addition, the Harbor Plan advocates provision of enhanced facilities for the historic Schooner Ernestina, the official vessel of the Commonwealth,

and a National Historic Landmark. The 2002 Harbor Plan was developed in cooperation with WHALE (Waterfront Historic Area LeaguE) and the Executive Director of WHALE served as Chairman of the original Harbor Master Plan Committee. This updated Harbor Plan has retained the support for several measures that will enhance the settings and interpretation of historic structures and places. These measures include support for redevelopment of Route 18 to improve pedestrian connections between the historic district and the waterfront, preservation and restoration of a historic whale oil structure on the site of the proposed waterfront hotel, the provision of space and facilities within the Central New Bedford waterfront for the interpretation of historic waterfront resources, and the National Register listing of the central areas of Fairhaven. The Wharfinger Building, located in the New Bedford central waterfront, has been preserved and is documented with the Massachusetts Historical Commission (Form B, Feb 1998). Marketing of the Port will include support of the tourism industry promoting the significance of this historic waterfront.

PORTS MANAGEMENT PRINCIPLE #1 - Encourage, through technical and financial assistance, expansion of water-dependent uses in designated ports and developed harbors, re-development of urban waterfronts, and expansion of visual access.

Major water-dependent industrial projects that are supported by the Harbor Plan are being advanced with the support of technical and financial assistance that is funded through the Seaport Bond Bill and other state and federal funding sources. Funded projects include repairs to the public piers that provide berthing for the fishing industry and development of a freight ferry terminal at State Pier. The Harbor Plan includes substantial provision to enhance public access to the harbor.

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301 CMR 23.05 (2) The Plan shall be consistent with state tidelands policy objectives and all associated regulatory principles.

The Plan is consistent with the state tidelands policy objectives as articulated in 310 CMR 9.00. The primary state tidelands policy objectives with which the Plan must be consistent are as follows:

23.05(2)(a)1 -To ensure that development of all tidelands complies with other applicable environmental regulatory programs of the Commonwealth and is especially protective of Aquatic Resources in coastal Areas of Critical Environmental Concern, as provided in 310 CMR 9.32(1)(e) and 9.33

All projects supported by the Harbor Plan are subject to applicable local and state review requirements, ensuring compliance with the Commonwealth's regulatory programs. There are no Areas of Critical Environmental Concern in the New Bedford/Fairhaven Harbor Plan study area.

23.05(2) (a) 2 - To preserve any rights held by the Commonwealth in trust for the public to use tidelands for lawful purposes, and to preserve any public rights of access that are associated with such use as, as provided in 310 CMR 9.35

Harbor Plan projects located within tidelands are subject to Chapter 91 jurisdiction ensuring compliance with requirements associated with rights of public access. The Plan includes support for enhancements to public landings in the New Bedford DPA and in the Fairhaven Central Waterfront, thereby enhancing opportunities for public access to tidelands. The Plan includes substantial provisions aimed at increasing on-foot public access to tidelands (Marsh Island, Palmer's Island and a continuous Harborwalk promoting public access to the water's edge).

23.05(2) (a) 3 -To preserve the availability and suitability of tidelands that are in use for water-dependent purposes, or that are reserved primarily for water-dependent industry or other specific types of water-dependent use as provided in 310 CMR 9.32(1)(b) and 9.36

Uses located on tidelands proposed in the Harbor Plan are consistent with the requirements of 310 CMR 9.32(1) (b) with respect to proposed uses in Designated Port Areas. In addition, the Harbor Plan is fully consistent with the requirements of 310 CMR 9.36 with respect to the protection of water-dependent uses on tidelands. Substantial areas of the waterfront within the New Bedford DPA are owned or controlled by public agencies (including the Harbor Development Commission and the Department of Conservation and Recreation) with a mandate to support water-dependent industrial uses, ensuring long term public control over these areas.

23.05(2)(a)4 -To ensure that all licensed fill and structures are structurally sound and other wise designed and built in a manner consistent with public health and safety and with responsible environmental engineering practice, especially in coastal high hazard and other areas subject to flooding or sea-level rise, as provided in 310 CMR 9.37

The harbor planning area addressed in this Harbor Plan is primarily located inside the Hurricane Barrier, which provides protection from coastal hazards, flooding and sea level rise. The Harbor Plan incorporates substantial proposals to repair, replace or develop structures to current engineering standards that provide for enhanced public safety in accordance with standards defined in 310 CMR 9.37.

23.05(2) (a) 5 - To ensure patronage of public recreational boating facilities by the general public and to prevent undue privatization in the patronage of private recreational boating facilities, as provided in 310 CMR 9.38 and to ensure that fair and equitable methods are employed in the assignment of moorings to the general public by harbormasters as provided by 310 CMR 9.07

The Harbor Plan provides for enhanced public water access through support for improvements to public boat ramps in New Bedford and Fairhaven, provision of enhanced facilities to serve transient recreational boaters on Pope's Island, at the Pease Park boat ramp in Fairhaven, and through provision of floating dock facilities to enhance public water access in the New Bedford Central Waterfront. The Harbor Plan supports the expansion of recreational mooring fields, including, where feasible, the use of watersheet over CAD cells used to support dredging projects. The Harbor Plan does not determine whether these mooring fields will be publicly or

privately operated. Once such a determination has been made, development of these areas and allocation of berths shall be advanced under the applicable standards of 310 CMR 9.38 and 310 CMR 9.07. Any other proposed recreational boating facilities will be developed in accordance with these same provisions. The Plan supports creation of a memorandum of agreement between the City of New Bedford and the Town of Fairhaven to promote consistency between fee structure and regulations governing recreational boating activities and support facilities.

23.05(2)(a)6 -To ensure that marinas, boatyards, and boat launching ramps are developed in a manner consistent with sound engineering and design principles and include such pumpout facilities and other mitigation measures as are appropriate to avoid or minimize adverse impacts on water quality, physical processes, marine productivity and public health, as provided in 310 CMR 9.39

The Harbor Plan identifies the potential for additional marina development and improvements to boat ramps in accordance with applicable state and local regulations ensuring use of sound engineering and design principles. Pumpout facilities shall be provided as needed in accordance with 310 CMR 9.39(1)3.b. In support of the Harbor Plan's goal of enhancing the harbor environment, the HDC has instituted a service for the collection and disposal of used engine oil from commercial vessels.

23.05(2)(a)7 -To ensure that dredging and disposal of dredged material is conducted in a manner that avoids disturbance of submerged lands and otherwise avoids or minimizes adverse impacts on water quality, physical processes, marine productivity and public health, as provided in 310 CMR 9.40

Navigational dredging projects that are supported by the Harbor Plan are subject to ongoing federal, state and local review via the SER process, ensuring that any potential adverse effects are minimized. Large areas of the harbor bottom are covered with sediments contaminated from past industrial activities located along the water's edge or near steams or storm drains that flowed into the Harbor. The currently permitted and preferred sediment disposal method for navigational dredge project involves CAD Cells, which temporarily disturb submerged land, but once capped, the areas can be reclaimed for marine habitats and a large variety of commercial and recreational uses. The SER Committee, for example, continues to fully consider options for future reuse of the CAD Cell areas as mooring fields for both commercial and recreational vessels. Analysis of potential disposal sites for dredge materials and dredge sediments supported by the Harbor Plan is ongoing through the SER process which evaluates alternative sites and identifies alternatives that minimize adverse environmental effects.

23.05(2) (a) 8 -To ensure that nonwater-dependent use projects do not unreasonably diminish the capacity of any tidelands to accommodate water-dependent use, as provided in 310 CMR 9.51

The Harbor Plan promotes the use of tidelands within DPAs for water-dependent industrial uses. For tidelands outside the DPA, the Harbor Plan provides general guidance on appropriate use options for key sites, including possible water-dependent uses such as public access facilities that might be incorporated on these properties.

23.05(2) (a) 9 -To ensure that nonwater-dependent use projects on any tidelands devote a reasonable portion of such lands to water-dependent use, including public access in the exercise of public rights in said lands as provided in 310 CMR 9.52

Outside the Designated Port Areas, the Harbor Plan strongly supports and encourages extensive public access to the water's edge including the extension/expansion of the existing Harborwalk around the entire perimeter of the Harbor. The addition of 42 outdoor interpretive panels along the "Nautical Mile" throughout New Bedford's central business district and waterfront also help promote public access to the Harbor and out onto its watersheet. The Harbor Plan continues to strongly support Commonwealth Chapter 91 regulations that define public rights to access over filled tidelands.

23.05(2) (a) 10 -To ensure that nonwater-dependent use projects on Commonwealth tidelands except in Designated Port Areas, promote public use and enjoyment of such lands to a degree that is fully commensurate with the proprietary interests of the Commonwealth therein, and which ensures that the private advantages of use are not primary but merely incidental to the achievement of public purposes as provided in 310 CMR 9.53

The Harbor Plan supports the public use and enjoyment of Commonwealth tidelands in non-water dependent use projects, as provided in 310 CMR 9.53. The extent of Commonwealth tidelands outside of Designated Port Areas within New Bedford Harbor have not been formally delineated. This delineation will occur as a part of individual projects that will be advanced in accordance with 310 CMR 9.53.

23.05(2) (b) -If the plan includes provisions which amplify upon certain *discretionary requirements* of 310 CMR 9.00, such provisions must be complementary of the regulatory principles underlying such regulatory requirement

The Plan includes only one provision that amplifies upon the discretionary requirements of 310 CMR 9.00 concerning public access along the water's edge.

301 CMR §9.52(1) (b) Utilization of Shoreline for Water-Dependent Purposes. Provides as follows:

(1) "In the event that the project site includes a water-dependent use zone, the project shall include...walkways and related facilities along the entire length of the water-dependent use zone...no less than ten feet in width..."
(2) "In the event that the project site includes a water-dependent use zone, the project shall include...appropriate connecting walkways that allow pedestrians to approach the shoreline walkways from public ways or other public access facilities to which any tidelands on the project site are adjacent.

The Plan establishes a dedicated 20-foot wide public accessway along the much of the shoreline located outside the DPA from the I-195 bridge over the Acushnet River to the Hurricane Barrier. This requirement contains both a substitution for a numerical standard in 301 CMR §9.52(1) (b) and an amplifications of the standards.

23.05(2)(c) -If the Plan includes provisions which are intended to substitute for the minimum use limitations or numerical standards of 310 CMR 9.00 at 310 CMR 9.51(3)(a) through (e), 9.52(1)(b)(1), or 9.53(2)(b) and (c), the Secretary must determine that the following conditions are applicable

- The Plan does not include substitute provisions for the standards outlined in 310 CMR 9.51(3) (a).
- The Plan does not include substitute provisions for 310 CMR 9.51(3) (b).
- The Plan does not include substitute provisions for 310 CMR 9.51(3) (c).
- The Plan does not include substitute provisions for 310 CMR 9.51(3) (d).
- The Plan does not include substitute provisions for 310 CMR 9.51(3) (e).
- The Plan does include substitute provisions for 310 CMR 9.52(1) (b) (1).

  The Plan changes the numerical standard for the width of pedestrian access walkways along the entire length of the water-dependent use zone for the planning areas between the I-195 bridge and the Hurricane Barrier on both sides of New Bedford/Fairhaven Harbor except for areas within the DPA. The width has been increased from a minimum of ten (10) feet to a minimum of twenty (20) feet. This change does not apply to waterfront within the Designated Port Area (DPA). Within the DPA, efforts should be made to provide public viewing platforms/areas and walkways to allow the public access to the water's edge and to view the activities of the working port where this can be done safely and not interfere with waterfront marine industrial activities or compromise port security. Further details concerning the design of the walkways and their intended specific route along the water's edge will be outlined in a Waterfront Public Access Plan to be developed by the City and Town as a follow-up to a recommendations in Chapter 7 of this Plan (Section 7.3.8.3).

- The Plan does not include substitute provisions for 310 CMR 9.53(2) (b).
- The Plan does not include substitute provisions for 310 CMR 9.53(2) (c).

23.05(2)(d) -In accordance with 310 CMR 9.51(3), any determination made pursuant to 301 CMR 23.05(2)(c) shall be based on a demonstration by the municipality that the substitute provisions

set forth in the Plan will promote, with comparable or greater effectiveness the state tidelands policy objectives in question.

The only substitute provision included in the 2010 updated New Bedford/Fairhaven Municipal Harbor Plan increases the minimum required width of the pedestrian walkway in the water-dependent use zone for the central harbor. This change promotes greater effectiveness of state tidelands policy objectives by improving pedestrian access and increasing opportunities for the public's enjoyment of the waterfront. and watersheet.

23.05(2)(e) -If the Plan includes a DPA Master Plan, such Master Plan must preserve and enhance the capacity of the DPA to accommodate water-dependent industrial use and must prevent substantial exclusion by any other use eligible for licensing in a DPA pursuant to 310 CMR 9.32

There are no specific changes proposed as part of the DPA Master Plan, other than the elimination of the Eligibility Credit Program. Nevertheless, the Plan complies with the approval standards for the DPA Master Plan as described below.

23.05(2) (e) (1) - *An extensive amount of total DPA land area in close proximity to the water will be reserved for water-dependent industrial uses. In general, commercial uses and accessory uses thereto will not occupy more than 25 percent of the total DPA land area covered by the Master Plan.*

The Plan strongly supports the continued use of an extensive amount of the total DPA land area in close proximity to the water for marine industrial uses. Ongoing efforts to renovate and improve DPA waterfront facilities at several sites around the Harbor have been focused on meeting the specific needs of existing marine industries and attracting new water-dependent commerce. These alterations continue to make the waterfront more suitable for marine industrial activities. Recent initiatives have included harbor dredging, adding marine recycling, energy conservation and waste oil recovery systems and programs for the commercial fishing fleet, new wharf fendering and lighting, and cargo and passenger handling and processing facilities. Several projects are underway or planned in the DPA including adding berthing space for the growing commercial fishing fleet, significantly expanding port security response and monitoring equipment, and rehabilitating and expanding facilities and services at the New Bedford State Pier including a new marina for port security and response boats. Private enterprise has also contributed to improving the capacity and capability of the working port with construction of new waterfront special use buildings and facilities to support marine industrial activities. In the Fairhaven DPA, plans are underway for extensive renovation of Town-owned Union Wharf and, through private investment, for an upgrade of the former D.N. Kelly yard recently acquired by Fairhaven Shipyard. Both these sites will continue to largely support marine industrial activities. All these waterfront DPA improvements in both the City and Town are intended to

support marine industry and ensure that these sections of waterfront remain highly suitable for marine industrial use.

As more fully described in Chapter 3, the New Bedford/Fairhaven Harbor DPA is extensively and actively utilized for water-dependent industrial uses, with very little commercial use. Nearly the entire DPA waterfront is occupied by seafood processing, ship repair, marine cargo facilities, transportation, utilities, service and support industries, and commercial fishing vessel berthing. The areas in close proximity to the water are all subject to Chapter 91 jurisdiction, and as the Plan does not make any changes to the existing Chapter 91 requirements for licensing in the DPA areas, the continued presence of water-dependent industrial uses along the water's edge is assured through the implementation of Chapter 91.

The federal government and the Commonwealth own 7% of the DPA land area, primarily the State Pier and EPA dewatering facility. The City of New Bedford and Town of Fairhaven together own approximately 20% of the land in the DPA. About 60% of this is waterfront land (a total of 18 properties) under long-term lease through the Harbor Development Commission, mostly to seafood processors. Much of the remainder of the municipally held land such as the six publicly owned commercial fishing wharves (five in New Bedford and one in Fairhaven) is, and for the foreseeable future will continue to be, directly supporting marine industries.

Over 30% of the DPA land is owned and actively used by privately-held marine industrial companies and another 10% is owned and actively used by warehousing and manufacturing companies, many with ties, or that are accessory, to the Port's water-dependent industries. Another 19% of the DPA is owned by public utility and transportation companies (Commonwealth Electric, Commonwealth Gas, railroad, TV/radio transmission). The extent and economic viability of this water-dependent industrial complex ensures that marine industry will remain a viable use of this land for the foreseeable future without additional significant government regulatory intervention. The City and Town believe that for DPA lands under Chapter 91 jurisdiction (i.e. on filled tidelands), existing DPA regulations adequately protect these areas from development for housing and recreational boat marina uses. The two municipalities strongly support these restrictions. Except for the largely vacant former power plant site which has been designated a special study area, no changes to existing use are expected under the 5-year time frame of this Plan that would change the preponderance of water-dependent industrial uses along the shoreline.

The Plan proposes the use of WDSFs in the DPA for the disposal of clean materials dredged from the Harbor during creation of CAD cells. These newly filled flowed tidelands will improve the function of the working port by allowing the expansion of existing wharves and the addition of state-of-the-art facilities and services to safely and efficiently accommodate deep-draft ocean-going vessels. These improvements will also help to ensure that the DPA waterfront continues to be used primarily to support marine industry.

As illustrated in Table 3.2, of the total DPA area of 231.5 acres, only about 22 acres is being used for commercial and 1.5 acres for residential and hotels, representing 10% of the total DPA. No private residential, motels, hotels, or boarding houses are located on filled tidelands within the New Bedford or Fairhaven DPAs. Since the original 2002 Harbor Plan was approved, there has been little change in the overall land use pattern. In fact, the only area of significant change has been in the "Standard Times Field", which has transitioned approximately 30 acres of vacant land primarily into seafood processing and related uses. The trend has been for increases, not decreases in water-dependent industrial uses. It appears unreasonable to expect that the level of supporting commercial uses would change significantly enough to even begin to approach the State's DPA limit of 25%. This would require an increase of 150% in land use by supporting commercial. Over the lifetime of the current Harbor Plan, neither the City nor Town propose or support new development at any project site within the DPA that would exceed the Commonwealth limits for supporting commercial uses. The expectation is that supporting commercial uses will continue to occupy close to 10% of the total DPA land area for the foreseeable future excluding what may be proposed for the former power plant special study area.

All private residential uses are prohibited by local zoning from areas currently within the DPA. There are no substitutions in this Plan that propose any changes to Chapter 91 restrictions to residential development on filled tidelands.

23.05(2) (e) (2) *-Prevent commitments of space or facilities that would significantly discourage present or future water-dependent industrial activity, especially on waterfront sites. In addition, specify limits on the type, scale, duration, operation, or other relevant aspects of commercial use to ensure that such uses will mix compatibly and not significantly alter the predominantly maritime industrial character of the DPA. Specify reasonable limitations on any uses in the DPA, if necessary to mitigate conflict with existing residential uses on properties abutting the DPA*

By adhering to the existing Chapter 91 standards for licensing in DPAs, the Harbor Plan ensures that the needs of water-dependent industrial facilities will be accommodated and not discouraged. While some 100 acres of the DPA are outside of Chapter 91 jurisdiction, these areas are, in general, further away from and not abutting the waterfront, and are appropriately zoned for industrial, seafood processing and other uses. Existing land use patterns show that the prevalence of commercial uses is higher within the Chapter 91 regulated areas than outside of jurisdiction.

Existing DPA areas are well separated from residential uses along the New Bedford waterfront by Route 18. Along the Fairhaven waterfront there is residential use across the street from the shipyards, but this has been a relationship that has existed for hundreds of years and no particular limitations are required on DPA uses to mitigate conflicts.

23.05(2)(e)(3) - *Identify any industrial or commercial uses allowable under the municipal zoning that qualify as supporting DPA uses, provided such uses comply with provisions of the definition of supporting DPA uses (310 CMR 9.02).*

As described in Chapter 3, in New Bedford the predominant zoning designations for the DPA are Industrial B (IB) and Waterfront Industrial (WI), both of which are within a Working Waterfront Overlay District. These zones are predominantly for industrial uses, but allow some commercial. These include neighborhood retail, business and professional offices, and (for WI only) banks, motor vehicle general repair, indoor commercial recreation, and restaurants. Several other uses in these two zones require special permits from the Board of Appeals or City Council. Not allowed are day care facilities, bed & breakfasts, theaters and auditoriums, and clubs and lodges. The only allowed commercial use which is not in concert with the definition of Supporting DPA uses are hotel, motel or inn. Allowed industrial uses include manufacturing, R&D and testing laboratories/facilities, warehousing, and transportation terminals. Prohibited industries include earth removal, junkyards, low-level radioactive or nuclear waste facilities, and tire recycling/retreading. Zoning also does not allow cemeteries or hospital within IB or WI. The Working Waterfront Overlay District supports the siting of fish filleting and seafood processing plants within the Industrial B district.

The City of New Bedford has given specific reviewing authority to the Harbor Development Commission to assure compliance with the Harbor Plan (see Section 3.3.3). The HDC's goal has been to ensure that the functioning of the working port is enhanced by any waterfront projects within the DPA. Their role is to encourage development that supports marine industry.

In Fairhaven, the zoning for the DPA is predominantly industrial, although a portion of the area is zoned for business. The Fairhaven zoning allows for industrial uses within the DPA, but also provides that commercial uses such as restaurants, retail, banks and professional offices may be approved as of right or by special permit. Hotels and motels are allowed only by special permit.

23.05(2)(e)(4) -*Identify a strategy to guide the ongoing promotion of water-dependent industrial use, including (a) recommendations for capital improvements or other benefits to be provided by projects involving supporting DPA uses, (b) preserving and enhancing transportation infrastructure and facilities providing user access to the working waterfront and its backlands from both water and landside, (c) committing to a surrounding land development pattern that provides an appropriate buffer between industrial uses in the DPA and community uses that require some separation to avoid conflict*

As more fully described in Chapter 7 of the Harbor Plan, a large number of initiatives designed to promote the water-dependent industrial use of the port are included within the Plan. Some of these initiatives are:

- Support for dredging for both navigational purposes and environmental remediation.

- Development of new bulkheads and waterfront development shoreline facilities (WDSF) to support maritime uses.
- Increased in berthing space for the commercial fishing industry through an expansion of dock space.
- Support for waterborne freight operations, water transportation, and seafood display auction.
- Integration of needs of the DPA into highway and rail planning efforts to ensure adequate highway access reduced navigational conflicts at bridge crossings and preservation of freight rail access to the waterfront.

The Harbor Development Commission has taken a very active and aggressive role in successfully promoting the Port of New Bedford both nationally and internationally to marine industrial interests. These have included short sea shipping, cruise ships and ferries, and industries needing shore-side support for their off-shore development initiatives such as wind energy.

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301 CMR 23.05 (3) The Plan must include all feasible measures to ensure compatibility with the plans or planned activities of all state agencies owning real property or otherwise responsible for the implementation or development of plans within the harbor planning area. This determination shall only be made if full consultation has occurred between the municipality and the relevant state agencies wherein both parties have made every reasonable effort to maximize the compatibility of their respective plans.

Throughout its period of development, the Harbor Plan has been developed in close consultation with state agencies, and any applicable plans of these state agencies for real property within the study have been reviewed. The following State Agencies are particularly relevant:

Executive Office of Transportation

Mass Highway

Redevelopment of Route 18. This project is in the design stage with state and federal funding by the City of New Bedford in conjunction with MassHighway.

Route 6 Bridge Replacement. The City of New Bedford has made an application for federal funds to further evaluate replacement and/or possible relocation of the Route 6 Bridge. It is anticipated that such an evaluation would provide the basis for further assessing the feasibility of this project, and further discussions with state transportation agencies.

MBTA

Intermodal Transportation Center. The Harbor Plan is consistent with the MBTA's conceptual planning for development of an intermodal transportation facility in Hicks-Logan section of New Bedford next to the Port's North Terminal as part of the New Bedford/Fall River Commuter Rail Improvement Project. The Harbor Plan

supports the development of additional compatible transportation services in this location, particularly connections from the intermodal terminal to the port's passenger ferries.

Department of Conservation and Recreation (DCR)

State Pier

The City of New Bedford is working cooperatively with DCR to advance revitalization of the State Pier including infrastructure improvements, marketing initiatives and management methods. A separate study has been initiated to evaluate the economic opportunities for the State Pier and recommend a course of action to more fully realize the potential of this valuable resource.

Ernestina

The Schooner Ernestina is considered to be a key element of the future of New Bedford's central waterfront area by both the City and DCR. Plans being advanced cooperatively by DCR and the City of New Bedford for the State Pier have the potential to substantially enhance the Ernestina's landside facilities in support of its educational mission.

Seaport Advisory Council

The communities have worked closely with the Seaport Advisory Council to advance Harbor plan initiatives.

MassDevelopment

The communities are working closely with MassDevelopment in order to identify appropriate opportunities to advance key Harbor Plan projects. During this effort to update the Plan, MassDevelopment worked with the City to complete an economic analysis of the working waterfront and identifying opportunities for future growth of marine industry in the Port. That evaluation and those recommendations are summarized in Chapter 4 of the Harbor Plan and factored into the Plan's recommendations.

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301 CMR 23.05 (4) The Plan must include enforceable implementation commitments to ensure that among other things, all measures will be taken in a timely and coordinated manner to offset the effect of any plan requirement less restrictive than 310 CMR 9.00.

The Harbor Plan includes a clear definition of the schedule for implementation of Harbor Plan initiatives and the roles of the responsible implementing and funding entities (where known). Several key Harbor Plan initiatives are already moving

forward into implementation using state and federal funds. There are no plan requirements that are less restrictive than 310 CMR 9.00.

The Town of Fairhaven is initiating a review of their zoning as part of an effort to enhance coordination between the Harbor Plan and town zoning.