

U.S. Department of the Interior
National Park Service
Environmental Assessment

Pedlocks Island—Fort Andrews Preservation and Adaptive Reuse Project

Boston Harbor Islands National Park Area
Massachusetts

This document assesses the impacts related to the proposed reuse of Fort Andrews and development of public use facilities at East Head on Pedlocks Island. If you wish to comment on this Environmental Assessment, you may submit comments by October 28th 2005 on the Internet at:

<http://parkplanning.nps.gov>.

Please note that names and addresses of people who comment become part of the public record. If you wish for your name and/or address to be withheld, you must state this prominently at the beginning of your comment. All submissions from organizations, businesses, and individuals identifying themselves as representatives or officials of organizations or businesses will be made available for public inspection in their entirety.

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Environmental Assessment



Submitted by:
U.S. Department of the Interior
National Park Service
Boston Harbor Islands National Park Area

September 26, 2005

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ES.0 EXECUTIVE SUMMARY

ES.1 Introduction

This Environmental Assessment (EA) evaluates the Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project, and has been prepared in accordance with the National Environmental Policy Act of 1969, as amended. As envisioned, the Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project includes the rehabilitation and reuse of portions of the historic Fort Andrews and East Head of Peddocks Island as a prime destination point within the Boston Harbor Islands national park area. The project is being proposed by two members of the Boston Harbor Islands Partnership: the Massachusetts Department of Conservation and Recreation (DCR), as owner of the island, and by the Island Alliance.

Reuse of Fort Andrews and development of public use facilities at East Head on Peddocks Island was presented and analyzed at a conceptual level in the Boston Harbor Islands *General Management Plan Final Environmental Impact Statement (GMP/EIS)*, released in December 2003. The *GMP/EIS* addressed Peddocks Island use alternatives, but at only a general level, due to the preliminary state of planning for the island when the document was filed.

The National Park Service is not currently undertaking or funding any aspect of the proposed project on Peddocks Island. However, the utilities component envisioned in the initial phase of the reuse project is based on development concepts in the *GMP/EIS*. In addition, there could be future federal actions to assist DCR and the Island Alliance in completing some elements of the project. The National Park Service has therefore prepared this EA in the interest of full disclosure of potential impacts of the proposed Peddocks Island project.

This EA describes the known environmental impacts of the proposed adaptive reuse plan as it is currently envisioned and addresses impacts associated with the utilities component proposed in the initial phase of the project.

ES.2 Project and Alternatives

The Boston Harbor Islands national park area *General Management Plan* underwent a comprehensive analysis process as part of the federal environmental analysis process that considered a reasonable range of ideas for managing the Boston Harbor Islands national park area. Four alternative concepts (including a no action alternative) were developed to support the park's purpose and significance, address issues, avoid unacceptable resource impacts, and respond to public interests and concerns.

This EA carries forward the analysis of a preferred alternative in comparison with a no action alternative. The no action alternative would be to not adaptively reuse Peddocks

Island—Fort Andrews. In this alternative, the existing environment would remain essentially the same; the historic fort would continue to deteriorate. The proposed Peddocks Island—Fort Andrews Adaptive Reuse Project is the preferred alternative. In this alternative certain buildings and features of the fort would be rehabilitated for adaptive reuse and public access and use of the island would increase.

The proposed Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project involves improvements that would occur solely on the East Head portion of the island. These improvements would be completed over time, with the goal of systematically enhancing the services and opportunities for public use and enjoyment of the island's historic and natural resources. Initial efforts would focus on establishing utility services on the island capable of supporting all phases of the project, and on initiating the expanded use of the island through the creation of day-use retreat capabilities. Public safety efforts would also be initiated to facilitate use of the island and to insure the integrity of the buildings and grounds. Later efforts would include the rehabilitation and stabilization of fort structures and the development of an overnight family eco-tent camp on the uplands of East Head. In the short term, Peddocks Island would provide a daytime destination for public use and enjoyment and as an events location for groups. In the long term, this phased improvement approach would establish Peddocks Island as an attractive daytime and overnight destination for area residents and visitors.

ES.3 Affected Environment

The affected environment includes resources affected, either beneficially or adversely, by the no action alternative or the preferred alternative. Resources that could be impacted by the proposed Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project that are considered in this EA include: cultural resources; ecologically sensitive areas and endangered species; water quality; wetlands, navigable waterways, and coastal zones; soils and hazardous materials; public safety; energy infrastructure; and populations. This EA evaluates existing conditions for each of these resource topics to provide a baseline and foundation for impact analysis. Topics dismissed from consideration due to the absence of any quantifiable impact or effect include prime and unique agricultural lands, noise, traffic, and air quality.

ES.4 Environmental Consequences

An analysis of environmental consequences for each of the resource topics affected by the no action alternative and the preferred alternative was conducted. The analysis focused on comparing impacts of the preferred alternative with existing conditions. The duration, intensity, and type of impacts were evaluated to provide a clear understanding of the no action alternative and the preferred alternative effects on the environmental resource topics. Table ES-1 summarizes impacts of the alternatives by resource topic.

ES.5 Conclusion

Both the no action alternative and the preferred alternative would result in limited adverse negative impacts on resources studied in this EA. The no action alternative would result in the continued deterioration of the cultural resources of the island. The preferred alternative would result in some short-term impacts associated with construction. The preferred alternative, however, would also result in numerous beneficial impacts including preservation of historic structures, increased public safety, and the improved public access, use, and enjoyment of Peddocks Island. Implementation of the preferred alternative would not result in impairment of the park's resources and values.

Table ES-1: Comparative Summary of Alternatives

Preferred Alternative	No Action
Cultural Resources	
The preferred alternative would result in positive long-term effects on cultural resources through the preservation and adaptive reuse of portions of the historic Fort Andrews buildings. The preferred alternative involves compliance with cultural resource regulatory requirements and their implementing regulations to ensure grading or excavation would not adversely impact significant archaeological resources. Specific plans to renovate or selectively demolish structures have not been developed and would be determined following further reuse analyses.	The no action alternative would result in long-term adverse impacts on cultural resources because no buildings would be rehabilitated through adaptive use. Historic structures would remain vacant and/or open to the elements and suffer further deferred maintenance, deterioration, and vandalism. In the no action alternative, there would be no impacts to archaeological resources because no grading or excavation would be required.
Ecologically Sensitive Areas and Endangered Species	
The proposed alternative would positively impact upland vegetation through the implementation of park policy that prescribes the control of exotic species. The proposed alternative would also benefit terrestrial wildlife through the implementation of a natural resource management area on almost half of Peddocks Island. Some minor adverse impacts on birds and mammals sensitive to human activity may occur in areas of the island slated for redevelopment and construction of trails or boardwalks. Although Peddocks Island is mapped as Massachusetts priority habitat for the plant species Seabeach Dock, no impacts would be anticipated as no work would be proposed within Seabeach Dock habitat.	The no action alternative would not impact upland vegetation, terrestrial wildlife, wetland and aquatic marine wildlife, or protected species.
Water Quality	
The proposed alternative could generate approximately 30,400 gallons per day (gpd) of wastewater and require a supply of 45,600 gpd of water. A single conduit installed via directional drilling beneath Hull Gut would beneficially impact water quality by supplying a new wastewater disposal main and a new water supply line that would improve existing infrastructure on the island. The grading and landscaping of several acres of upland for the family camp ground would result in minor impacts to the existing stormwater runoff patterns on East Head. A stormwater management system would reduce rates of runoff and include Best Management Practices to protect water quality.	In the no action alternative, the existing wastewater, water, and stormwater systems would remain the same. Future use of the island would be limited by the capacity of the existing systems and thereby reduce potential for historic preservation, recreation, use, and enjoyment of Peddocks Island.

Table ES-1: Comparative Summary of Alternatives (continued)

Preferred Alternative	No Action
Wetlands, Navigable Waterways, and Coastal Zones	
The proposed alternative would result in no impacts to wetland resource areas, navigable waterways, or the coastal zone. No aspect of the project would involve filling or altering a federal wetland resource area. Directional drilling work associated with the installation of a utilities conduit beneath Hull Gut would require work beneath federal waters, including a federal navigation channel and would require approval by the US Army Corps of Engineers. The directional boring would preclude any dredging or other work within a coastal or freshwater wetland resource area and would not affect navigation within or outside of the designated channel.	In the no action alternative, there would be no impacts to wetlands, navigable waterways, and coastal zones.
Soils and Hazardous Materials	
The proposed alternative would beneficially impact soils through the continued abatement of potential asbestos and lead contamination during the rehabilitation of existing buildings. Urban fill soils excavated during project implementation would be assessed through observation and testing, and disposed of in accordance with state and federal regulations and guidelines.	The no action alternative would not include the abatement of asbestos and lead contamination associated with existing buildings. The no action alternative would not address the condition of urban fill soils, or the potential presence of hazardous materials in fill soils.
Public Safety	
The proposed alternative would result in positive impacts on public safety through the adaptive reuse or securing of existing buildings that are vacant and could pose safety hazards. Negligible impacts on demand for public safety personnel would be anticipated due to the increase in the number of visitors to Peddocks Island.	The no action alternative would result in adverse impacts to public safety. Buildings would remain vacant and/or open to the elements and suffer further deferred maintenance and deterioration. Structurally unstable buildings would not be isolated from public access leading to increased public safety concerns.
Energy Infrastructure	
The proposed alternative would result in positive impacts on energy infrastructure on the East Head through the installation of an energy cable through a conduit underneath Hull Gut. Negligible impacts on the overall energy demand for the Boston area would result from increases in energy demand as a result of the project.	The no action alternative does not propose any changes to the current level of activity at East Head; therefore no impacts on energy infrastructure would be anticipated.
Construction	
The proposed alternative would result in short-term impacts on ambient noise levels, air quality and water quality. Some short-term impacts may also result from the installation of the utility conduit.	The no action alternative does not involve any proposed construction activity; therefore no impacts would be anticipated.

Table ES-1: Comparative Summary of Alternatives (continued)

Preferred Alternative	No Action
Socioeconomic Environment	
The proposed action does not place disproportionate impacts on a particular demographic group. The preferred alternative would not impose any health or environmental impact on nearby populations. The proposed alternative would contribute to increased jobs and tax revenues. The preferred alternative would provide increased access to recreation, use, and enjoyment of East Head by members of the public.	The no action alternative would not result in adverse impacts to particular demographic groups. The no action alternative would not contribute benefits to economic development associated with the redevelopment of the island and would limit public access to and use of the island.
Cumulative Impacts	
The <i>GMP/EIS</i> addresses impacts associated with the development of all Boston Harbor Islands. Impacts associated with the individual components and the overall Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project would be minimal; therefore cumulative impacts would not be anticipated.	The no action alternative assumes that no development of East Head would occur; therefore cumulative impacts would not be anticipated.
Sustainability and Long-Term Management	
The preferred alternative would result in beneficial long-term impacts on sustainability and long-term management. The Boston Harbor Islands Partnership demonstrates environmental leadership and a commitment to the principles of sustainability and leads by example in park management. The preferred alternative emphasizes sustainable design through the rehabilitation and adaptive reuse of existing dilapidated buildings. The footprint of the project would be proposed in areas already disturbed by previous development and the eco-tent camp would result in limited impacts. Existing on-island infrastructure would be reused and reconstructed, where possible.	Under the no action alternative, conditions at East Head would remain the same and opportunities for sustainable development would not be realized. Cultural resources would continue to deteriorate. Long-term management at the island would not change.

1.0 PURPOSE AND NEED

1.1 Introduction

As part of the Omnibus Parks and Public Land Management Act of 1996 (the Act), the United States Congress established the Boston Harbor Islands national park area as a unit of the National Park System in order to preserve island resources for the public, to improve access to the park through the use of public water transportation, and to provide education and visitor information programs. The Act directs that the Harbor Islands park be managed in partnership by the National Park Service, Commonwealth of Massachusetts, City of Boston, and others. It is explicit that the jurisdiction of the Commonwealth of Massachusetts, or any of its political subdivisions, remains unchanged within the park. Therefore, responsibilities to protect park resources and provide visitor services that existed prior to establishing the national park area continue as part of the partnership management of the park.

The Act established the 13-member Boston Harbor Islands Partnership to coordinate the federal, state, and local planning and management of the new national park area. The Island Alliance, a member of the Boston Harbor Islands Partnership, is charged by the Partnership with generating private revenue to support the park area and is working with several of the Partnership agencies to develop and manage facilities for public use and educational opportunities at, public access to, and conservation of the Boston Harbor Islands. The Massachusetts Department of Conservation and Recreation (DCR), as both a member of the Partnership and the owner of Peddocks Island, is working directly with the Island Alliance in the design and implementation of facilities to fulfill the purpose and goals of the Act.

In 2000 the National Park Service and the Boston Harbor Islands Partnership issued a Draft *General Management Plan* and Draft General Management Plan Environmental Impact Statement for the newly-established Boston Harbor Islands national park area for public comment and agency review. During the comment and review period for these documents, eight formal public meetings were held throughout the region and numerous consultations were conducted with local, state, and federal agencies, members of the congressional delegation, state and local elected officials, and American Indian tribes. The Final *GMP/EIS* was issued in 2003 and incorporated much of the information obtained during the public review process. A Record of Decision is anticipated in late 2005.

The Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project presented in this EA has been prepared in consideration of, and in response to, the Boston Harbor Islands national park area *General Management Plan*. The Boston Harbor Islands Partnership's vision for East Head is to develop a new day-use and overnight destination on Peddocks Island that would make the island more accessible to the public, protect the island's natural and cultural resources, preserve portions of the historic military fort, and

promote wider public use of the island. This vision would be achieved through a phased program that includes the preservation and adaptive reuse of portions of historic Fort Andrews' buildings and the development of an outdoor eco-tent camp complex on the uplands of the East Head end of the island.

1.2 Project Setting

Peddocks Island is located approximately one-quarter mile off the western (harbor) coast of mainland Hull, Massachusetts and, at approximately 187 acres in size, is one of the largest and most ecologically diverse of the 34 islands of the Boston Harbor Islands national park area. It offers a varied terrain that includes uplands, lowland marshes, four miles of coastline, ten acres of mostly rocky beaches, and spectacular harbor and city views. It is also the home of Fort Andrews, a 26-building coastal fortification built at the end of the nineteenth century. While lying within the corporate boundaries of the Town of Hull, the island is separated from the mainland by the approximately one-quarter mile wide channel identified variously as Hull Gut or the Nantasket Roads Channel. The island is owned by the Commonwealth of Massachusetts and is managed by DCR.

Figure 1-1 depicts both the location of Peddocks Island within Boston Harbor and the topography of the island (USGS quadrangle map). A recent vertical aerial photograph of the island is presented in Figure 1-2. As these figures depict, the island is topographically segmented into three principal sections – West Head, Middle Head, and East Head.

Fort Andrews historically occupied the entirety of East Head, and existing fort structures and the Parade Ground still occupy much of the central portion of the eastern end of Peddocks Island. The extant fort structures have been unoccupied since the 1940s and since that time have experienced varying levels of structural damage and decay. In addition to the areas in the vicinity of the existing structures and Parade Ground at the center of East Head, there is evidence of terracing, earthworks, roadways, and paths associated with the former fort apparent throughout the upland and coastal areas of East Head.

The perimeter of Middle Head and the western end of East Head are occupied by approximately forty seasonal cottages, some of which are still used on a seasonal basis. The land on which they are located is owned by the DCR and tenants reside in the cottages with the permission of DCR. The remaining portions of Middle Head and virtually all of West Head are essentially undeveloped.

Day visitors travel to the island during the summer months to tour the abandoned fort and to hike and picnic. Day visitation averages 60 to 70 visitors, while peak day visitation is approximately 300 visitors. In addition, a limited number of tent campsites for overnight camping are offered through the DCR reservation system; however, services for visitors are limited. There had been a small visitor contact facility located in the former Guardhouse, but that is not currently operating. Three on-site composting toilet facilities are provided,



Scale 1:14,400
1 inch = 1,200 feet

0 1,200 2,400 Feet



Figure 1-2
Aerial Photograph

Peddocks Island
Hull, Massachusetts

Basemap: 2001 Orthophotography, MassGIS

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but there is no running water on the island and power is limited to a small photovoltaic system at the Guardhouse.

Access to Peddocks Island is via passenger ferry and water shuttle service from Georges Island. Specifically, a passenger ferry company under agreement with the Island Alliance, acting on behalf of the Partnership, provides service to Georges Island from three mainland points: Downtown Boston, Quincy, and Hull. At Georges Island a free water shuttle service is available for access between Georges, Bumpkin, Grape, Lovells, and Peddocks Islands. At the time the *General Management Plan* was published, eighty percent of the ferry passengers left from Long Wharf in Boston, while most of the remainder was from south shore.

The proposed Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project involves improvements that would occur solely on the East Head portion of the island. These improvements would be completed over time, with the goal of systematically enhancing the services and opportunities for public use and enjoyment of the island's historic and natural resources. Initial efforts would focus on establishing utility services on the island capable of supporting all phases of the project and on initiating the expanded use of the island through the creation of day-use retreat capabilities. If implemented, these initial efforts would be expected to be completed in late summer 2006. Safety efforts would also be initiated to facilitate public use of the island and to insure the integrity of the buildings and grounds. Later efforts would include the rehabilitation and stabilization of specific fort structures and the development of an overnight family eco-tent camp on the uplands of East Head.

The Island Alliance and DCR have developed a phased approach for completing improvements on the island to accommodate visitors. In the short term, the focus would be to provide amenities for single day visits to the island for public use and enjoyment and as an events location for groups. The mid-term and long-term plans include adaptive reuse of portions of the fort buildings and the development of the family camp, to establish East Head as an attractive daytime and overnight destination for area residents and visitors. This EA addresses potential impacts of all phases of development.

1.3 Environmental Review

There is a complex array of federal and state laws, regulations, and other mandatory guidance related to this project. In implementing the Boston Harbor Islands general management plan, the Partnership agencies will comply with all applicable laws, regulations, and guidance documents. A few of the relevant laws and regulatory review processes are summarized below.

1.3.1 *National Environmental Policy Act*

National Environmental Policy Act (NEPA) review is required whenever National Park Service or other federal agency considers an action that could have impacts on the human environment. Federal actions are defined as projects, activities, or programs funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; those requiring a federal permit, license, or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency.

Reuse of Fort Andrews was presented and analyzed at a conceptual level in the Boston Harbor Islands *General Management Plan* and *GMP/EIS*. The *GMP/EIS* addressed Peddocks Island alternatives, but at a general level, due to the preliminary state of planning when the document was filed. The *GMP/EIS* and the *General Management Plan* make a commitment to consult, at the earliest practicable time, with federal agencies, state and local governments, potentially affected communities, Indian tribes, interest groups, and entities specified by law or regulation regarding actions that may have impacts on park resources.

The National Park Service is not currently undertaking or funding the proposed Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project; therefore, an EA is not required at this time under NEPA. However, the utilities component envisioned in the initial phase of the project is based on the *General Management Plan*, and there may be future federal actions to assist DCR and the Island Alliance in completing the larger project. The National Park Service has therefore prepared this EA to provide full disclosure of the phased adaptive reuse program's potential impacts and to allow opportunity for public comment.

This EA describes the known environmental impacts of the adaptive reuse plan as currently envisioned and addresses the specific alternatives and impacts associated with the utilities component proposed in the initial phase of the project.

1.3.2 *Massachusetts Environmental Policy Act*

The DCR and Island Alliance initiated state review of the project and its impacts, in compliance with the Massachusetts Environmental Policy Act (MEPA), through the preparation of an Environmental Notification Form (ENF) submitted to the Massachusetts Secretary of Environmental Affairs in April 2005. While it was determined that initial planned project components, including the utility conduit, would not meet or exceed MEPA regulatory review thresholds, the DCR and Island Alliance agreed to prepare the ENF in order to provide an opportunity for broad public input. It was also noted that implementation of later phases of the project could result in exceeding certain MEPA review thresholds, which would be the subject of separate, future MEPA filings. Following public review and comment on the ENF, the Secretary of Environmental Affairs determined

that the project would not require further environmental review under MEPA. A copy of the Secretary's ENF Certificate for the project is included in Appendix A.

1.3.3 National Historic Preservation Act

The National Historic Preservation Act of 1966, as amended, protects and preserves districts, sites, and structures and architectural, archaeological, and cultural resources. Section 106 of the Act requires consultation with the State Historic Preservation Officer (SHPO). Section 110 of the Act requires that the National Park Service identify and nominate all eligible resources under its jurisdiction to the National Register of Historic Places.

During development of the general management plan, the National Park Service made a commitment to enter into an agreement with the Massachusetts SHPO that establishes procedures for ongoing consultation. Such an agreement would take into account the unique management structure of the Boston Harbor Islands while being consistent with the requirements of 36 CFR 800. The memorandum of agreement referenced in EA Section 1.3.4 below and Section 4.2, Cultural Resources, EA will be key to developing the National Park Service/SHPO agreement; the executive director of the Massachusetts Historical Commission acts as the Massachusetts SHPO.

1.3.4 Massachusetts Historical Commission

The DCR and Island Alliance are consulting with the MHC in compliance with State Register Review requirements (950 CMR 71) on potential project impacts. A memorandum of agreement (MOA) has been drafted among the MHC, DCR, and Island Alliance, that establishes an ongoing review procedure for future undertakings not yet planned and/or funded, and that provides stipulations to adequately identify, protect, and/or mitigate impacts to significant historic and archaeological resources. The MOA is discussed in more detail in EA Section 4.2, Cultural Resources.

1.4 Land Use and Planning Context

1.4.1 Boston Harbor Islands National Park Area General Management Plan

As previously noted, a *General Management Plan* for the national park area was prepared, which has been unanimously endorsed by the Boston Harbor Islands Partnership. The proposed Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project would be consistent with that plan.

1.4.2 Statewide Comprehensive Outdoor Recreation Plan

The Massachusetts Statewide Comprehensive Outdoor Recreational Plan (SCORP) is a five-year plan that identifies open space and recreation lands, analyzes the demand for parkland, and assesses parkland needs.

SCORP outlines the following six policies:

- ◆ Protect Massachusetts' natural resources and their ecosystem context by maintaining connectedness of open spaces in each watershed. Achieve protection to maximize public-private partnerships in the protection of open space lands. Strive to prevent damage from development activities and promote principles of good stewardship among all users.
- ◆ Promote environmental literacy among Massachusetts' citizens, especially about the importance of protecting open space for biological diversity, ecosystem health, and human health and well-being, and support programs in environmental education.
- ◆ Develop productive partnerships between state agencies, the Federal government, municipalities, and the private sector for acquisition, maintenance, and programming of open space and recreation resources.
- ◆ Support increased funding for open space and recreation planning, land acquisition, and facility maintenance and develop and promote alternative funding measures when public funds are unavailable.
- ◆ Promote improved access for the general public to open space and recreation resources throughout the Commonwealth.
- ◆ Ensure proper maintenance of all open space and recreation resources and encourage innovative ways of funding maintenance budgets.

The proposed project would be consistent with SCORP by providing access to one of the Boston Harbor Islands and enhancing the services and opportunities for public use and enjoyment of Peddocks Island's historic and natural resources.

1.5 Public Involvement and Consultation

An extensive participatory process was undertaken during the development of the *General Management Plan* and *GMP/EIS*. The process involved public meetings, formal and informal consultation with stakeholders, newsletters, a Web site, direct mailings, and monthly meetings of the Boston Harbor Islands Partnership planning committee. In 2000, a Draft *General Management Plan* and Draft *Environmental Impact Statement* were released for public review. Eighty-eight written comments were received during the 60-day period. Comments from all these sources were considered by the Boston Harbor Islands Partnership and the National Park Service and informed the preparation of the Final *General Management Plan* and *GMP/EIS*.

Consultation with federal agencies was undertaken throughout the process, including with the: Massachusetts SHPO,; US Fish and Wildlife Service; National Marine Fisheries Service; USDA Natural Resources Conservation Service; Environmental Protection Agency; MEPA;

Massachusetts Natural Heritage Program; and others. Informal consultation has also taken place with members of the congressional delegation and state and local elected officials. In a parallel course, the National Park Service held a number of consultation meetings with American Indian tribes and groups.

The preparation of this EA affords additional opportunity for public input and for consultation in the redevelopment of East Head.

2.0 DESCRIPTION OF PROJECT AND ALTERNATIVES

2.1 Alternatives for the Boston Harbor Islands

2.1.1 Initial Concepts Eliminated from Consideration

Throughout the planning process for the Boston Harbor Islands, Boston Harbor Islands Partnership was presented with ideas and concepts for management of the islands. The following ideas and concepts represent ideas that, for various reasons, were reviewed but determined not to be viable. Concepts eliminated from consideration during general management planning included the following:

- ◆ The adaptive reuse of facilities on Long Island for such functions as a youth hostel, restaurants, bed-and-breakfast accommodations, a health and sports center, hotels, and conference centers had proponents. However, while the City of Boston has been opening parts of Long Island for public use, existing health and human service functions on Long Island and Moon Island are essential to the residents of the City of Boston. Those activities will remain on the islands until they are no longer needed.
- ◆ Opening most islands to full public access was a concept desired by some but recognized by many as undesirable given the need to protect park resources. In addition to resource protection concerns, there are existing uses and activities that would need to be relocated outside the park. Certain aspects of these current uses, such as a school, wastewater treatment facilities, and lighthouses, can be functionally and programmatically part of the park and contribute to its interpretive programs.
- ◆ New recreational facilities, such as a golf course, roller-blade park, “extreme sports,” dirt-bike trails, amusement park, and casinos have been proposed. A consensus was reached that uses that can be provided on the mainland and that have no relationship to the harbor islands setting and the park mission should not be located on the islands.
- ◆ Continuing private residential use of Peddocks Island cottages met with both support and opposition. Currently, there remain approximately 40 privately-owned summer cottages. Under plans of the DCR, the cottages are scheduled for evacuation as their owners vacate them and turn them over to the DCR.

2.1.2 Alternatives Considered in the Boston Harbor Islands National Park Area General Management Plan Environmental Impact Statement

Consistent with NEPA, alternative management schemes were developed to consider a reasonable range of ideas for managing the Boston Harbor Islands national park area. Information on park resources, visitor use, and visitor preferences was gathered and

analyzed. Information was solicited about the critical issues and the scope of the project from the members of the Partnership and Advisory Council, American Indian tribes, the public, government agencies, and special interest groups through newsletters, meetings, and personal contacts. Alternative concepts were then developed to support the park's purpose and significance, address issues, avoid unacceptable resource impacts, and respond to public desires and concerns. In the combined *General Management Plan* and *GMP/EIS*, four management alternatives were presented including a "no action" choice. The *GMP/EIS* included a discussion of management areas to help determine the balance between resource preservation and visitor use in each part of the park. Each alternative proposed a different type and distribution of management areas. Management areas proposed in the alternatives of the *GMP/EIS* included visitor services and park facilities, historic preservation, managed landscapes, and natural features.

Alternative A emphasized the preservation of the islands' natural and cultural resources where visitors would be encouraged to discover nature and history along routes described and laid out by park managers. The Boston Harbor Islands would be a park of adventure where visitors explore the islands' nature and history. The adventuresome nature of a trip to the islands may mean that some visitors would prefer to view the islands from a boat or remain at the mainland portion of the park. Island visitors would find abundant opportunities for solitude. In this alternative, visitor services and park facilities areas would occur on two "hub" islands, Georges and Spectacle. Peddocks Island would be slated for emphasis on historic preservation at East Head and an emphasis on natural features on the southern half of the island. A managed landscape emphasis was proposed for the area between East Head and Middle Head. In terms of natural resource protection, the landscape at Peddocks would be rehabilitated after cottages were removed. Water shuttles would go on circuits on a regular schedule several times a day to several islands, including Peddocks Island. Several buildings at Fort Andrews would be rehabilitated for adaptive reuse. This alternative also included a special initiative for developing infrastructure on Fort Andrews at Peddocks Island for a cost of approximately \$16 million.

Under Alternative B, the park would be the background or setting for a variety of recreational opportunities that meet the diverse interests of visitors. It would become a well-known recreation area in metropolitan Boston available for open-ended, unstructured experiences on the harbor and the islands, and which could have elements not specifically related to the resources of the Boston Harbor Islands. The Boston Harbor Islands would be a place where visitors would be encouraged to try the various programs while learning something of the natural and cultural history of the islands. Visitors would experience the park as a busy and highly active place. In this alternative, visitor services would occur on five "hub" islands, including Peddocks Island. These facilities would include visitor centers or contact stations, food services, venues for concerts or other events and could be spread out beyond the immediate vicinity of the pier and contain a variety of attractions. Peddocks Island would not be a location for emphasis on historic preservation in this alternative. Rather, activities at most of East Head would focus on visitor services and park facilities.

West Head and Middle Head would have a management landscapes emphasis. Visitor access, use, and enjoyment would focus on program and recreational activities on the islands. Peddocks Island would be a major visitor destination, with a rehabilitated and adaptively reused Fort Andrews providing lodgings, restaurants, and shops. Developing infrastructure at Fort Andrews in this alternative would cost upwards to \$56 million.

The *GMP/EIS* included a third alternative, Alternative C, which represented the preferred option for the Boston Harbor Islands management. This alternative would increase opportunities for visitors to discover the natural and cultural history of the Boston Harbor Islands while continuing to provide strong emphasis on preservation of the islands' important resources. The visitor would have a menu of choices about where to go for a range of experiences, from immersion in cultural or natural history to recreational activities with resources as the backdrop. Visitors could experience the park in its multifaceted possibilities, which focus attention and programs on cultural and natural history of the islands. Overall, the park would be a place where resources would be protected by instilling stewardship in visitors who return repeatedly to enjoy creative activities revolving around the islands' resources. The preferred alternative in the *GMP/EIS* identified five "hub" islands including Peddocks Island for visitor services and park facilities. Peddocks Island would be a primary hub in the early development of the Boston Harbor Islands. Visitor facilities would be concentrated close to the pier and would include visitor centers or visitor contact stations, restaurants or food concessions, boat rentals, and small venues for events such as concerts, historical pageants, and educational presentations. Peddocks Island would be an area with management emphasis on historic preservation and managed landscapes. The southern half of Peddocks would be slated for management emphasis on natural features. Water shuttles would go in regular circuits once or several times a day among several islands, including Peddocks Island. Improvements to facilities would emphasize resource protection throughout the park with the accommodation of visitors in concentrated areas of the park. Peddocks Island, as one of the hub islands, would have a ferry terminal. Fort Andrews would be rehabilitated and adaptively reused as a retreat center, with food service also for day visitors. Alternative C included a special initiative to be conducted in collaboration with the private sector for developing infrastructure at Fort Andrews on Peddocks Island. This would cost upwards to \$56 million.

A fourth alternative considered in the *GMP/EIS*, Alternative D, was "no action."

Given the environmental analysis of four alternatives in the *GMP/EIS*, this EA addresses only two alternatives for the redevelopment of Fort Andrews and Peddocks Island – the no action alternative and the preferred alternative.

2.2 Alternative 1: No Action

The no action alternative would be to not redevelop Peddocks Island—Fort Andrews. In this alternative, the existing environment would remain the same and no utility conduit would be installed beneath Hull Gut. Fort Andrews buildings would remain vacant, in dire

need of rehabilitation, and would continue to deteriorate. In the no action alternative, ferries and water shuttles would continue to bring visitors to Peddocks Island. Existing limited visitor amenities such as guided tours, a small visitor station, picnic areas, hiking paths, and campsites would continue to be open to the public.

2.3 Alternative 2: Preferred Alternative

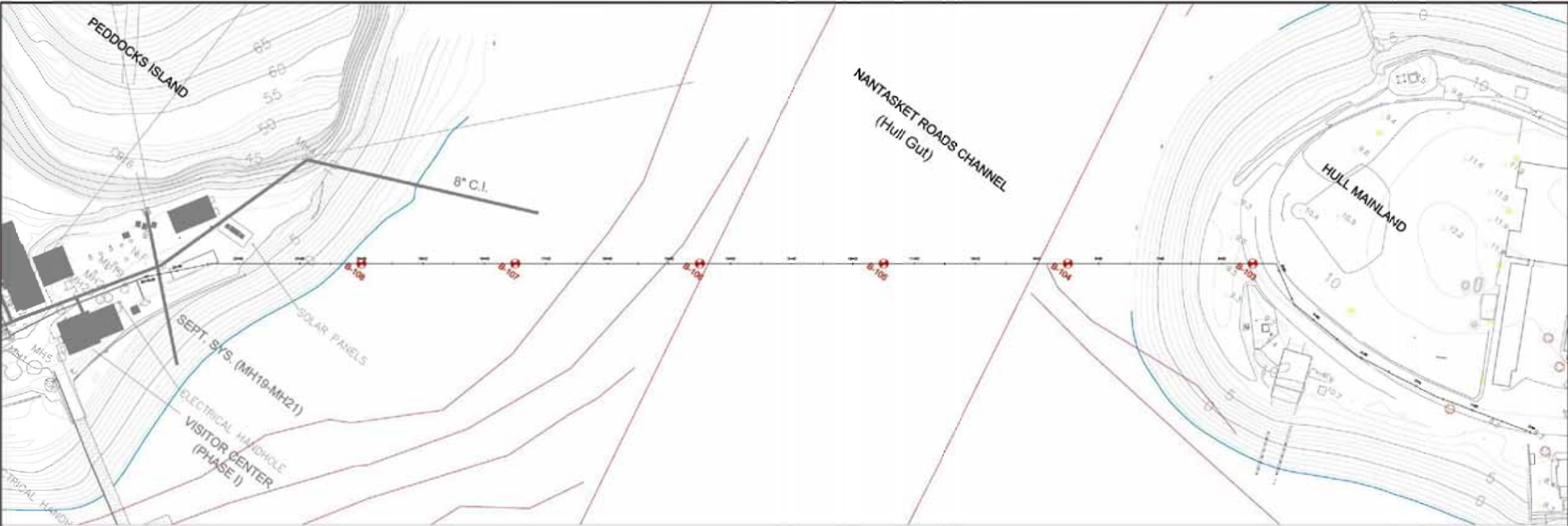
The proposed Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project, as presented in this EA, involves improvements that would occur solely on the East Head portion of the island. These improvements would be completed over time, with the goal of systematically enhancing the services and opportunities for public use and enjoyment of the island's historic and natural resources. Initial efforts would focus on establishing utility services on the island capable of supporting all phases of the project, and on initiating the expanded use of the island through the creation of day-use retreat capabilities. These initial efforts would be expected to be completed in late summer 2006. Safety efforts would also be initiated to facilitate public use of the island and to insure the integrity of the buildings and grounds. Later efforts would include the rehabilitation and stabilization of fort structures and the development of an overnight family eco-tent camp on the uplands of East Head. In the short term, East Head would provide a daytime destination for public use and enjoyment and as an events location for groups. In the long term, this phased development approach would establish Peddocks Island as an attractive daytime and overnight destination for area residents and visitors.

The key components of the project as currently envisioned are detailed below.

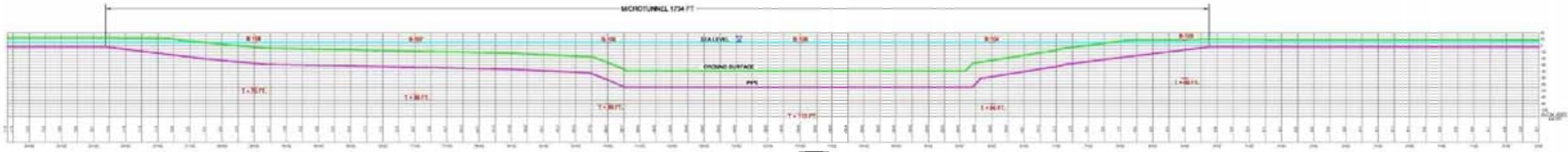
2.3.1 Utilities

The long-term adaptive reuse and resulting preservation of portions of the historic Fort Andrews for wider public use would require necessary utilities to accommodate the desired increased public use levels. By the year 2020, with improved facilities in place, an estimated 1,400 people could visit the island daily during the summer. These visitation levels are estimated to utilize approximately 45,600 gallons per day (gpd) of water, and require utilities for the disposal of 30,400 gpd of wastewater (peak design rates). Island facilities serving the increased public use would require an estimated 400 kilowatts of power per day. Hence, the preservation and adaptive reuse plan would need to include the provision of an adequate water supply for potable and non-potable purposes, wastewater management system, and power supply.

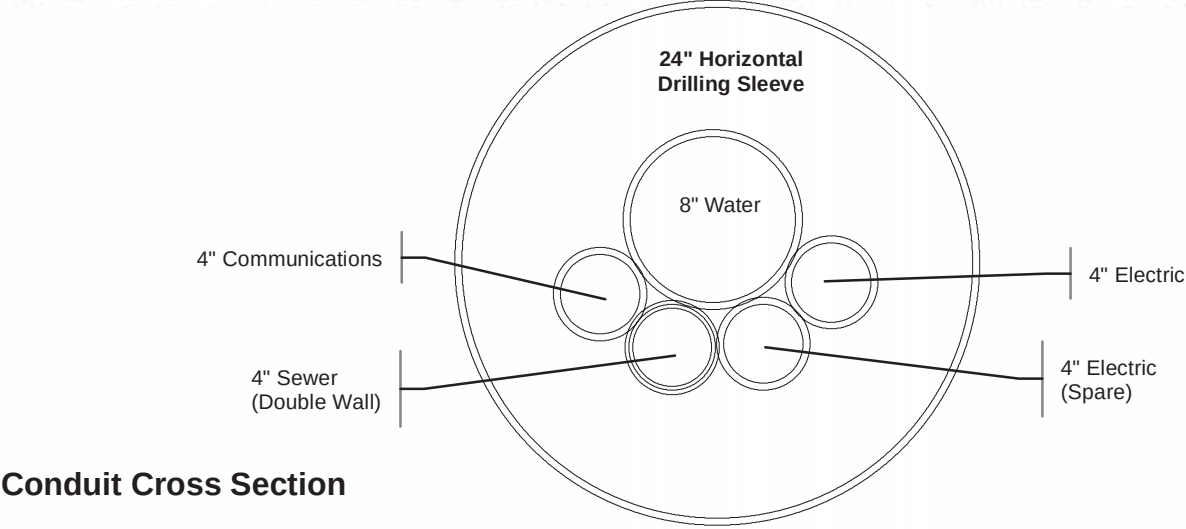
Utility service to the island would be via a single conduit installed by directional drilling beneath Hull Gut between the Hull mainland and East Head. As proposed, the conduit would be 24 or 30 inches in diameter and would carry a 10-inch water main, a 4-inch wastewater force main, two 4-inch conduits for power and communication cables, and a 4-inch spare conduit. Figure 2-1 depicts the proposed utility crossing route, a cross-section



Plan View



Cross Section



Conduit Cross Section

Scale	Date	Job No.	Design by	Drawn by	Checked by	Approved by	No.	Description	REVISIONS	Date
1" = 80'										
ISLAND ALLIANCE										
UTILITY CROSSING										
HULL GUT										

Figure 2-1
Proposed Utility Crossing
Peddocks Island
Hull, Massachusetts

between the island and mainland Hull, and a schematic cross-section of the bundled utilities inside the primary conduit

2.3.2 *Safety Improvements*

Many of the Fort Andrews buildings have suffered deferred maintenance from over 50 years of abandonment and are in generally poor condition. DCR has identified several buildings that are structurally unstable and need to be closed to public access. In the initial phase of this project, and in the interest of public safety, DCR proposes to close and fence these buildings, and limit access to areas deemed unsafe for current public use. Medium- to long-term plans for these buildings include undertaking adaptive reuse analyses and planning studies to determine if selective demolition would be necessary, consistent with increased day use of the island and rehabilitation of other fort buildings. Any proposed demolition would be determined on a case-by-case basis and would be subject to review by the Massachusetts Historical Commission/Massachusetts State Historic Preservation Officer (MHC).

2.3.3 *Day Retreat Facilities*

The initial focus would be on establishing East Head as a daytime visitation site, with facilities for passive use such as hiking and picnicking, as well as a site for single-day group events. Already completed is a newly-constructed pier, which serves as the primary access point for the island. The Guardhouse (Visitor Center) roof has also been repaired and the roofs of seven other buildings have been stabilized.

In the early phase of the project, the Chapel could undergo repairs to stabilize the structure for future use and fire protection suppression equipment would be installed. The level of repair would be contingent upon funding.

Other proposed improvements would include the construction of a new toilet facility, envisioned as a prefabricated walk-in facility with running water and full wastewater utility service. Landscaping improvements to the Parade Ground would be undertaken so as to return it to its original open lawn condition. Parade Ground improvements would include the removal of volunteer and invasive trees, shrubs and stumps, and the installation/renovation of a stormwater management system. These improvements would expand the usability of this open space and assist to establish a site for the installation of a temporary events tent.

2.3.4 *Fort Andrews Adaptive Reuse*

The preservation and adaptive reuse of portions of Fort Andrews is envisioned to be the cornerstone in the effort to establish Peddocks Island as an attractive daytime and overnight destination for area residents and visitors. Installation of basic wastewater, water supply, and electrical service to East Head in the initial phase of the project would be critical to facilitating the future preservation and interpretation of the island's historic and natural

resources. In the mid-term, the plan would be to focus on adaptive reuse of key buildings and the evaluation of other buildings in the fort for possible stabilization and/or reuse.

Buildings identified for potential adaptive reuse following the initial phase of the project include the former Chapel, Guardhouse, Firehouse, Bakery, and Administration Building. As envisioned, the former Guardhouse would be renovated as a Visitor Center with interpretive exhibits, a catering kitchen and/or retail area. The building could also house activity space and caretakers quarters. The former Chapel would be renovated, beyond the initial stabilization and fire protection repairs, to accommodate group activities including weddings and meetings. The former Firehouse could be renovated as a full-service kitchen to serve campers as well as day-use groups. In association with this reuse and resulting preservation, the former Bakery could be renovated as a dining hall/café to serve these groups. Finally, the remains of the former Administration Building at the head of the Parade Ground could be reused as an outdoor amphitheater to support musical and theatrical productions, lectures, and movies.

2.3.5 *Family Eco-Tent Camp*

Later phases of the project would include the development of a family eco-tent camp on the uplands of East Head. As envisioned, this camp would consist of two eco-tent complexes at the tops of the drumlins located east and west of the main fort campus. In all, an estimated 100 eco-tent cabins would be constructed to provide overnight accommodations for visitors.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This section provides a description of existing conditions for each environmental resource topic affected by the preferred alternative. A discussion of topics dismissed from further consideration due to absence of quantifiable impacts is included in Section 3.10. Section 3.0 does not provide an impact analysis of the project alternatives and is intended solely to provide baseline conditions for the impact analysis. A description of the impacts and proposed mitigation of project alternatives is presented in Section 4.0.

3.2 Cultural Resources

Peddocks Island's history is rich and varied, from its long occupation and use by Native Americans to its contributions to Boston's coastal military defense efforts. Peddocks Island is listed, in its entirety, on the State and National Registers of Historic Places as a contributing element to the Boston Harbor Islands Archaeological District, because of its association with Native American history and use. In addition, Fort Andrews is included in the Inventory of Historic and Archaeological Assets of the Commonwealth and has been determined eligible for listing on the State and National Registers of Historic Places by the MHC. Numerous archaeological studies have demonstrated the archaeological significance of the islands in the Boston Harbor during prehistoric times, and several have focused specifically on Peddocks Island.

3.2.1 *Peddocks Island Historical Overview*

The earliest records for the island indicate that it was once home to local Native Americans. References to Peddocks Island can also be found in Puritan records from 1634 when the island was "granted to the inhabitants of Charlton to enjoy." In 1641, as Nantasket was settled, Peddocks Island became a part of that territory.

During the Revolutionary War Peddocks Island served as an encampment for Continental Army troops as they readied to meet any effort of the British fleet to return to Boston Harbor. Also during the Revolutionary War, French marines reportedly landed on the island while their fleet sought refuge in Boston Harbor.

During the 1800s the island was primarily used for farming, with three farmhouses located near the present location of the pier on East Head. In 1897 East Head was conveyed to the federal government under a quit-claim for fortifications by its owner at the time, Mrs. Eliza Andrew, the wife of the former Governor of Massachusetts, and in 1900 the post became officially known as Fort Andrews in honor of General Leonard Andrews, a Civil War hero.

From 1897 through 1945 the army enlarged and fully occupied the fortifications and related facilities at Fort Andrews, including the housing of prisoners of war during World War II.

These development activities encompassed virtually all of East Head's 88 acres and accommodated thousands of army personnel and prisoners of war.

By 1947 Fort Andrews was decommissioned and abandoned. Since 1970 the island has been controlled and managed by the Metropolitan District Commission (MDC), which is now incorporated into the DCR.

In 1996 the United States Congress established the Boston Harbor Islands national park area as a unit of the National Park System in order to preserve and enhance the Boston Harbor Islands for public use and enjoyment. The purpose of the park is to preserve and protect a drumlin island system within Boston Harbor, along with associated natural, cultural, and historic resources; to tell the individual stories of the islands and enhance public understanding and appreciation of the island system as a whole, including the history of Native American use and involvement; and to provide public access, where appropriate, to the islands and surrounding waters for the education, enjoyment, and scientific and scholarly research of this and future generations.

3.2.2 *Historic Earthwork Operations*

Specific information regarding earth moving operations on East Head is not readily available. However, Peddocks Island's history of military use and direct observation of terraced landforms reveal that significant reshaping has been conducted on East Head beginning as far back as the 1700s. A report entitled *Peddocks Island Building Study* by Moore-Heder Architects, Inc. (1990) references texts describing "entrenchments" that were reportedly constructed by the French during 1778. Significant modifications continued to be completed on the East Head portion of the island during the construction of Fort Andrews from 1900 to 1945. Documentary evidence suggests East Head was also deforested during the construction of the Fort.

Military documents referenced in the Moore-Heder report provide some insight into the earthmoving operations that were required to construct the Fort, referring to "extensive grading to create flat areas on slopes for buildings and campgrounds, to modify steep slopes to prevent erosion, and to fill low spots in functional areas." This excavation material was reportedly used to "fill, not only in the immediate vicinity, but for the hole in the Parade Ground." Additional re-grading within the fort was also reportedly performed to raise the area of the wharf, and to reduce the slope of the hill at the rear of the former Stable in order to stabilize the slope.

Recent field investigations of existing utilities reveal that the Parade Ground area was filled and re-graded at least twice, as evidenced by the depth of drain lines and the extension of water gate manholes that left ca. 1900 water mains at depths in excess of ten feet. Earthmoving operations were also conducted for the construction of the 200,000-gallon underground water storage tank on the western side of East Head.

3.2.3 *Building Conditions*

Many of the Fort Andrews buildings have suffered more than 50 years of deferred maintenance following military abandonment and are in generally poor condition. The Island Alliance and DCR have identified several buildings that are structurally unstable and need to be closed and fenced in the interest of public safety. Structures requiring immediate attention include Buildings 29 and 30, as well as six other buildings along Officer's Row (Buildings 17, 18, 19, 20, 21, and 34). Figure 3-1 depicts a preliminary building condition assessment.

Building 29 is immediately accessible from the dock and is partially collapsed with cast iron columns and charred wood beams rising precariously several stories above mixed debris on the ground floor. The building interior is currently accessible through empty, uncovered window openings. Brick walls are self-supporting, but their long-term stability is compromised by the remaining beams that connect to the walls at several levels. These beams could fail and progressive collapse could affect the walls. Loose bricks line the gables and exposed portions of the main exterior walls.

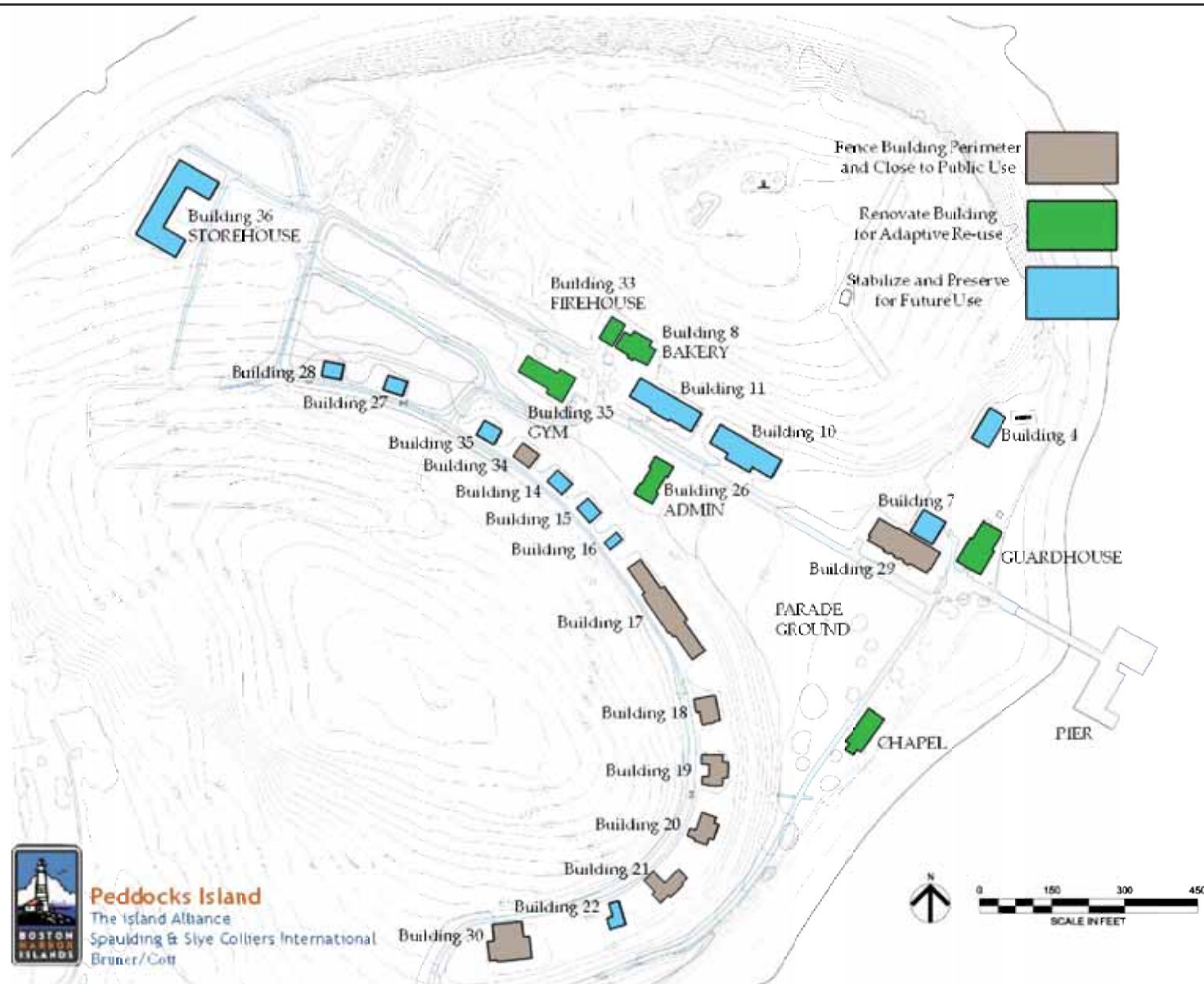
Building 30 is collapsing in stages as the roof structure fails and pushes the brick wall outward over the Officer's Row path system. The wall closest to the path is now forced out of plumb to the point where the complete collapse of the upper wall could occur.

3.3 Ecologically Sensitive Areas and Endangered Species

3.3.1 *Upland Vegetation*

The flora of Peddocks Island, and the Boston Harbor Islands in general, reflects a long history of human alteration. The drumlins of Peddocks Island (West Head, Middle Head and East Head) are thought to have been once vegetated with mature forests of hemlock, maple, oak, pine, and hickory, all of which were cleared to support agriculture and pasturage, and to supply firewood for fuel. In particular, the construction of the Fort Andrews fortifications severely disrupted much of the native flora of East Head. Some limited replanting of these areas has occurred over the years. Patches of undisturbed native flora are rare on the island, and much of the flora includes non-native, opportunistic species.

Peddocks Island vegetative communities range from closed canopy forests to dry scrublands and long stretches of sandy beaches. East Head has the park's only large stand of closed canopy forest outside of World's End, although much of this is comprised of Norway maple (*Acer platanoides*), a non-native and invasive tree species. Black pine (*Pinus nigra*), Scotch pine (*Pinus sylvestris*) and black locust (*Robinia pseudoacacia*), as well as the native hackberry (*Celtis occidentalis*), white ash (*Fraxinus Americana*) and black cherry (*Prunus serotina*) are scattered in this forest. The shrub understory is dominated by exotic species,



Source: Bruner/Cott, 2/9/05

Figure 3-1
Preliminary Building Condition Assessment

Peddocks Island
Hull, Massachusetts

Epsilon
ASSOCIATES INC.

8/30/05

including oriental bittersweet (*Celastrus orbiculatus*), Japanese barberry (*Berberis thunbergii*), Morrow's honeysuckle (*Lonicera morrowii*) and multiflora rose (*Rosa multiflora*).

Woodlands and shrub communities cover the central and western drumlins of Peddocks Island, with gray birch (*Betula populifolia*), red cedar (*Juniperus virginiana*), black cherry and big-tooth aspen (*Populus grandidentata*) forming an open canopy above tangled shrub thickets. Native shrubs include smooth shadbush (*Amelanchier arborea*), red chokeberry (*Aronia arbutifolia*), common elder (*Sambucus canadensis*), and arrow-wood (*Viburnum recognitum*). Non-native shrubs in these thickets include Japanese barberry, European barberry (*Berberis vulgaris*), privet (*Ligustrum vulgare*), Morrow's honeysuckle and multiflora rose

Open communities include scrublands and weedy fields in the sandy necks between the drumlins. Staghorn sumac, saltspray rose, four-o'clocks (*Mirabilis nyctaginea*), bracted plantain (*Plantago aristida*), sleepy catchfly (*Silene antirrhina*), and purple sand grass (*Triplasis purpurea*) are found in three dry scrub communities. A naturalized population of tiger lily (*Lilium tigrinum*) grows in the scrub west of the island's salt marsh.

Beach strand associations occur around the island perimeter. These communities include Dusty miller (*Artemisia stelleriana*) orache (*Atriplex patula*), sea-rocket (*Cakile edulenta*), goosefoot (*Chenopodium album*), seaside spurge (*Euphorbia polygonifolia*), common sunflower (*Helianthus annuus*), beach pea (*Lathyrus japonicus*), saltwort (*Salsola kali*), and cocklebur (*Xanthium echinatum*).

The northeastern side of Prince Head has the largest known population of Seabeach Dock (*Rumex pallidus*), a state-listed protected species (see Section 3.3.4) of the Harbor Islands. These plants are scattered along 800 feet of shoreline at the foot of Prince Head. The population had 160 fruiting stems and 50 vegetative stems when surveyed by National Park Service personnel in 2001. The most vigorous plants were observed growing in the slightly moist and organic soils at the base of the drumlin's steep face, while those in sandier soils tended to be smaller, often having only basal leaves.

3.3.2 Terrestrial and Marine Wildlife

The Boston Harbor Islands are host to many avian species and terrestrial and marine mammals. These include both native and non-native species, seasonal and year-round residents, and casual or migrant species.

Shorebirds, gulls and cormorants, waterbirds, and nesting neotropical migrant species can be found in significant numbers on many islands, including Peddocks. A survey of birds conducted for the National Park Service (2001–2003) recorded 38 species of birds nesting on Peddocks Island, more than any other of the park islands, including oystercatchers, which the park has identified as a species of management concern. Upland species such as

hawks, owls, and songbirds occupy areas vegetated with trees and shrubs. Wetland species, such as herons, ibis, and egrets, are found near freshwater or shallow brackish or salt marshes. Shorebirds such as oystercatchers, terns, and sandpipers occupy rocky and sandy beach areas. Herring gulls, cormorants, and sea ducks live either at sea or on the rocky intertidal shores. Special bird habitat or communities on the islands include those for heron rookeries and nesting habitats for both shorebirds and passerine species.

A few species of terrestrial mammals occur throughout the Boston Harbor Islands, including cottontail rabbits, raccoons, skunks, gray and red squirrels, mice, muskrats, voles, and Norway rats. No comprehensive management of these species currently occurs on the Boston Harbor Islands. Finally, non-native or feral species have been introduced to virtually all the islands through release by earlier residents and more recent visitors.

The Boston Harbor Islands, including Peddocks Island, provide varying types and extents of shelter and food-rich habitats for marine birds, mammals, fishes, and invertebrates, as well as nurseries for their young. Much of the Gulf of Maine fauna can be found in Boston Harbor and proximate to islands such as Peddocks. Lobsters, crabs, and clams inhabit the submerged and intertidal portions of the islands, while mussels and barnacles thrive on the rocks of the intertidal zone. Several species of fish including striped bass, bluefish, and winter flounder live in waters surrounding the islands. Marine mammals found in the waters surrounding these islands include seals, humpback, fin, minke, and North Atlantic right whales, white-sided and striped dolphins, and gray and harbor seals.

3.3.3 *Wetland and Aquatic Marine Vegetation*

Vegetated wetlands on the island include a salt marsh in the large flat north of Prince Head, and a brackish pond on the islands southwest corner. The salt marsh is one of the largest of the Boston Harbor islands. Common reed (*Phragmites australis*) dominates the east side of the marsh, but the majority of the marsh has native species, including spikegrass (*Distichlis spicata*), marsh elder (*Iva frutescens*), black grass (*Juncus gerardi*), sea lavender (*Limonium nashii*), salt marsh alkali grass (*Puccinellia maritima*), glasswort (*Salicornia maritima*), seaside goldenrod (*Solidago sempevirens*), saltwater cordgrass (*Spartina alterniflora*), salt hay (*Spartina patens*), tall sea-blite (*Suaeda linearis*), and saltmarsh sea-blite (*Suaeda maritima*).

One of the only Harbor Island occurrences of saltmarsh arrowgrass (*Triglochin maritimum*) is found in this marsh, and the watch-listed seaside angelica (*Angelica lucida*) grows on the southwest side of the marsh.

The brackish pond on the southwest side of the island has a large patch of Phragmites, a stand of narrow-leaved cattail (*Typha angustifolia*), and populations of Olney's three-square (*Scirpus americanus*), and saltmarsh bulrush (*Scirpus robustus*).

Off-shore of the island, no significant beds of the once-plentiful marine eelgrass have been identified near Peddocks Island.

3.3.4 *Protected Species*

As noted in the *GMP/EIS*, consultation with the US Fish and Wildlife Service reveals that no federally listed or proposed threatened or endangered plant or animal species under the jurisdiction of the US Fish and Wildlife Services are known to occur on the Boston Harbor Islands. Most migratory birds are protected under the Migratory Bird Treaty Act, and marine mammals by the Marine Mammal Protection Act.

Plant and animal species that could be extirpated are listed by the Massachusetts Natural Heritage and Endangered Species Program (NHESP) as endangered, threatened, or of special concern. The NHESP lists six species known to exist within the Boston Harbor Islands national park area, including two species listed as threatened, and four of special concern. One of the six, Seabeach Dock, a state-listed threatened species, was identified on Peddocks Island. As discussed in Section 3.3.1, above, this plant is believed confined to the seaside base of the drumlin of Prince Head.

A formal request for island-specific information concerning this listing was submitted to the NHESP in July 2004. In a letter dated October 21, 2004, NHESP identified Peddocks Island as located entirely within Priority Habitat for Seabeach Dock. As noted therein, project plans must be reviewed by the NHESP before the initiation of work at the project site.

3.4 Water Supply, Wastewater, and Stormwater Utility Infrastructure

Water supply, wastewater, and stormwater utility infrastructure exist on Peddocks Island in varying states of repair. These utilities, for the most part, are remnants of the past use of the island as a fort, although some improvements are more recent. The existing conditions of these utilities are reviewed below.

3.4.1 *Water Supply*

The first water supply to the island was constructed for Fort Andrews circa 1898 and was provided by a six-inch cast iron water pipe from Nut Island in Quincy. The water supply pipe crossed the channel for a distance of about 3,000 feet, entered Peddocks Island at the tip of West Head and then continued 7,400 feet to Fort Andrews. This line was later connected to a booster pump on East Head as well as to six-inch and four-inch mains, and hydrants within Fort Andrews.

A 200,000-gallon, buried, reinforced concrete water tank and related control valves was constructed circa 1940 at the top of the main drumlin on East Head, south of the main fort complex. The storage tank was constructed to provide fire protection and pressure regulation throughout the fort complex, as well as temporary supply in the event of a break in the water main from Nut Island..

Documentation indicates that cottages on Middle Head have unauthorized connections to the cast iron water main at numerous locations by way of small plastic water pipes laid across the ground surface. However, the Nut Island line was severed during the early 1990s and is no longer functioning. It was recently severed again by the Duke Energy gas pipeline project, with the permission of DCR. Mitigation funds from Duke Energy comprise the bulk of available funds to restore utility service to the island.

3.4.2 *Wastewater Management*

Existing wastewater sewer system components on East Head include both the infrastructure installed as part of the original Fort Andrews development, and a smaller septic system installed in 1989 in accordance with Title V of the Massachusetts State Sanitary Code. Inspection of the original system indicates that much of the sewer pipe infrastructure is still in place, although its condition is not fully known. It may be that portions of this collection system may be viable for future reuse, either through reconstruction or relining of the sewer pipe network. The newer Title V system is not operational.

The existing Fort Andrews wastewater collection system comprises a six-inch sewer main which connects to an eight-inch cast iron pipe near the Visitor Center before discharging directly to Hull Gut. One portion of the main system collected wastewater from temporary barracks and from several non-commissioned officers quarters. A second area of the main system handled the wastewater flow from the officer's quarters and hospital, along the southwest edge of the Parade Ground. A third collection area included the fire station and buildings located along the northern edge of the Parade Ground to manhole. In addition to the system's six-inch main, a gravity collection system runs from a point west of the gymnasium to the Quartermaster's Warehouse and discharges to the ocean along the northwest portion of the beach of East Head.

It has been reported that facilities associated with the batteries may have had a wastewater collection system that was mapped and held by the Department of the Army for security reasons. Floor drains and manholes have been observed in the batteries, but no mapping for these facilities has been located.

In 1989 a septic system was constructed northwest of the Guardhouse in order to provide modern wastewater management facilities for the staff on the island. The system was designed according to Massachusetts Title V standards, with a reported capacity of 3,000 gpd. The basic components of the system included a 5,000-gallon septic tank, duplex septic tank effluent pumps, a leaching field comprised of leaching galleries, and a small generator to power the pumps. A 550-gallon underground fuel storage tank was also constructed next to the generator. All components of the system, except the generator, appear to be intact. The generator was removed after the water supply to the island was cut off. The septic system has not been utilized since that time and has been determined to be functionally obsolete. Three composting toilets have since been placed near the Guardhouse for sanitary needs.

3.4.3 Stormwater Management

One major storm drain runs from the area between the Firehouse and gymnasium, along the Parade Ground, to the shore in the vicinity of the Chapel. Some catch basins are visible and functioning. Additional catch basins are located along the road leading to the Quartermaster's Warehouse that discharge northwesterly to the ocean. The overgrowth of the island has resulted in a changed run-off coefficient from when the fort was active.

3.5 Wetland Resources, Navigable Waterways, and Coastal Zones

Peddocks Island is surrounded by and contains wetland resource areas and waterways protected under the federal Clean Water Act, the federal Rivers and Harbor Act of 1899, the state Wetlands Protection Act, and the state Waterfront Protection Act (Chapter 91).

The interconnected wetlands and waterways of the island and surrounding waters are deemed navigable waters of the United States and, as such, are protected from alteration and filling. These include all freshwater wetlands of the island, and all coastal waters and lands lying below the lines of either mean high water or mean high tide.

The Massachusetts Wetlands Protection Act and its associated regulations identify wetland resources to include freshwater wetlands, as well as coastal banks, coastal wetlands, coastal beaches, coastal dunes, tidal flats, land under the ocean or under estuary or under salt pond, land subject to tidal action or coastal storm flowage, and/or land under fish runs. As with the federal acts, these resource areas are protected from alteration and filling under the state Act and regulations.

Finally, the state Chapter 91 waterways protection program identifies the tidelands of Peddocks Island as lands of the Commonwealth and regulates their use so as to protect the public interests associated with access to the water.

3.6 Soils and Hazardous Materials

Prior environmental studies were reviewed to assess the potential that oil or hazardous materials could be encountered during construction of the utilities tunnel, or during any other construction activity. These include the 1998 MDC report *Environmental Audit Report – Peddocks Island (Fort Andrews) Hull, Massachusetts* (CDM). In addition, numerous site visits to the island were made by the Project Team in connection with utility feasibility studies and preparation of preliminary project concepts.

The 1998 environmental audit report encompassed all of Fort Andrews. The report indicated that previous remediation activities conducted by the US Army Corps of Engineers in the early 1990s as part of the Defense Environmental Restoration Program removed contaminated soils in the vicinity of the brick electrical substation behind the Guardhouse, five electrical transformers, and two old underground storage tanks. The 1998 audit report also identified an inactive 550-gallon fiberglass underground fuel tank installed for the

septic system generator in 1989. This tank was reportedly installed with secondary containment and leak detection provisions, and is located beneath a concrete pad behind the Guardhouse. Finally, the report identified concerns regarding asbestos and lead paint within the standing buildings, and potential residue within the soil and debris piles from demolished buildings.

3.7 Public Safety

Public safety on the Boston Harbor Islands is handled by many entities: the Massachusetts State Police Marine Unit, Massachusetts Environmental Police, agencies that manage islands, municipalities, harbor masters, and the US Coast Guard. The Partnership subcommittee on public safety has furthered coordination and communications among the nine island owners, ten law enforcement jurisdictions, and three counties, resulting in less duplication of effort. Safety at Peddocks Island is provided primarily by the Massachusetts State Police Marine Unit.

The US Coast Guard has two main centers of operation within the harbor. One is the Sector Boston command, the headquarters for the US Coast Guard's marine safety office and large Integrated Support Command, located on the Boston waterfront just north of Battery Wharf. Large ships moor here along with aids-to-navigation vessels. The other is a multi-mission station in Hull at Point Allerton, where small vessels are maintained. In the harbor, the US Coast Guard is responsible for oil spill response, navigation and marine traffic management, recreational boating safety, search and rescue, and enforcement of all laws and treaties on water subject to federal jurisdiction.

3.8 Energy Infrastructure

Power supply to Fort Andrews was historically provided via an underwater cable from Hull which terminated in a small brick structure adjacent to the Guardhouse. This connection predated the existing 35-foot-deep shipping channel through Hull Gut that is maintained by the US Army Corps of Engineers. While there is some evidence of limited underground distribution in the area, the buildings were served by overhead lines on wood utility poles.

In the late 1980s, a 3.2-kW photovoltaic (PV) system was installed on the island. The system is connected to the existing Guardhouse, Stable, Firehouse, and Chapel, and can provide basic lighting needs. Based on a recent survey of the PV system by the firm that installed it, one of the four modules is not functioning due to damage, and at least one of the outgoing 120V circuits is shorted at some point along its run.

With the exception of the existing PV system, there is no other existing functional electrical system on the island. The generator that powered the septic system lift station has been removed. The historic system of overhead electrical lines on wooden utility poles is in total disrepair, has largely collapsed, and cannot be reused as part of a reliable long-term electrical system for the island.

The military installed a system of underground electric and signal wire manholes to interconnect some of the buildings and battery locations on the island. The covers on these manholes are welded shut and thus no physical investigation was possible at this time. Given the age of these facilities, it would not be feasible to use any electrical cable that exists underground and the manholes would require rehabilitation.

3.9 Socioeconomic Environment

The 1990 population in the Boston Metropolitan Area Planning Council (MAPC) region, consisting of 21 cities and 80 towns extending over 1,422 square miles, was 2,922,934 (1990 Census). With visitation to the Boston Harbor Islands currently at approximately 150,000 people per year, an estimated \$9 million in income, \$1.5 million in tax revenue, and 330 jobs are generated to the local economy.

According to the 2000 Census, the Town of Hull's population was 11,050 and majority of residents were white (97.0%). Median household income was \$52,377 and 918 individuals lived below the poverty level.

3.10 Topics Dismissed From Consideration Due to Absence of Quantifiable Impact

3.10.1 Prime and Unique Agricultural Lands

The US Department of Agriculture defines prime farmland as the land that is best suited for food, feed, forage, fiber, and oilseed crops. Unique farmland produces specialty crops such as fruit, vegetables, and nuts. Although some soils classified as prime or unique farmland types occur within the Boston Harbor Islands, none of these soils are located on Peddocks Island. Further, there are no historically farmed areas still in active agricultural use on Peddocks Island.

3.10.2 Noise

Noise on the Island would be limited to temporary construction noise, human activity, and noise from the mechanical systems associated with the reuse of portions of Fort Andrews. Due to the limited nature of the proposed development, the project would not result in substantial noise impacts.

3.10.3 Traffic

Access to Peddocks Island is via passenger ferry and water shuttle service from Georges Island. Specifically, a passenger ferry company under agreement to the Island Alliance, acting on behalf of the Partnership, provides service to Georges Island from three mainland points: Downtown Boston, Quincy, and Hull. At Georges Island a free water shuttle service is available for access between Georges, Bumpkin, Grape, Lovells, and Peddocks Islands. At the time the *General Management Plan* was published, eighty percent of the ferry passengers left from Long Wharf in Boston.

The passenger ferries would not accommodate vehicles; therefore, no traffic impacts would be anticipated on Peddocks Island.

3.10.4 *Air Quality*

Potential sources of air quality impacts at Peddocks Island would be automobile trips to ferry departure locations, watercraft emissions from passenger ferries to Peddocks Island, and facility construction and maintenance. Each of these impacts were described and evaluated in the *GMP/EIS*; therefore, this EA does not contain a full analysis of impact but provides a summary of the *GMP/EIS* discussion.

Ferries currently depart to the Boston Harbor Islands from three locations. Some auto-related exhaust is associated with visitors traveling to and parking at these locations. The *GMP/EIS* described impacts on air quality associated with increases in the number of visitors who would drive to ferry departure points. Park management would encourage the use of public transportation gateways to the islands to mitigate impacts on air quality. As previously described, the passenger ferries would not accommodate vehicles; therefore, no air quality impacts from vehicular traffic would be anticipated on Peddocks Island.

Currently, passenger ferries operate from May to October to Georges Island. Water shuttles depart from Georges Island to five additional islands, including Peddocks Island. Operation of these water shuttles results in exhaust emissions comprised of oxides of nitrogen and sulfur, which contribute to the ozone load in the air basin. Additionally, particulates from diesel engines are released. Visitors and park staff are encouraged to use scheduled boat transportation to reduce boat emissions from special boat trips and vehicles are well-maintained to reduce emissions.

As described in the *GMP/EIS*, air emissions from heavy equipment during construction and other improvements would be similar to those emissions from cars or boats. These emissions would be temporary and exist only during construction.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

Section 4.0 of this EA provides an analysis of potential environmental impacts of the preferred alternative and the no action alternative. As prescribed by National Park Service compliance procedures, each resource topic for which a quantifiable impact may result has been evaluated for the following:

- ◆ Duration of Impact: whether the impact would occur in the short term or the long term.
- ◆ Intensity: whether the impact would be negligible, minor, moderate, or major.
- ◆ Type: whether the impact would be beneficial or adverse to the natural, cultural, or social environment.

The *GMP/EIS* addressed impacts associated with the development of all Boston Harbor Islands, including Peddocks Island. This EA addresses the management and adaptive reuse of East Head within the framework of the park development set out in the *GMP/EIS*. In doing so, this EA assesses the effects of the individual components of the preferred alternative for the island's preservation and adaptive reuse, and the cumulative effects of those improvements.

4.2 Cultural Resources

4.2.1 Impacts of No Action Alternative

The no action alternative would result in long-term adverse impacts on historic resources. No adaptive reuse of fort buildings and features would occur. Rather, buildings would remain vacant and/or open to the elements and suffer further deferred maintenance and deterioration. Structurally unstable building would not be fenced from public access leading to increased public safety concerns. In the no action alternative, there would be no impacts to archaeological resources because no grading or excavation would be required.

4.2.2 Impacts of Preferred Alternative

As described in Section 4.2, Peddocks Island is listed, in its entirety, on the State and National Registers of Historic Places as a contributing element to the Boston Harbor Islands Archaeological District, for its association with Native American habitation and burials. Fort Andrews is included in the Inventory of Historic and Archaeological Assets of the Commonwealth and has been determined eligible for listing on the State and National Registers of Historic Places by the MHC.

4.2.2.1 Impacts of Adaptive Reuse on Historic Resources

The preferred alternative would result in positive long-term impacts on historic resources through the preservation and adaptive reuse of portions of Fort Andrews. Architectural and planning analyses have identified several key fort buildings and features for reuse as part of the proposed island revitalization and call for the ongoing evaluation of other buildings in the fort for possible stabilization and/or reuse, as funding permits.

In addition to preserving a historic structure, the reuse of the former Guardhouse as a Visitor Center offers the opportunity to present displays that interpret the island's many themes, including Native American history and culture, military history, environmental studies, and marine science and technology. The island's unique natural and cultural resources, rich and diverse history, and spectacular setting lend themselves to an exceptional opportunity to showcase the *General Management Plan* mission of preservation, interpretation, education, and public access.

Fort Andrews buildings and landscape features being considered for reuse include:

- rehabilitation of the former Andrews Guardhouse into a Visitor Center,
- rehabilitation of the former Chapel for public programs,
- rehabilitation of the historic Parade Ground landscape, creating a central outdoor gathering place for cultural and recreational activities,
- creation of a kitchen within the former Firehouse to serve campers as well as day-use groups,
- construction of a dining hall/café within the Fort's former Bakery,
- reuse of the former Administration Building at the head of the Parade Ground into an amphitheater to support musical and theatrical productions, lectures, and movies for overnight visitors, and
- adaptive reuse of the Gymnasium or Warehouse building for conferences and meetings.

Several other buildings have been recommended to be stabilized and preserved for future reuse, including Buildings 4, 7, 10, 11, 14, 15, 16, 22, 27, 28, 35, and 36. Figure 3-1 depicts a preliminary building condition assessment.

4.2.2.2 Building Safety Improvement Impacts

In the interest of public safety, DCR proposes to fence buildings in the short term. Medium- to long-term plans for buildings include undertaking adaptive reuse analyses and planning

studies to determine if selective demolition would be necessary, consistent with increased day use of the island and rehabilitation of other fort buildings. Any proposed demolition would be determined on a case-by-case basis and would be subject to consultation with and review by the MHC.

4.2.2.3 Cultural Resource Management

The Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project would be subject to review by the MHC in compliance with state laws and regulations governing archaeology, historic structures and sites, and State Register review and compliance (M.G.L. Ch. 9, sections 26-27c; 950 CMR 70 and 950 CMR 71). The Island Alliance and DCR are committed to complying with cultural resource regulatory requirements and their implementing regulations through ongoing consultation with the MHC.

In the short term, the project would involve limited grading and excavation work needed for utility tunnel entry and exit holes, Parade Ground landscaping, and siting of the events tent and toilet structure. The DCR and Island Alliance would continue to consult with the MHC to assure that historic properties are identified and significant resources are protected during these activities. Although the extent of earth modification would be limited and most of the short-term work would be within a previously disturbed context, Peddocks Island is listed as an Archaeological District on the National Register of Historic Places, and Fort Andrews has been determined eligible for listing on the National Register of Historic Places. Therefore, DCR and the Island Alliance would provide the necessary level of archaeological services that are recommended in advance of, or in coordination with, earth moving activities.

Other project undertakings would be anticipated to be implemented over a multi-year period, and plans to renovate many of the existing Fort Andrews buildings and features have not yet been prepared. Therefore, MHC review of project undertakings in compliance with State Register review would need to be an ongoing consultation effort. The DCR and Island Alliance have drafted a memorandum of agreement (MOA) to be implemented among the MHC, Island Alliance, and DCR that establishes review procedures to assure that project impacts are identified and mitigation measures are proposed to eliminate, minimize, or mitigate any potential adverse project impacts. The state-level memorandum has been developed within the context of a broader proposed Programmatic Agreement to be drafted between the National Park Service and the Massachusetts State Historic Preservation Office (MASHPO, within the MHC) for the Boston Harbor Islands national park area. In the event the National Park Service proposes undertaking or funding specific activities on East Head, those activities would be the subject of a separate Section 106 review and consultation. The National Park Service is not currently undertaking or funding any aspect of the proposed project on Peddocks Island.

The proposed state memorandum of agreement (MOA), currently under review, outlines undertakings that would be subject to MHC review and establishes a review process for

future individual undertakings. The MOA is the result of the DCR and Island Alliance's ongoing consultation with the MHC and includes following types of stipulations:

- Identification of Archaeological Resources. For those below-ground areas impacted by the project which have not been included in previous archaeological investigations and reports, an appropriate archaeological survey would be conducted under State Archaeologist permit.
- Design Review. A review process would be outlined to ensure early involvement of the MHC during consideration of design alternatives so that historic preservation issues would be identified early in the process and considered while fulfilling the mission and goals of the project.
- Public Interpretive Exhibits. Consultation with the MHC would be undertaken regarding exhibits proposed to be developed at the Guardhouse Visitor Center that may include Native American culture, military history, environmental studies, and marine science and technology.
- Rehabilitation of Historic Structures. Where the project would involve the rehabilitation of historic properties, the work would adhere to the Secretary of the Interior's *Standards for the Treatment of Historic Properties, including Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* to the extent feasible.
- New Construction. The agreement would ensure that any new construction proposed on the island would be compatible with the historic and architectural qualities of the adjacent historic buildings and structures and would be responsive to the recommended approaches to new construction set forth in the Secretary's *Standards*.
- Photographic Recordation and Documentation. In the event demolition of an historic property would be considered, the resource would be documented to MHC standards for transfer to the Massachusetts State Archives.
- Unanticipated Discoveries. While historic properties on the island have been identified, or would be identified through additional cultural resource survey(s), the agreement would outline a process in the event of the discovery of previously unidentified historic properties.
- Dispute Resolution. A process would be outlined to resolve any objections raised by any consulting parties to the agreement.

4.2.2.4 Conclusion

The project's impacts on cultural resources would be positive. The long-term vision for the island includes the preservation and rehabilitation of portions of Fort Andrews and public education highlighting the island's prehistoric and historic significance through interpretive displays and programs. Specific building rehabilitation would be coordinated with the

MHC and would be performed consistent with the Secretary of the Interior's Standards for Rehabilitation. Activities requiring below-ground disturbance would be monitored by an archaeologist, under a State Archaeologist permit.

The initial project work program involves limited physical intrusion into ground surfaces or structures on the island and no significant modification or demolition of any historic structures. In the immediate short term, several buildings currently deemed unsafe for access or use would be closed and fenced for security purposes. Ultimately, activities associated with future adaptive reuse of the fort could require modification of existing structures, or the potential removal of structures found to be unsafe and beyond rehabilitation and reuse. Any proposed rehabilitation or demolition would be determined on a case-by-case basis and would be subject to consultation with and review by the MHC.

With respect to longer-term project activities, the DCR and Island Alliance are developing an MOA with the MHC that establishes procedures to assure timely detailed review of potential impacts of future site-specific undertakings on historic and/or archaeological resources and incorporation of mitigation measures proposed to eliminate, minimize, or mitigate any adverse impacts.

In the event the National Park Service proposes undertaking or funding specific activities on Peddocks Island, those activities would be the subject of a separate Section 106 review and consultation with the Massachusetts SHPO.

4.3 Ecologically Sensitive Areas and Endangered Species

4.3.1 Impacts of No Action Alternative

The no action alternative would not directly impact upland vegetation, terrestrial wildlife, wetland and aquatic marine wildlife, or protected species. Under this alternative, there would be no alteration of existing vegetation or habitats. Vegetative growth and species succession would continue.

4.3.2 Impacts of Preferred Alternative

4.3.2.1 Upland Vegetation

Impacts to upland vegetation would include the removal of invasive and successional plant species from the Parade Ground, the selective removal of vegetation around rehabilitated buildings, and the clearing of tent campsite areas on the drumlin of East Head. Concentration of proposed development on East Head with limited disturbance associated with the eco-camp would reduce impacts on upland vegetation. The proposed alternative would positively impact upland vegetation through the implementation of park policy that prescribes that control of exotic species. This would be accomplished through an integrated pest management program. This approach involves developing an understanding

of the pest's life cycle; evaluating all available methods of control, placing priority on the least toxic and potentially damaging treatment; and finally, evaluating its effectiveness.

4.3.2.2 Terrestrial Wildlife

Impacts to terrestrial species would be limited to the displacement of species that have colonized the former Fort Andrews grounds. Such displacement would be highly localized, and existing habitats would be well protected in the natural resources management area, which covers the almost half of Peddocks Island.

In the areas of proposed development and redevelopment it would be anticipated that removal of habitat or increased disturbance could result in the displacement of birds and mammals that are sensitive to human disturbance. These species might move to the southern end of the island or leave the island. Potential for impacts on East Head would be reduced by proposing development in areas where there has already been considerable disturbance, and where public access already exists and is promoted.

In addition to redevelopment of fort buildings, construction of trails or boardwalks along the beach could disturb and displace shorebirds and some wetland species. However, in the natural resource management area located on the southern side of Peddocks Island and on other Boston Harbor Islands, habitat may be created which would support native bird species.

Non-native cats and Norway rats can impose devastating negative impacts on small vertebrates and nesting birds. The proposed project would result in beneficial impacts through the implementation of an integrated pest management plan to address these exotic mammals on Peddocks Island. The control of these exotics and the restoration of native species and habitat would be within natural resource management areas in portions of Peddocks Island.

4.3.2.3 Wetland and Aquatic Marine Wildlife

Previous development of the Boston Harbor Islands has likely adversely affected habitat for invertebrates of wetland and aquatic marine areas. Increased island visitation associated with the preferred alternative could further this effect.

Fishing by Peddocks Island visitors could have an impact on fish population size or health.

Increased boat activity associated with visitor trips to Peddocks Island could pollute ocean water slightly with oil, grease, and black or gray water releases. Engine noise could also disturb marine mammals. These actions would be expected to have a negligible impact on dolphins and whales.

4.3.2.4 Protected Species

As previously noted, no federally protected species are listed as present on Peddocks Island, and only one of the six species listed by the Massachusetts Natural Heritage Program found on the Boston Harbor Island has been identified on Peddocks Island. Specifically, the Massachusetts Natural Heritage Atlas (11th edition) identifies Peddocks Island as Priority Habitat for Seabeach Dock. However, given the known location of the plant and its preferred habitat, it is not anticipated that the project would adversely affect the plant or its habitat.

The preferred alternative would not involve any work within beaches or coastal wetlands. Hence, no phase of the project would be anticipated to have any effect on this protected species. Plans for the project, including stormwater management plans prepared in compliance with the Massachusetts Department of Environmental Protection (DEP) stormwater management guidelines, would be reviewed with the NHESP to ensure compliance with Massachusetts Endangered Species Act (MESA) and to preclude the possibility of any inadvertent impact to Seabeach Dock or its habitat. Potential impacts would be mitigated by surveying, avoiding actions near these plants, and posting signs or otherwise preventing pedestrian traffic in known habitat areas.

4.4 Water Supply, Wastewater, and Stormwater Utility Infrastructure

4.4.1 Impacts of No Action Alternative

In the no action alternative, the existing water supply, wastewater management, and stormwater management utility systems would remain in the same, essentially unusable state of disrepair. Future use of the island would be limited by the capacity of the existing systems and thereby reduce the potential for recreation, use, and enjoyment of Peddocks Island.

4.4.2 Impacts of Preferred Alternative

4.4.2.1 Water Supply

At proposed visitation levels, the visitors are projected to consume an estimated 45,600 gpd of water. Ample water storage would need to be provided to meet peak hourly demands and fire protection needs. Since there are no on-island sources of potable water, there are two feasible options to provide water to the island: (1) via connection to the existing Aquarion system in Hull or Cohasset, or (2) via reconnection to the existing 100-year old, six-inch transmission main to Nut Island in Quincy. This existing connection to Nut Island is known to be broken in multiple locations. Given the necessity of costly leak detection and repairs to the existing Nut Island main, and the likely inability of this main to supply enough water for fire flows, connection to the Aquarion system would be preferred.

Connection to the Aquarion water system in Hull is proposed via inclusion in a micro-tunnel conduit that would be drilled beneath Hull Gut. The connection would consist of an eight-inch or ten-inch water main connecting to the existing ten-inch Aquarion water main at Windmill Point in Hull. The water supply is available from Hull through Aquarion under the condition that water conservation measures be undertaken within the Aquarion system to reduce current demand in the amount equal to the planned withdrawal (1:1 ratio). The initial water withdrawal is estimated to be approximately 2,000 gpd. In future years, as East Head water demands increase, additional 1:1 water conservation measures could be undertaken to offset the new demand, unless additional water supply sources are placed online by Aquarion.

A second water supply option would be to obtain the needed water supply from the Town of Cohasset, which has the surplus capacity in town wells to meet the water supply needs of the island. This supply would be received via the Aquarion distribution system in Cohasset and Hull. The Project Team is currently engaged in conversation with Aquarion, the Town of Hull, and the Town of Cohasset regarding the potential for supplying water to the project. Water conservation measures to be implemented would be determined in the course of these discussions and made part of any water supply agreements.

The project would result in minimal impacts on water supply due to the proposed water conservation measures. The project would employ the use of low-flow plumbing fixtures in any new or rehabilitated structures in compliance with state building codes. Additional water conservation measures would be determined in the course of discussions with the applicable municipality and Aquarion.

4.4.2.2 Wastewater Management

The proposed project would generate wastewater flows that must be collected and disposed of in accordance with local, state, and federal laws and regulations. Peak daily wastewater flows are projected to increase to as much as 30,400 gpd in 2020 under the full re-development and activation of the East Head of Peddocks Island.

In consideration of the dense till soils throughout the island, construction and operational costs, and the premium placed on reliability and operational simplicity, the project would propose to collect wastewater generated on the island at a central location near the proposed Visitor Center and pump it via a 4-inch double-walled force main beneath Hull Gut to the Hull municipal wastewater system for treatment and disposal. The onsite sewer collection network would likely be comprised of a combination of new collection lines and rehabilitated existing lines.

The Hull municipal wastewater system consists of a network of collection sewers and a treatment plant located approximately one mile to the east of Hull Gut. The collection system extends to serve Hull High School, which is only several hundred feet from the Hull Gut shoreline. Based on recent discussions with Hull municipal wastewater officials, Hull's

wastewater treatment plant has capacity to accommodate an additional one million gpd of wastewater flow. In addition, the wastewater collection system at Windmill Point on the Hull mainland has been upgraded in recent years. Accordingly, there would be more than enough municipal sewer capacity to accept the projected wastewater flow from East Head. The proposed sewer connection to the Town of Hull would allow the removal of the on-site, aging septic system at Fort Andrews and would allow for more complete treatment of existing and anticipated wastewater flows.

The new sewer line to be installed as part of the directional drilling beneath Hull Gut would initially be extended to service the Visitor Center and Chapel. It may be that the existing on-site sewers lines in the vicinity of the Visitor Center and Parade Ground would be acceptable for service to the kitchen and dining hall buildings after the appropriate cleanup and relining of these older lines. Similarly, the existing sewers west of the Parade Ground may also be usable for collecting wastewater generated from tent cabins.

The tent cabin complex envisioned for the area around the northern batteries would likely require a new sewer connection, since it is understood that any collection system in that area flowed to the north or northwest, away from the Parade Ground. Additional investigations and acquisition of mapping in that area would be required during the actual design phase to confirm the presence or absence of sewer lines running in a southerly direction.

The sewer lines serving the Officers Row area appear to be in good condition and could be reused in the event that the existing brick structures were to be placed back into productive use. In the event that the Warehouse was to be renovated, wastewater could be collected from existing sewer lines and pumped through a new, small diameter force main to the rehabilitated gravity sewers near the kitchen/dining hall complex.

Ultimately the project would result in positive impacts on water quality by channeling sewage to the treatment plant in Hull. The system would be designed and constructed in accordance with DEP and the Town of Hull design policies and regulations. The section of force main located beneath Hull Gut would be double-walled to preclude both infiltration and leakage.

4.4.2.3 Stormwater Management

Since the short-term and mid-term phases of the project would not be anticipated to alter drainage patterns or runoff coefficients, no specific drainage system improvements would be necessary.

The grading and clearing of upland for the family tent camp ground would result in minor impacts to the existing stormwater runoff patterns on East Head. The stormwater management system for the project would be designed to comply with DEP's stormwater management guidelines. This would include the use of site planning measures to reduce

the rate of runoff and the incorporation of appropriate stormwater Best Management Practices (BMPs). Potential structures for controlling runoff include structures for capturing oil and grease, sediments, and litter prior to discharge to the harbor.

4.5 Wetlands, Navigable Waterways, and Coastal Zone

4.5.1 Impacts of No Action Alternative

In the no action alternative, there would be no impacts to wetlands, navigable waterways, or the coastal zone.

4.5.2 Impacts of Preferred Alternative

No phase of the project would involve filling or altering a federal wetland resource area. Hence, no filing under the Clean Water Act would be required. However, the directional boring work associated with the installation of the utilities conduit beneath Hull Gut would require work beneath federal waters, including a federal navigation channel, and would therefore require approval by the US Army Corps of Engineers under the Rivers and Harbors Act of 1899. Similarly, while no phase of the project would require work directly within a wetland or waterway, the directional boring effort would entail work beneath the resource area identified as Land Under the Ocean in the Massachusetts Wetland Protection Act regulations, as well as within the buffer zone of the coastal beach and banks of the Hull mainland and the Peddocks Island shorelines, and beneath tidelands regulated under the Massachusetts Chapter 91 waterways program.

The proposed utilities connection to the mainland would be via a 24-inch diameter conduit installed beneath Hull Gut, utilizing directional drilling methods. Doing so would preclude the necessity of any dredging or other work within a coastal or freshwater wetland resource area. The entrance and exit pits of the drilling operation would be established within the uplands of the mainland and island, and outside of the state-regulated buffer zone of the respective coastal resource areas. The boring would be advanced beneath Hull Gut at a minimum depth of 25 feet below the bottom surface and the designated depth of the federal navigational channel. As a result it would have no effect on the coastal resource areas associated with the Gut; nor would it affect navigation within or outside of the designated channel.

4.6 Soils and Hazardous Materials

4.6.1 Impacts of No Action Alternative

The no action alternative would not change existing conditions of soils and hazardous materials. Remediation of hazardous materials would not be completed and abatement of asbestos and lead contamination would not occur.

4.6.2 *Impacts of Preferred Alternative*

The proposed alternative would beneficially impact soils through the continued remediation of hazardous materials in existing buildings. In 2004 the Island Alliance, on behalf of the DCR, engaged a contractor to conduct a full asbestos removal program for the Guardhouse, which would be proposed to become a Visitor Center. This remediation project was completed in August 2004. Further site-specific assessments for asbestos and lead would be undertaken in connection with evaluation and design of adaptive reuse improvements for specific buildings.

During utility feasibility study activities, limited hand test-pitting was conducted and one boring was advanced in the area of the existing septic system. Near-surface fill layers resembling urban fill were detected over natural soils. These fill layers were likely deposited during development of Fort Andrews. No signs of petroleum products were observed. However, in recognition of the urban fill characteristics observed, samples would be collected and characterized during the design phase and appropriate plans would be prepared for handling the fill materials that may be encountered during construction. A Massachusetts Licensed Site Professional would assess the sample results and take all appropriate steps in accordance with the Massachusetts Contingency Plan. Any contaminated material encountered during construction would be disposed of by a licensed contractor in a manner consistent with the Massachusetts Contingency Plan.

Aside from the urban fill and several rubble piles, no signs of solid waste landfill activities have been noted in site visits on the island. The fortifications, housing, and barracks buildings occupied most of East Head, affording little or no space for landfiling activities. It is likely that solid waste generated during the period of military occupation was burned (generating the urban fill noted in the utility feasibility studies near the Guardhouse) and/or barged off-island.

Further site-specific assessment of fill would be undertaken by DCR in connection with future evaluation and design of the proposed upland eco-tent area, and any future utility line connections or other activities involving excavation elsewhere on the island.

During project operation, island visitors, both day and overnight, would generate trash typical of a recreational destination. Generation of hazardous wastes would not be anticipated.

4.7 Public Safety

4.7.1 *Impacts of No Action Alternative*

The no action alternative would result in adverse impacts to public safety. Buildings would remain vacant and/or open to the elements and suffer further deferred maintenance and deterioration. Structurally unstable building would not be fenced from public access leading to increased public safety concerns.

4.7.2 *Impacts of Preferred Alternative*

The redevelopment of East Head would result in positive impacts on public safety relative to building conditions. Currently, many of the Fort Andrews buildings have suffered from more than 50 years of abandonment and are in generally poor condition. The preservation and adaptive reuse of portions of Fort Andrews would counter the ongoing deterioration of historic buildings. This, combined with the closing and fencing of structurally unstable buildings, would improve public safety on the island.

As previously described, safety at Peddocks Island is provided primarily by the Massachusetts State Police Marine Unit. Minor impacts on demand for public safety personnel would be anticipated due to an increase in the number of visitors to Peddocks Island.

4.8 Energy Infrastructure

4.8.1 *Impacts of No Action Alternative*

The no action alternative does not propose any change in the current level of activity at East Head; therefore, no impacts on energy infrastructure would be anticipated.

4.8.2 *Impacts of Preferred Alternative*

The proposed alternative would result in positive impacts on energy infrastructure on East Head through the installation of an energy cable through a conduit underneath Hull Gut. Minor negative impacts would result from increased energy demand. Anticipated demand for the island would be estimated to be approximately 400 kilowatts of power per day.

Several potential power sources for the island were evaluated, including solar, wind, stand-alone generators, and direct cable connection to the mainland in Hull. Only the direct cable connection to Hull would provide sufficient, reliable power at a cost-effective price. A single 13.8 kV power cable would carry three-phase power to the island. The cable would have simple switch gear and metering on both the island and the mainland, where it would connect to the Hull Power and Light system near Hull High School. As previously described, the electrical power cable would be bundled in conduit installed by directional bore beneath Hull Gut between the Hull mainland and East Head.

4.9 Construction

4.9.1 *Impacts of No Action Alternative*

The no action alternative does not involve any proposed construction activity, therefore no construction impacts would be anticipated.

4.9.2 *Impacts of Preferred Alternative*

In the short term, an increase in noise and impacts on air quality could result from construction of the project. These impacts would be anticipated to be negligible given the distance of the construction activity from existing populated areas. It is likely that access to East Head would be prohibited during construction periods, as construction activities would center on the pier and Visitor Center areas, resulting in a direct conflict with visitor access from the pier.

Short-term adverse impacts on ambient air quality at East Head would be negligible because construction activity would be limited to adaptive reuse and no major excavation activity would be proposed. Potential impacts associated with construction activities could include fugitive dust resulting in localized increases in particulate levels. Principal on-site sources of particulates would include a demolition, exposed aggregate and storage piles, and unpaved areas. For each source type, fugitive emissions would depend on such factors as the properties of emitting surfaces (e.g., soil silt content, moisture content, and volume of spoils), meteorological variables, and the construction practices employed.

Mitigation measures to reduce potential emissions and minimize impacts include:

- ◆ use wetting agents on areas of exposed soil on a scheduled basis;
- ◆ minimize spoils on the construction site;
- ◆ monitoring of actual construction practices to ensure that unnecessary transfers and mechanical disturbances of loose materials would be minimized;
- ◆ minimize storage of debris on-site; and
- ◆ conduct periodic cleaning of paved pathways to minimize dust accumulations.

Implementation of these mitigation measures would ensure that construction would have a negligible short-term effect on air quality.

The construction of the project would result in minimal impacts to water quality, limited to disturbance of land and potential sediment loading on the stormwater management system. A National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities would be required for greater than one acre of disturbance. A Notice of Intent would be filed with the DEP and development of a Stormwater Pollution Prevention Plan would be prepared prior to construction start and include measures to reduce, avoid, or mitigate impacts on water quality.

The proposed directional drilling would require excavation of borehole entrance and exit pits on Windmill Point and East Head, respectively. These pits would be lined to prevent release of drilling muds to the ground.

4.10 Socioeconomic Environment

4.10.1 Impacts of No Action Alternative

The no action alternative would not contribute benefits to the economy, increased tax revenues, or new jobs. The no action alternative would not result in any impacts on minority populations or income levels.

4.10.2 Impacts of Preferred Alternative

Boston Harbor Islands are known for attracting a broad cross section of the population, from international tourists to inner-city school children. The Peddocks Island project would have positive impacts on the sociological environment. Economically, the Boston Harbor Islands are projected to attract approximately 400,000 visitors per year, which would increase income by \$24 million, add \$4 million to tax income, and add 880 jobs to the labor force. Peddocks Island, as one of the major hubs of the Boston Harbor Islands, would be anticipated to directly contribute to these economic benefits.

The preferred alternative would not result in any disproportionate effect on minority populations or income levels.

4.11 Cumulative Impacts

4.11.1 Impacts of No Action Alternative

The no action alternative assumes that no development of East Head would occur; therefore cumulative impacts would not be anticipated.

4.11.2 Impacts of Preferred Alternative

This EA addresses the management and development of East Head in the short, mid-, and long term. Impacts associated with the individual components and the overall Peddocks Island—Fort Andrews Preservation and Adaptive Reuse Project would be minimal, therefore cumulative impacts would not be anticipated.

4.12 Sustainability and Long-Term Management

4.12.1 Impacts of No Action Alternative

In the no action alternative, conditions at East Head would remain the same and opportunities for sustainable development would not be realized. Long-term management impacts at the island would not change.

4.12.2 Impacts of Preferred Alternative

The Boston Harbor Islands Partnership demonstrates environmental leadership and a commitment to the principles of sustainability. The Partnership agencies lead by example

in all aspects of park management including policy development; park planning; park operations; natural and cultural resource management; interpretation and education; facilities design, construction and management; and commercial services. Infrastructure, programs, and functions are models for the use of sustainable design, planning, construction, development, access resource use, and maintenance. To ensure appropriate commitment, the Partnership agencies adopt sustainable practices on the islands over time. Collaborations foster environmentally, socially, and economically compatible solutions. The Boston Harbor Islands Economic Sustainability Strategy focuses on a series of business ventures and public investments to support park operations. The plan incorporates retail, fee-based programs, mooring program, ferry boat audio program, special events, improved access and information, recreation and food concessions, constituency building and membership program. As a hub island and the location of the eco-retreat, the development of the East Head on Peddocks Island would be essential to the economic sustainability initiative for the Boston Harbor Islands national park area.

The preferred alternative emphasizes sustainable design through the rehabilitation and adaptive reuse of existing buildings. The footprint of the project would be proposed in areas already disturbed by previous development, resulting in limited impacts.

Existing infrastructure would be reused and reconstructed where possible. New wastewater, water, and electricity connections would be provided through a single conduit thereby reducing impacts of three separate installations of infrastructure.

4.13 Conclusion

Both the preferred alternative and no action alternative would result in limited adverse impacts on resources studied in this EA. The preferred alternative, however, results in numerous beneficial impacts including preservation of historic structures, increased public safety, and improved public access, use, and enjoyment of Peddocks Island. Implementation of the preferred alternative would not result in impairment of the park's resources and values.

5.0 CONSULTATION AND COORDINATION

The National Environmental Policy Act requires federal agencies preparing environmental assessments to consult with stakeholders, including the general public and related agencies, early in the planning process to identify issues and concerns. As outlined in the park general management plan, the Boston Harbor Islands Advisory Council is the primary forum for consultation with the general public and with the seven stakeholder groups that were identified in the park enabling legislation.

This EA will be placed on formal public review for 30 days, available on the Internet at <http://parkplanning.nps.gov>. Notices of the EA review period and availability will be sent to those listed in Section 5.1, Agencies and Interested Parties Consulted and Section 5.2, List of Recipients.

5.1 Agencies and Interested Parties Consulted

A number of federal, state, and local agencies and interested parties were consulted in the development of the proposed project. Consultation consisted of meetings, telephone communications, and/or the distribution of the Massachusetts Environmental Notification Form. All parties listed in Section 5.1 received a copy of the ENF and was provided the opportunity to review and comment on the document. They will also be notified of the EA availability and review period.

Federal Agencies and Offices

US Army Corps of Engineers
US Department of Agriculture/Natural Resources Conservation Service
US Department of Commerce/NOAA National Marine Fisheries Service
US Environmental Protection Agency, Region 1
US Fish and Wildlife Service

Massachusetts Agencies and Offices

Massachusetts Aeronautics Commission
Massachusetts Bay Transportation Authority
Massachusetts Coastal Zone Management
Massachusetts Department of Conservation and Recreation
Massachusetts Department of Environmental Protection
Massachusetts Division of Fisheries & Wildlife, Natural Heritage and Endangered Species Program
Massachusetts Division of Marine Fisheries
Massachusetts Executive Office of Environmental Affairs/Massachusetts Environmental Policy Act
Massachusetts Executive Office of Transportation
Massachusetts Highway Department
Massachusetts Historical Commission
Metropolitan Area Planning Council

Municipal Agencies and Offices

Hull Board of Health
Hull Board of Selectmen

Hull Building Commissioner
Hull Conservation Commission
Hull Light Department
Hull Planning Board
Hull Sewer Plant
Hull Town Manager

Organizations

John F. Kennedy Library and Museum
New England Aquarium
Peddocks Island Association
Save the Harbor/Save the Bay
The Boston Harbor Association
University of Massachusetts – Boston

Boston Harbor Islands Partnership

Boston Environment Department
Boston Harbor Islands Advisory Council
Boston Redevelopment Authority
Island Alliance
Massachusetts Department of Conservation and Recreation
Massachusetts Port Authority
Massachusetts Water Resources Authority
National Park Service
Thompson Island Outward Bound Education
Trustees of Reservations
US Coast Guard

5.2 List of Recipients

Notices of the EA review period and availability will be sent to those listed in Section 5.1 above plus the recipients listed below.

Federal Elected Officials

Senator Edward M. Kennedy
Senator John F. Kerry
Congressman Michael Capuano – 8th Congressional District
Congressman William Delahunt – 10th Congressional District
Congressman Barney Frank – 4th Congressional District
Congressman Stephen A. Lynch – 9th Congressional District
Congressman Edward Markey – 7th Congressional District
Congressman John Tierney – 6th Congressional District

Federal Agencies and Offices

Advisory Council on Historic Preservation
Massachusetts State Historic Preservation Officer
US Department of Agriculture
US Department of the Interior

Federally Listed American Indian Tribes

Delaware Tribe of Western Oklahoma (Anadarko) (formerly Delaware Nation, Oklahoma)
Delaware Tribe of Indians (Bartlesville) (Oklahoma)
Mashantucket-Pequot Tribal Nation (Connecticut)
Mohegan Indian Tribe of Connecticut
Stockbridge-Munsee Community Band of Mohican Indians (Wisconsin)
Narragansett Indian Tribe (Rhode Island)
Wabanaki Tribes of Maine
 Passamaquoddy Tribe
 Penobscot Indian Nation
 Houlton Band of Maliseet Indians
 Aroostook Band of Micmacs
Wampanoag Tribe of Gay Head (Aquinnah) (Massachusetts)

Other Indian Tribes and Groups

Nipmuc (Hasanamisco)
Nipmuc Nation
Nipmuck Chaubunagungamaugg
Natick Nipmucs
Mashpee Wampanoag Tribe
Muhheconneuk Intertribal Committee on Deer Island
North American Indian Center of Boston

Massachusetts Elected Officials

Governor Mitt Romney
Senate President Robert Travaglini
Speaker of the House Salvatore DiMasi

Massachusetts Agencies and Offices

Commission on Indian Affairs
State Police

Municipalities

City of Boston
Office of Mayor Thomas M. Menino, City of Boston
Town of Hingham

City of Quincy
Town of Weymouth

Organizations

Appalachian Mountain Club
Bosport Docking, LLC Constitution Marina
Conservation Law Foundation
Fort Revere Park and Preservation Society
Greater Boston Chamber of Commerce
Greater Boston Convention and Visitors Bureau
Hull Chamber of Commerce
Hull Lifesaving Museum
Sierra Club
Volunteers and Friends of the Boston Harbor Islands
Urban Harbor Institute/University of Massachusetts – Boston

6.0 REFERENCES

6.1 Bibliography

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Camp Dresser & McKee (CDM). *Environmental Audit Report – Peddocks Island (Fort Andrews) Hull, Massachusetts*. Prepared for the Metropolitan District Commission. Boston, MA. 1998.

Environmental Partners Group. *Feasibility Study for the Supply of Water, Wastewater, and Electrical Services for the Peddocks Island—Fort Andrews Preservation and Adaptive Re-Use Project Final Report*. Prepared for the Island Alliance in coordination with Spaulding & Slye Colliers international. October 2004.

Epsilon Associates, Inc. *Peddocks Island-Fort Andrews Preservation and Adaptive Reuse Project Environmental Notification Form*. Prepared for the Island Alliance on behalf of the Massachusetts Department of Conservation and Recreation. April 15, 2005

Moore-Heder Architects, Inc. *Peddocks Island Building Study*. 1990

National Park Service, Boston Support Office of the Northeast Region. *Boston Harbor Islands, A National Park Area. Draft General Management Plan and Draft Environmental Impact Statement*. Prepared for the Boston Harbor Islands Partnership. April 2000.

National Park Service, Boston Support Office of the Northeast Region. *Boston Harbor Islands, A National Park Area, General Management Plan*. Prepared for the Boston Harbor Islands Partnership. 2002.

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6.2 Glossary of Terms and Acronyms

BMP Best Management Practice

DCR Department of Conservation and Recreation

DEP Massachusetts Department of Environmental Protection

EA Environmental Assessment

EIS Environmental Impact Statement

ENF Environmental Notification Form

GMP General Management Plan

gpd Gallons per day

MDC Metropolitan District Commission

MEPA Massachusetts Environmental Policy Act

MESA Massachusetts Endangered Species Act

MHC Massachusetts Historical Commission/Massachusetts State Historic Preservation Office

MOA Memorandum of Agreement

NEPA National Environmental Policy Act

NHESP National Heritage and Endangered Species Program

ppm Parts per million

SHPO State Historic Preservation Act

US United States

USDA United States Department of Agriculture

7.0 LIST OF PREPARERS

The EA was prepared by Epsilon Associates, Inc. for Spaulding Slye & Colliers on behalf of the National Park Service and Island Alliance. This section presents a list of those who assisted in the preparation of this EA

National Park Service

Bruce Jacobson, Superintendent, Boston Harbor Islands

Island Alliance

Thomas Powers, President
Doug Welch,

Massachusetts Department of Conservation and Recreation

Thomas Mahlstedt

Spaulding & Slye Colliers

Thomas Hamill
Danielle McLaughlin

Bruner/Cott & Associates, Inc.

Henry Moss
Christopher Stanley

Environmental Partners Group

Paul Gabriel, Principal
Robert Kenneally

Epsilon Associates, Inc.

Maureen Cavanaugh
Andrew Magee

8.0 APPENDICES

- A Certificate of the Massachusetts Secretary of Environmental Affairs on the Environmental Notification Form



The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
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Boston, MA 02114-2524

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GOVERNOR

KERRY HEALEY
LIEUTENANT GOVERNOR

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SECRETARY

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May 23, 2005

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Peddocks Island - Fort Andrews
Preservation and Adaptive Reuse
PROJECT MUNICIPALITY : Hull
PROJECT WATERSHED : Boston Harbor
EOEA NUMBER : 13519
PROJECT PROPONENT : The Island Alliance on behalf of the
Department of Conservation and
Recreation
DATE NOTICED IN MONITOR : April 23, 2005

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** the preparation of an Environmental Impact Report.

Project Description

As described in the Environmental Notification Form (ENF), the project involves the preservation and reuse of Fort Andrews as a daytime visitation site with facilities for passive use such as hiking and picnicking and a site for group events. The project is located on the East Head portion of Peddocks Island, part of the Boston Harbor Islands National Park Area. Proposed improvements include the installation of basic utility infrastructure (water supply, wastewater disposal and

electricity), the construction of a new toilet facility, landscaping and drainage improvements within the Fort Parade Ground to return it to its historical open lawn condition, and interior and exterior renovation of the chapel building. The three utilities will be combined into one conduit that will be directionally drilled from the mainland in Hull beneath Hull Gut to Peddocks Island. Depending on funding, future phases of the project may entail adaptive reuse of key Fort Andrews buildings and the evaluation of other buildings for stabilization or reuse, and the development of a family eco-tent campground on the uplands of East Head. The purpose of the project is to make the island more accessible to the public, protect the island's natural and cultural resources, preserve portions of historic Fort Andrews, and promote wider public use of the island.

MEPA Jurisdiction and Permitting Requirements

The project is undergoing review pursuant to Section 11.03 (5) (b) (3) (c) and (10) (b) (1) of the MEPA regulations because the proposed sewer main extension beneath Hull Gut and onto the island may be more than one-half mile in length and the project may entail demolition of historic structures listed in the Inventory of Historic and Archeological Assets of the Commonwealth. The project will require a Chapter 91 License and a Sewer Connection/Extension Permit from the Department of Environmental Protection (DEP) and review by the Massachusetts Historical Commission (MHC). The project may require federal consistency review by the Office of Coastal Zone Management (CZM) and may require a Conservation and Management Permit from the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP). The project will also require an Order of Conditions from the Hull Conservation Commission (and hence, a Superceding Order from DEP if the local order is appealed) and a National Pollutant Discharge Elimination System (NPDES) Storm Water Permit for Construction Activities from the US Environmental Protection Agency (EPA).

Because the proponent is not seeking financial assistance from the Commonwealth for the project, MEPA jurisdiction extends to those aspects of the project that may cause significant Damage to the Environment and that are within the subject matter of required or potentially requires state permits. In this case,

MEPA jurisdiction extends to issues of waterways and tidelands, wastewater, and historic and archeological resources.

Permitting Issues

Chapter 91 Waterways

According to the ENF, the proposed utility crossing will be a minimum of 25 feet below the ground surface level. In its comments, CZM recommends that, in determining the final design depth, the proponent consider the potential for lateral migration of the Hull Gut channel and that the depth of the conduit be sufficiently deep to ensure that it would not be exposed if migration of the channel occurs. The proponent should consult with the U.S. Coast Guard Port Operations Department regarding this matter.

Prior to initiating directional drilling, the proponent should have procedures in place to monitor drilling fluids, slurry, and grouting materials, and to detect and respond to any potential or actual release into the waterway. In its comments, DEP indicates that this issue will be addressed during the Chapter 91 License review process.

The shoreline of Peddocks Island in the immediate vicinity of the proposed utility crossing has experienced erosion in recent years. When siting the utility conduit and supporting structures, such as the pump station, the proponent should consider the dynamic nature of the shoreline and set back the utilities and any structures to the maximum extent practicable to minimize the risk of future erosion. I strongly encourage the proponent to consult with CZM regarding this matter.

Historic and Archeological Resources

Peddocks Island is listed in the State and National Registers of Historic Places as part of the Boston Harbor Islands Archeological District, for its significant Native American archeological resources, and Fort Andrews is listed in the Inventory of Historic and Archeological Assets of the Commonwealth. In its comments, MHC indicates that the proposed utility conduit would not adversely affect any significant historic and archeological resources. However, MHC requests that the proponent submit plans for the proposed restroom facilities

in order to determine if an archeological survey is warranted. MHC also requests an opportunity to review more detailed information on the proposed placement of tents in the eco-tent campground and plans for the renovation of the chapel.

MHC states that it will be concerned with any proposed demolition of historic buildings at Fort Andrews. Presently, the project entails fencing off buildings that are in disrepair and that might pose a public safety hazard. The ENF indicates that the proponent will undertake adaptive reuse analyses and other planning studies for these buildings. MHC recommends that the architectural assessment of the conditions of these buildings be revisited and that the proponent consider preserving as many officers quarters buildings as possible. I strongly encourage the proponent to consult and work closely with MHC regarding future phases of the project and the development of a Memorandum of Agreement (MOA).

Rare Species

The entire project site is located within Priority Habitat for Seabeach Dock, a state-listed Threatened Species protected under the Massachusetts Endangered Species Act (MESA). In its comments, NHESP recommends that the proponent retain a qualified botanist to conduct a habitat assessment and botanical survey in order to determine if the project will result in a "take" of the Seabeach Dock. If the project results in a "take", the project must meet performance standards for a Conservation and Management Permit to be issued by NHESP. I strongly encourage the proponent to consult with NHESP regarding the selection of a qualified botanist, the botanical survey protocol, as well as the design of habitat protection areas, fencing and trails to avoid and minimize impacts to the Seabeach Dock.

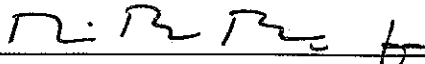
Conclusion

The proponent should note the Boston Harbor Association's comments generally and DEP's comments regarding water conservation, potential hazardous waste, and recycling issues. I strongly encourage the proponent to incorporate water conserving features into the project wherever possible and to comply with applicable Solid Waste and Air Quality Control regulations.

The impacts of the project within MEPA jurisdiction do not warrant the preparation of an EIR. I conclude that no further MEPA review is required. The proponent may resolve any remaining issues during the state and local permitting processes.

May 23, 2005

Date

Ellen Roy Herzfelder

Comments received:

05/13/05 Division of Fisheries and Wildlife
05/16/05 Department of Environmental Protection Northeast
Regional Office
05/17/05 Massachusetts Historical Commission
05/18/05 Boston Harbor Association
05/19/05 Office of Coastal Zone Management

ERH/RAB/rab