

National Park Service
U.S. Department of the Interior

Fire Island National Seashore
New York



FIRE ISLAND NATIONAL SEASHORE

Rehabilitation of Sailors Haven Marina and Ferry Dock Environmental Assessment

DRAFT

March 2005

Environmental Assessment

Rehabilitate Sailors Haven Marina and Ferry Dock Fire Island National Seashore New York

Fire Island is a fragile, isolated, dynamic barrier island south of Long Island, New York. Sailors Haven is one of Fire Island National Seashore's prime visitation areas, servicing approximately half of all school and other organizational groups that visit Fire Island each year. Sailors Haven contains a concession contractor-operated marina, snack bar, and store, and serves a lifeguard-supervised beach. The area also includes a natural wonder known as the Sunken Forest. A ferry service, which uses 50 to 80-foot vessels, runs daily from the mainland between mid-May and mid-October. The marina provides docking for the ferry operation and can berth 53 boats. The current annual visitation at the marina is 85,000-120,000 people.

Sailors Haven Marina was in existence prior to the establishment of Fire Island National Seashore in 1964. Based on photographs in park archives, the marina dock was constructed in 1961. At that time, there were extensive sand berms that extended into the bay for protection from wave action. These berms have since eroded. The ferry dock was constructed in 1978 and other marina components were repaired. Dredging of the marina basin and channel was also conducted at that time, and again in 1988. The entire marina complex including boardwalks, utility services, and picnic facilities, were repaired following storm damage which occurred in October 1991. Emergency dredging in the channel and marina entrance was conducted in 2002 and 2004. The marina bulkheads were re-faced in the early 1990's; however, inadequately treated materials were used and the bulkhead sheathing has since deteriorated.

The National Park Service is proposing to rehabilitate the existing Sailors Haven Marina and ferry dock by repairing damaged portions of the marina, including bulkheads, decks, breakwaters, docks, piers, moorings, and their substructures; stabilizing the structures against future damage and deterioration; correcting deficiencies in the existing ferry dock to make it stable, operational, and safe for public use; dredging materials; and otherwise making improvements to boaters' navigation in, and the functional use of, the marina. The primary purpose of this project is to allow for continued visitor access, and to improve visitor safety and experience. A secondary purpose is to provide protection to bay beaches by providing for centralized visitor access to the island, thereby avoiding diffuse access impacts to bay beaches and vegetation. Additional protection to bay beaches and vegetation would be provided through stabilization of the shoreline on either side of the marina where erosion has occurred.

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA) to evaluate the impacts of the project on the human environment and provide an opportunity for the public to review and comment on the project. This EA serves as notification to the public of proposed actions, consistent with Section 800.2(d) of Title 36 Code of Federal Regulations (CFR), and seeks the views of the public and consulting parties on the effects, if any, on historic properties in accordance with Section 800.5 of Title 36 CFR.

Note to Reviewers and Respondents

If you wish to comment on the Environmental Assessment, you may mail comments to the name and address below. It is the practice of the National Park Service to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that their home address is withheld from the record, which will be honored to the extent allowable by law. 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 or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Written comments on this environmental assessment should be submitted within 30 days of publication date and should be addressed to:

Superintendent
Fire Island National Seashore
120 Laurel Street
Patchogue, NY 11772

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INTRODUCTION

Fire Island is a 32-mile long barrier island located south of, and parallel to, Long Island, New York (Figure 1). Fire Island is one of the northernmost barrier islands managed by the National Park Service in a chain that stretches from Cape Cod, Massachusetts to Florida.

Establishment - Approximately 26 miles of Fire Island was authorized by Congress as Fire Island National Seashore (FIIS) on September 11, 1964 (Public Law 88-587). The enabling legislation authorizes the establishment of Fire Island National Seashore:

For the purpose of conserving and preserving for the use of future generations relatively unspoiled and undeveloped beaches, dunes, and other natural features within Suffolk County, New York, which possess high values to the Nation as examples of unspoiled areas of great natural beauty in close proximity to large concentrations of urban population, the Secretary of the Interior is authorized to establish an area to be known as the “Fire Island National Seashore.” (16 USC 459e(a))

The national seashore preserves the last developed barrier island in the United States that does not support a system of continuous paved roads. It extends from the eastern boundary of the main unit of Robert Moses State Park eastward to Moriches Inlet, and includes Fire Island proper and the surrounding islands and marshlands in the Great South Bay, Bellport Bay, and Moriches Bay adjacent to Fire Island. Other areas managed as part of FIIS include Sexton Island, West Fire and East Fire Islands, Hollins Island, Ridge Island, Pelican Island, Pattersquash Island, and Reeves Island. Other small and adjacent islands, marshlands, and wetlands that lend themselves to contiguity and reasonable administration within the national seashore are also managed as part of FIIS. In addition, the waters surrounding the national seashore to distances of 1,000 feet in the Atlantic Ocean and up to 4,000 feet in Great South Bay and Moriches Bay are managed as part of FIIS as well (Figure 1). The mainland terminal and headquarters are on the Patchogue River in Patchogue, New York.

Mission – The National Park Service (NPS) mission statement at Fire Island National Seashore reflects the park’s legislated mandate and is a synthesis of the park’s mandated purpose and its primary significance:

The National Park Service is committed to preserving Fire Island’s National Seashore’s cultural and natural resources, its values of maritime and American history, barrier island dynamics and ecology, biodiversity, museum collection objects, and wilderness. The NPS is committed to providing access and recreational and educational opportunities to Fire Island National Seashore visitors in this natural and cultural setting close to densely populated urban and suburban areas, and to maintaining and exemplifying the policies of the National Park Service.

Project Background – Fire Island is a fragile, isolated dynamic barrier island subject to natural processes such as storms, hurricanes, and constant wave action. The island is essentially a large sandbar and is migrating westward. From 1858 until the stabilization of the Fire Island inlet in the 1940s, the west end of Fire Island grew approximately 5 miles.

More than two million people visit the park annually to swim, sunbathe, picnic, beachcomb, clam, hike, and fish. Although most park visitors utilize only the park’s eastern and western ends, which are easily accessed by automobile, tens of thousands of annual visitors use facilities in the project area, which is primarily accessed by boat or ferry. Sailors Haven is one of Fire Island National Seashore’s prime visitation areas, servicing approximately half of all of the school and other organizational groups that visit

Fire Island each year. Sailors Haven contains a concession contractor-run marina, snack bar, and store, and serves a lifeguard-supervised beach; it also includes a natural wonder known as Sunken Forest. The NPS *Strategic Plan* (NPS 2000) for the Fire Island National Seashore describes the Sunken Forest as a “250-300 year old American holly-shadblow-sassafras maritime forest considered to be at or near climax” that shall be preserved from the Great South Bay to the ocean “without developing roads therein.”

A ferry service originating at the ferry terminal at the mainland port in Sayville uses 50 to 80-foot vessels and runs daily between May and the end of October. The marina provides docking for the ferry operation and can berth 53 boats. The current annual visitation at the marina ranges from 85,000 to 120,000 people. The majority of visitors come from either Long Island or elsewhere in the New York metropolitan area.

Figure 1: Project Location Map

Fire Island National Seashore
Long Island, New York
Sailors Haven Marina

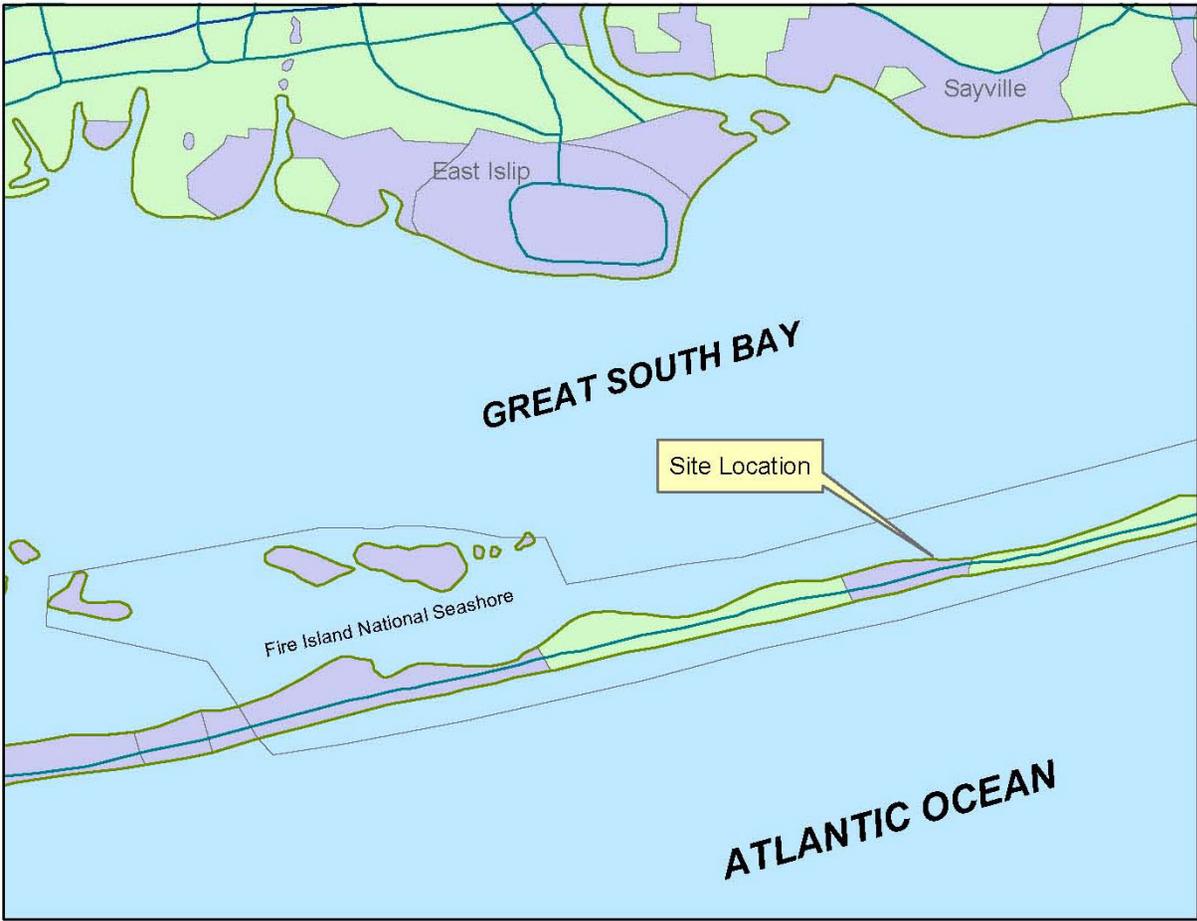
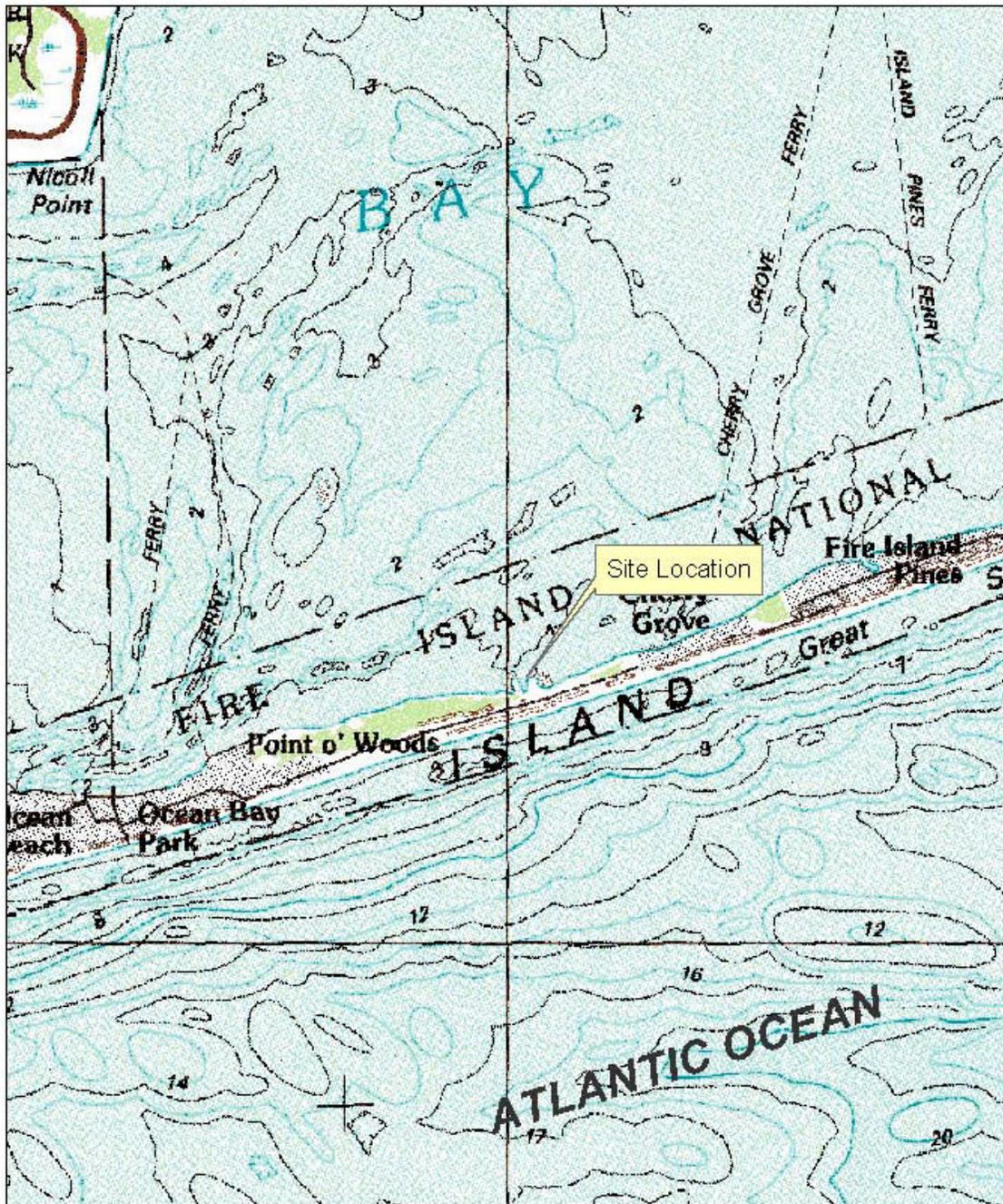


Figure 2: USGS Topographic Quadrangle



Map Source:
USGS Topographic Quadrangle taken from
New York State GIS Clearing House

PURPOSE OF THE PROJECT

The National Park Service is proposing to rehabilitate the existing Sailors Haven Marina and ferry dock by repairing damaged portions of the marina, including bulkheads, decks, breakwaters, docks, piers, moorings, and their substructures; stabilizing the structures against future damage and deterioration; correcting deficiencies in the existing ferry dock to make it stable, operational, and safe for public use; dredging materials; and otherwise making improvements to boaters' navigation in, and the functional use, of the marina. The primary purpose of this project is to allow for continued visitor access, and to improve visitor safety and experience. A secondary purpose is to provide protection to bay beaches by providing for centralized visitor access to the island, thereby avoiding diffuse access impacts to bay beaches and vegetation. Additional protection to bay beaches and vegetation would be provided through stabilization of the shoreline on either side of the marina where erosion has occurred.

NEED FOR THE PROJECT

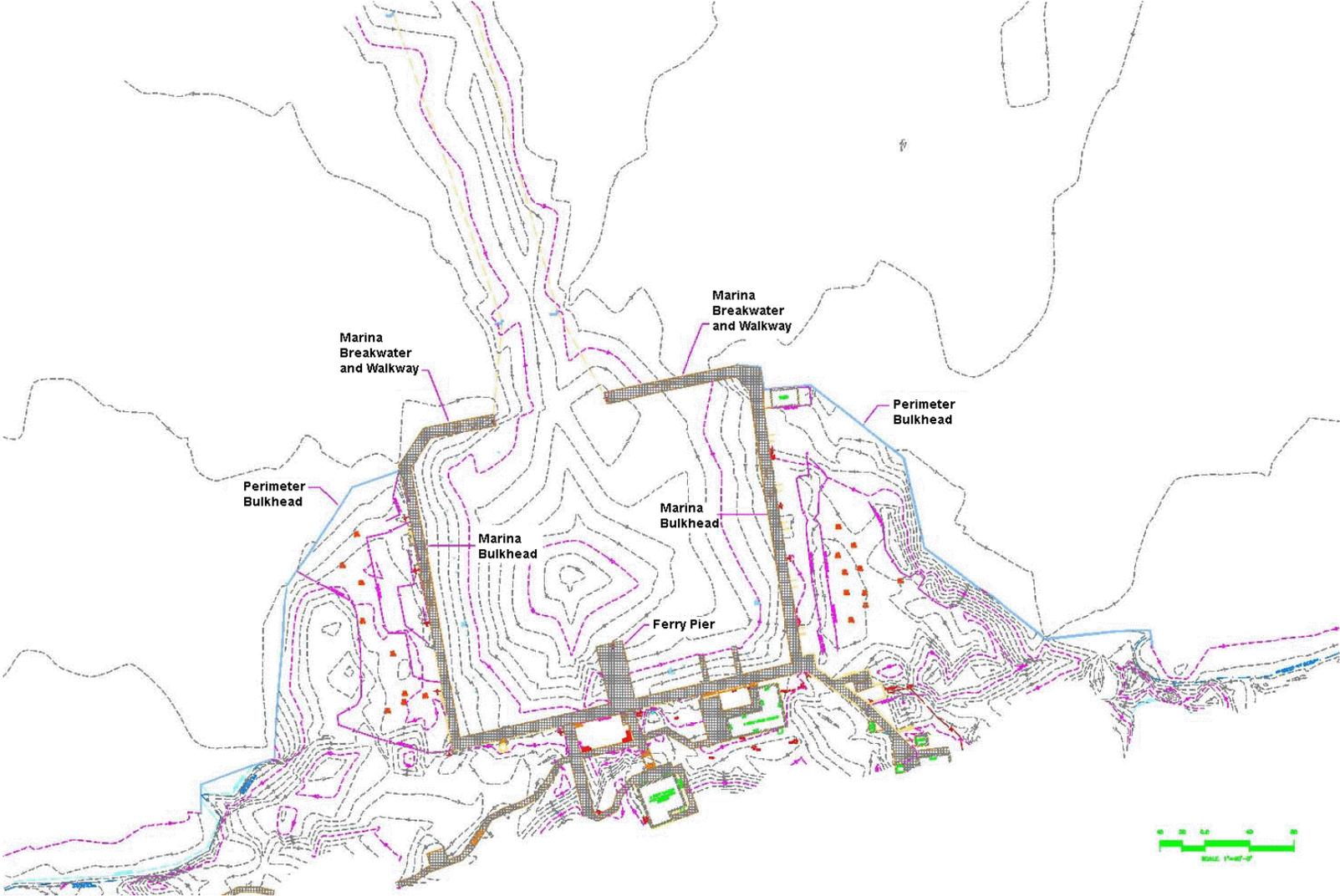
The proposed rehabilitation of the existing Sailors Haven Marina and ferry dock and shoreline stabilization in the marina vicinity is necessary to:

- Prevent further deterioration of the marina and ferry dock structures and increasingly unsafe conditions;
- Provide continued visitor access to this section of the park, including the Sunken Forest Preserve; and
- Reduce continued shoreline erosion impacts and protect the Sunken Forest Preserve in the marina vicinity.

Marina. The marina basin is approximately 300 feet wide and 260 feet long, projecting north from the north shore of Fire Island into Great South Bay. The boat basin is protected from the bay by breakwaters that extend east from the northwest corner and west from the northeast corner of the basin, leaving a 100-foot wide opening into the basin (Figure 3). These breakwaters are constructed with bulkheads on both sides consisting of timber sheetpiling supported by timber wales, timber piles, and timber bracing. The space between the sheetpile bulkheads was originally filled with sand to increase the mass of the breakwater and provide structural stability, but is no longer structurally sound due to sheetpiling and major structural component failures.

The other three sides of the boat basin are defined by timber bulkheads similar in construction to the breakwaters. Timber decking supported by framing of the bulkheads provides a walkway the width of the breakwaters along each side of the boat basin (Figure 3). All bulkheads have major structural and sheetpiling deterioration due to marine borers that have the ability to "eat" CCA treated lumber. This deterioration has caused a loss of fill, primarily on the west side of the marina and at both breakwaters, resulting in a substantial public safety hazard.

Figure 3: Existing Site Plan — Sailors Haven Marina



Most of the timber bulkheads at this marina show significant deterioration due to marine organisms, fungi, corrosion of metal fasteners, physical damage caused by wave and ice action, and settlement or loss of fill and base materials. The park installed new replacement timber sheetpiling bulkhead during repairs in 1992 and the material is already deteriorated just below the waterline. Backfill from behind the bulkheads migrates through openings in the facing and is lost to the bay. The loss of mass from behind the bulkheads make the structures susceptible to further physical damage from wave action and boat impacts.

Additional bulkheads extend from the northeast and northwest corners of the marina to the natural shoreline east and west of the marina. These perimeter bulkheads protect peninsulas of sand along the east and west edges of the boat basin that taper from approximately 150 feet wide at the shoreline to less than 50 feet wide at the north end. These areas are currently used for picnic areas. Significant land erosion has encroached into the shoreline at both the east and west ends of the perimeter bulkheads. Soils have been scoured by wave action and water ponds behind the ends of the bulkheads.

Ferry Dock. A 30-foot wide timber dock centered on the south edge of the boat basin projects north approximately 58 feet into the basin. The construction of the dock is similar to the breakwaters, with timber sheetpile facing, timber piles, and sand fill. This dock is used by a commercial ferry to load and unload passengers. Two smaller timber piers also project into the basin from the south edge east of the ferry dock and are used by park boats. As with other sections of the marina, the ferry dock is significantly deteriorated.

Approach Channel. Dredging of the approach channel to the marina is periodically required to facilitate navigation. An access channel is maintained for a length of approximately 1,000 feet. The channel is dredged to a depth of 6 feet below mean low water. Routine maintenance dredging of the channel has been conducted under permit from the US Army Corps of Engineers (USACE) (permit # 2001-01329), New York State Department of Environmental Conservation (NYSDEC) (permit # 1-4722-04114/00001) and the Town of Brookhaven (permit # 2001-1901-01). Maintenance dredging was last conducted in 2004; the channel has since silted in and channel dredging is again necessary to facilitate safe boat access to the marina. In addition, siltation in the marina basin is impairing the accessibility of the marina. Therefore, dredging of the marina basin is also necessary.

SCOPE OF THE DOCUMENT

Scoping is a process to identify resources that may be affected by a project proposal, and to explore possible alternative ways of achieving the proposal while minimizing impacts. Fire Island National Seashore conducted internal scoping with appropriate NPS staff.

Internal scoping was conducted by an interdisciplinary team consisting of Fire Island employees, planning professionals from the NPS Denver Service Center, and representatives from Childs Engineering Corporation (an engineering firm), Bargmann Hendrie + Archetype, Inc. (an architectural firm), and URS Corporation (a planning consulting firm). Team members held a Value Analysis workshop in August 2003 to discuss the purpose and need for the project; resource issues, values, and concerns; past, present, and foreseeable impacts; ongoing monitoring activities; possible mitigation measures for the proposed action; and reasonable alternatives to be addressed in the environmental assessment.

Federal, state, and local agencies and organizations contacted for information; or that assisted in identifying important issues, developing alternatives, or analyzing impacts, or that will review and comment on the EA include the National Oceanic and Atmospheric Administration, National Marine Fisheries Service; U.S. Fish and Wildlife Service; USACE; NYSDEC; New York State Department of State Coastal Management Program; New York State Historic Preservation Office; and the Town of Brookhaven. Copies of letters received from agencies during the consultation process are included in Appendix A of this EA.

IMPACT TOPICS

The National Environmental Policy Act of 1969 (42 U.S. Code [USC] 4321 et seq.), or NEPA, requires federal agencies to consider alternatives to proposed actions and to analyze impacts of those alternatives. The act is implemented through regulations of the Council on Environmental Quality (CEQ) (40 CFR 1500-1508). The National Park Service has in turn adopted procedures to comply with the act and the CEQ regulations as found in *Director's Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-making* (2001) and its accompanying handbook.

Impacts of the proposed alternatives described in this document were assessed in accordance with Director's Order #12. The *Director's Order #12 Handbook* requires that impacts to park resources be analyzed in terms of their context, duration, and intensity. In order to help the public and decision-makers understand the implications of impacts, they are described in the short and long term, cumulatively, and within context, based on an understanding and interpretation by resource professionals and specialists.

Impact topics were identified on the basis of Federal law, regulations, Executive Orders, National Park Service Management Policies, National Park Service *Director's Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-Making*, 2001, *Director's Order 28 Cultural Resource Management*, 1998, and National Park Service knowledge of park resources.

Impact Topics Analyzed in this Environmental Assessment

NEPA calls for an examination of the impacts on all components of affected ecosystems, including (but not limited to) aquatic communities, wildlife, vegetation, and soils. NPS policy is to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of aquatic and terrestrial plants, birds, and animals (NPS *Management Policies 2001*).

Aquatic Communities/Essential Fish Habitat. The action alternatives call for the rehabilitation of the marina and dredging the access channel and marina basin. There would be a short-term disturbance to aquatic habitat, primarily as a result of dredging activities and shoreline stabilization activities. Other impacts include potential impacts to birds and fish that feed on aquatic invertebrates. Therefore, aquatic communities are included as an impact topic and impacts to both fish and benthic invertebrates are assessed.

Wildlife. The action alternative calls for marina rehabilitation and includes dredging and filling existing nearshore habitat. There would be a short-term disturbance to existing vegetation and macroinvertebrate habitat. Therefore, wildlife is included as an impact topic.

Threatened and Endangered Species, Candidate Species, and Species of Concern. The Endangered Species Act (1973) requires the analysis of impacts to all federally listed threatened or endangered species that could be affected by the proposed project. NPS policy also requires examination of the impacts on federal candidate species, as well as species of concern to the state. In order to identify potential threatened or endangered species in the project vicinity, the US Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and the NYSDEC Natural Heritage Program (NHP) were consulted. Copies of correspondence with USFWS and NYSDEC NHP are provided in the Consultation Appendix.

The following federally and/or state listed species have been identified as potentially occurring in the project area:

Piping plover (*Charadrius melodus*) — Federally threatened; state endangered
Common tern (*Sterna hirundo*) — State threatened
Least tern (*Sterna antillarum*) — State threatened
Seabeach amaranth (*Amaranthus pumilus*) — Federally threatened; state endangered
Atlantic ridley sea turtle (*Lepidochelys kempi*) — Federally and state endangered
Leatherback sea turtle (*Dermochelys coriacea*) — Federally and state endangered
Green sea turtle (*Chelonia mydas*) — Federally and state threatened
Loggerhead (*Caretta caretta*) — Federally and state threatened

Therefore, threatened and endangered species, candidate species, and species of concern are included as an impact topic.

Vegetation. The action alternative calls for marina rehabilitation and shoreline stabilization by filling existing nearshore habitat in areas subject to erosion. A unique vegetative community, the Sunken Forest, is present landward of the project area. The shoreline stabilization portion of the project is necessary in order to minimize future erosion and protect the adjacent Sunken Forest. There would be a short-term disturbance to existing vegetation and potential loss of habitat. Therefore, vegetation is included as an impact topic.

Littoral Processes. Littoral processes are integral to island and coastal ecosystems and determine whether beaches accrete sediment or are eroded. Due to the presence of hard structures at the shoreline and the proposed dredging, the marina is interfering with littoral processes; therefore, littoral processes are included as an impact topic.

Wetlands, and Open Water Habitats. Executive Order 11990, “Protection of Wetlands,” requires federal agencies to avoid, where possible, adversely impacting wetlands. Proposed actions that have the potential to adversely impact wetlands must be addressed in a statement of findings. The proposed project includes the marina rehabilitation in the nearshore area, and dredging. Therefore, wetlands are included as an impact topic.

Water Quality. NPS policies require the protection of water quality consistent with the Clean Water Act. Section 404 of the Clean Water Act authorizes the USACOE to prohibit or regulate, through a permitting process, the discharge of dredged or fill material, or excavation within U.S. waters. There would be short-term discharges of sediment to the waters of Great South Bay, particularly associated with the dredging and shoreline stabilization components of this project. Therefore, water quality is included as an impact topic.

Soils. Soils within the project area have the potential to be impacted by dredge material placement and construction activities. Therefore, soils are included as an impact topic.

Visitor Use and Experience. The NPS Organic Act states that a fundamental purpose of the national park system is to provide opportunities for the public enjoyment of park resources as long as the resources are conserved unimpaired for the enjoyment of future generations. The National Park Service is committed to providing educational opportunities for visitors to enjoy the parks, and it will maintain an atmosphere that is open, inviting, and accessible to every segment of American society. However, visitor use is limited to those activities that can be sustained without causing unacceptable impacts to park resources or values (*NPS Management Policies 2001*). The action alternative includes the rehabilitation of existing marina and ferry dock structures, which would have a short-term influence on visitor activities and visitor use. Therefore, visitor use was included as an impact topic.

Impact Topics Dismissed from Further Analysis

The following impact topics were initially considered but were determined to not be relevant to the action being considered. Consequently, they have been dismissed from consideration as described below:

Cultural Resources: The National Historic Preservation Act, as amended (16 USC 470 et seq.), NEPA, *NPS Management Policies 2001*, *Directors Order #28: Cultural Resource Management Guideline* (1997), and *Director's Order #12* require the consideration of impacts on cultural resources listed on or eligible for listing on the National Register of Historic Places. Cultural Resources are divided into five categories, all of which are dismissed from further analysis.

Archeological Resources: The construction of Sailors Haven Marina pre-dates the establishment of the park in 1964. When originally constructed, the marina was surrounded and protected by the land mass of the barrier island itself; however Fire Island is a dynamic barrier island subject to natural processes and is essentially a large sandbar migrating westward. As a result of natural processes, the 300-foot wide and 260-foot long marina basin now projects north from the north shore of Fire Island into Great South Bay. Since the 1960s, efforts to stabilize the marina have continued and the area has been repeatedly dredged and bulkheads have been extended. Extensive dredging and bulk-heading of this facility created a safe anchorage on an otherwise straight shoreline that was subject to storms from the north, hence the name Sailors Haven. The area of potential effect for this project has been manipulated and heavily disturbed and prehistoric or historic archeological resources are not anticipated. Therefore, archeological resources were dismissed as an impact topic.

Historic Structures / Buildings: Structural elements of the marina, piers, bulkheads, decking have all been modified and/or replaced over the years and are not historic. The NPS finds that there would be no historic properties affected in the implementation of this project and is consulting with the New York State Historic Preservation Office (SHPO) but has not yet received concurrence. Therefore, historic structures and buildings have been eliminated as an impact topic.

Cultural Landscapes: The cultural landscape of the seashore has not been evaluated for eligibility for listing in the National Register of Historic Places; however, the proposed action would be confined to the existing marina footprint and would not result in any alteration to either

the topography or vegetation of the landscape. Any visual and audible intrusions on the landscape during construction would be short-term and negligible.

Implementation of the proposed action would not result in alterations to the topography and vegetation of the landscape, and would have no effect upon the potential National Register eligibility of the landscape. In addition, any visual, audible, and atmospheric intrusions associated with construction would be temporary and negligible, lasting only as long as construction. Because the integrity of the existing landscape would be unaffected, cultural landscapes was dismissed as an impact topic.

Ethnographic Resources: Ethnographic resources are defined by the National Park Service as any “site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence or other significance in the cultural system of a group traditionally associated with it” (*Director’s Order #28*). No Traditional Cultural Properties have been identified within the area of potential effect for this proposed undertaking. Because it is unlikely that ethnographic resources would be affected, it was dismissed as an impact topic.

Museum Collections: Museum collections would not be affected by the proposed project; therefore, museum collections were dismissed as an impact topic.

Indian Trust Resources: Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native Tribes.

There are no Indian trust resources in Fire Island National Seashore. The lands comprising the seashore are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian trust resources was dismissed as an impact topic in this EA.

Air Quality. Section 118 of the Clean Air Act (42 USC 7401 et seq.) requires a park unit to meet all federal, state, and local air pollution standards. The project area receives approximately 85,000 to 120,000 visitors annually, most of whom arrive by commercial ferry or private boats. Park staff do not expect an increase in visitor use as a result of this marina rehabilitation project. Construction equipment utilized for marina repair and dredging and filling activities would temporarily contribute to exhaust and emissions. However, the effects of these emissions, as well as any airborne particulates created by construction activities, would be negligible and short-term, occurring only during construction. Therefore, air quality was dismissed as an impact topic.

Prime and Unique Farmlands. In accordance with CEQ regulations, all federal agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture’s Natural Resource Conservation Service (NRCS) as prime or unique. Prime or unique farmland is defined as soil that particularly produces general crops, such as fruits, vegetables, and nuts. This project area contains no prime and unique farmlands; therefore, prime and unique farmlands were dismissed as an impact topic.

Socioeconomic Resources. The project would neither alter local population densities or distribution, nor result in any increased development. Short-term employment and income impacts are expected due to project construction. These impacts would be beneficial, but due to

the short duration of construction, would be negligible. Therefore, socioeconomic resources were dismissed as an impact topic.

Environmental Justice: Executive Order 12898, “General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” requires that all federal agencies address the effects of policies on minorities and low-income populations and communities. There would be no disproportionately high and adverse human health or environmental effects to minority or low-income populations or communities in the area. Therefore, environmental justice was dismissed as an impact topic.

Soundscape Management. In accordance with NPS *Management Policies 2001* and *Director’s Order #47: Sound Preservation and Noise Management*, natural soundscapes are to be preserved within national park system units. Alternatives addressed in this document would have little or no potential to adversely affect the soundscape of the park over the long term. The existing noise level in the vicinity of the project area includes ferry and private boat traffic, and other sounds of visitor use, park maintenance, and operations. Short-term impacts related to construction activities would occur, but such activities would be scheduled during off-peak season and would have negligible impacts to visitors. Construction-related noise impacts would also have negligible impacts to wildlife. Therefore, soundscape management was dismissed as an impact topic.

Hazardous Materials. Records and previous use indicate that there are no known hazardous materials in the project area. Therefore, hazardous materials were dismissed as an impact topic.

Lightscape Management. In accordance with NPS *Management Policies 2001*, NPS strives to preserve natural resources and values that exist in the absence of human-caused light. The alternatives being considered would not affect any exterior lighting. If artificial lighting at the marina needs to be replaced, the NPS would use lights that have minimal impact on night sky resources. Therefore, lightscape management was dismissed as an impact topic.

Visual and Scenic Resources. Because the marina and ferry dock structures would be replaced in kind, there would be no new impacts to visual or scenic resources. Adverse, short-term impacts would result from temporary construction activities. However, these activities would occur during the off-peak visitation season, reducing the level of adverse visual impacts to negligible.

Land Use. Fire Island National Seashore was established “to preserve and protect for the use and enjoyment of present and future generations, an area possessing outstanding natural and recreational features.” The alternatives addressed in this environmental assessment would have little to no effect on current land use patterns in the project area. Therefore, land use was dismissed as an impact topic.

Park Operations: The alternatives addressed in this environmental assessment would have no to negligible effects on park operations during or after project implementation. Therefore, park operations were dismissed as an impact topic.

Floodplain Management. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM; Community Panel Number 3604970099C May 18, 1992), the Fire Island National Seashore is located within the 100-year tidal floodplain. Executive Order 11988, “Floodplain Management,” requires all federal agencies to consider alternatives to avoid

adverse effects and incompatible development in the floodplains in order to reduce the risk of flood loss and to minimize the impact of floods on human safety, health, and welfare. Thus, certain construction within a 100-year floodplain requires preparation of a statement of findings. However, the purpose of the executive order is to set forth guidance to avoid or minimize impacts (i.e., loss of floodplain storage or increased flood hazards) associated with the occupancy and modification of floodplain development. Since the marina will be reconstructed within the existing marina footprint, no modification of the existing floodplain is expected and no adverse impacts on existing development in the area of Great South Bay are anticipated. Likewise, the shoreline stabilization portion of the project would serve to restore portions of the shoreline that previously existed but have been eroded over time and therefore constitutes reconstruction of previously existing conditions in the floodplain. The shoreline stabilization is expected to reduce erosion in the project area, thereby providing some limited protection to upland natural resources, such as the Sunken Forest. Therefore, floodplain management was dismissed as an impact topic.

Coastal Zone Management: New York Department of State (NYDOS), Policy 18, requires agencies “to safeguard the vital economic social and environmental interests of the state and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the state has established to protect valuable coastal resource areas.”

As part of the permitting process, the National Park Service will prepare a coastal zone consistency determination to demonstrate the project’s consistency with the New York State Coastal Zone Management Program, which is administered by the NYDOS. No project activities would begin prior to authorization from these agencies relative to consistency with coastal policies. Therefore, coastal zone management was dismissed as an impact topic. However, a copy of the Federal Consistency Assessment Form and supporting documentation describing project consistency with relevant coastal policies is provided as Appendix B to this EA.

Geology and Topography: NPS *Management Policies 2001* require the protection of significant geologic and topographic features. The alternatives being considered would have little to no effect on the geology or topography of the area. Therefore, geology and topography were dismissed as impact topics.

RELATIONSHIP OF THE PROPOSED ACTION TO CURRENT AND PREVIOUS PLANNING EFFORTS

Other planning and/or construction efforts that are currently being undertaken in the vicinity of Sailors Haven Marina, or that have been completed but are still relevant to the project area, are summarized below.

Personal Watercraft Use. An environmental assessment has been developed and new regulations have been proposed for personal watercraft (PWC) use at Fire Island National Seashore. Alternatives being considered range from banning all PWC use to allowing PWC use under certain management restrictions. PWC are currently not allowed to use the Sailors Haven Marina, and under proposed regulations would continue to be banned from NPS marinas. There would be no conflict between alternatives being considered in this document and the proposed PWC regulations.

Maintenance Dredging of Entrance Channel to Sailors Haven Marina. The entrance channel to the marina was dredged in May 2002 to restore and maintain a depth of 6 feet below mean low

water, a length of approximately 1,000 feet and a 120-foot width in the channel in accordance with an Environmental Assessment prepared in August 2001. The dredged spoil material was deposited behind existing marina bulkheading to replace eroded sediments. This action was implemented to improve visitor and boater safety by removing the navigation hazard of the shoal at the marina entrance, and to maintain access to the marina. Emergency dredging operations were conducted in Spring 2004; material was placed behind the existing marina bulkheading. Such dredging operations will continue into the future as needed.

Miscellaneous Other Projects. Other projects at various stages of planning or construction at the Sailors Haven Marina include:

- Installation of a pumpout station – a pumpout station with holding tank is currently in operation and available for public use.
- Rehabilitation of the boardwalk – This project will consist of resurfacing the existing walkways from the marina to the primary protected ocean beach. This project is not currently scheduled.
- Rehabilitation of the walkways within the Sunken Forest – This project is not currently scheduled.
- Demolition of the motel complex – This project is tentatively scheduled for 2005.
- Rehabilitation of the maintenance facility – This project is not currently scheduled.

ALTERNATIVES

All alternatives analyzed in this document must be consistent with the purpose and significance of Fire Island National Seashore, and they must meet the purpose and need for the proposed action, as well as the project's purpose and need. Two alternatives are considered in this EA — the No Action Alternative and one action alternative. Alternatives that were considered but eliminated are briefly discussed in this section following descriptions of Alternatives 1 and 2. Table 2 at the end of this chapter summarizes the impacts of each alternative for this project.

ALTERNATIVE 1 – NO ACTION ALTERNATIVE

Under the No Action Alternative, the park would not rehabilitate the existing Sailors Haven marina and ferry dock, or stabilize the shoreline in the marina vicinity. Park staff may continue to implement repair or maintenance activities on an as-needed basis. However, the park would eventually be required to close the marina as it would continue to deteriorate, essentially prohibiting visitor access to the area.

The No Action Alternative provides a baseline for comparison with the action alternative and is analyzed in accordance with CEQ regulations for implementing the NEPA.

ALTERNATIVE 2 – REHABILITATE MARINA AND FERRY DOCK AND STABILIZE SHORELINE (PREFERRED ALTERNATIVE)

Under Alternative 2, the Sailors Haven marina and ferry dock would be rehabilitated using the existing footprints, and the approach channel and marina basin would be dredged. The proposed action would also include providing for shoreline erosion protection on either side of the marina. American Disabilities Act (ADA) requirements would be incorporated into the marina design. Activities proposed under this alternative would include:

- Replacing the ferry dock with a structure composed of a best value sustainable material (BVSM). Choice of materials include either steel, vinyl, or fiberglass sheet piling. Due to shorter life-span than the other materials, treated timber is not considered a BVSM
- Replacing the failing breakwater bulkheads with BVSM
- Replacing the failing marina basin timber bulkheading and decking with BVSM
- Replacing the failing timber bulkheading around the perimeter of the marina
- Replacing existing light poles
- Dredging the marina basin and the 120-foot wide, 1,000-foot long access channel to a depth of 6 feet below mean low water (MLW); no maintenance dredging is called for under this alternative

- Stabilizing the shoreline on either side of the marina site by creating a “perched beach” through placement of coir logs or biologs and subsequent sand fill behind the log, followed by planting of native wetland vegetation

Proposed activities would maintain the current size and shape of the marina, accommodating up to 53 vessels with an approximate maximum length of 50 feet. All bulkhead and breakwater heights would be constructed to the original design height of the existing marina. The ferry dock would continue to accommodate a 50- to 80-foot boat, and would be modified to accommodate accessibility requirements with the use of varying moveable ramps on the deck surface. Other existing marina activities that would also be incorporated into the marina rehabilitation include:

- Temporary docking for boats to allow holding tank off-loading that presently occurs on the east side of the marina
- Temporary docking for a 25-35 foot public water taxi that serves the marina and presently provides disembarking on the bay side of the west breakwater
- Temporary docking for pleasure boat off-loading that presently occurs on the bay side of the west breakwater
- Maintenance of one dedicated boat slip for the concessionaire’s use or NPS administrative use
- Restoration of the picnic grounds presently located on the sand peninsulas between the marina bulkheads and the east and west perimeter bulkheads

Dredging of the access channel and marina basin would be conducted with a clam shell or other closed bucket equipment, or a hydraulic dredge. Dredging activities would be scheduled so as to avoid impacts to aquatic resources. To avoid impacts to marine turtles, no hydraulic dredging would occur between April 1 and November 15. Timing restrictions would not be associated with clam shell or bucket dredging since these are not known to impact marine turtles. An estimated 15,000 cubic yards of material would be dredged from the access channel and marina basin. Dredged material would be placed on a barge for dewatering. Material with suitable physical characteristics would be used as fill material within the breakwater and behind the bulkheads to provide structural integrity. Excess dredged material, or material not suitable for use as fill, would be placed on picnic areas on the east and west sides of the marina, and used to backfill ferry dock and breakwater structures. Dredged material would also be utilized for shoreline stabilization on either side of the marina.

Figures 3 and 4 show plan views of the existing marina conditions and the proposed conditions, respectively. Figure 5 shows a plan view of the proposed shoreline stabilization area. Figure 6 shows a representative profile view of the shoreline stabilization.

The preferred alternative would also provide for an additional five slips for NPS administrative use within the existing footprint, and an approximate 30-foot long fendering system for “touch-and-go” boat access on the breakwater, which would allow for boats to deposit and retrieve passengers without docking. Sustainable design concepts would be incorporated into the marina rehabilitation activities to the extent practicable.

All materials and equipment necessary for the marina rehabilitation and shoreline stabilization components of the project will be brought to the site via barge or boat. Staging areas will include the existing picnic areas within the marina and perimeter bulkheads. If additional staging areas are required, previously cleared areas, such as the maintenance facility and associated parking area will be used. These locations are located in the mid-section of the island. No equipment or materials will be stored or transported along oceanside beaches or dunes. Existing roads will be used to access these areas. No additional disturbance to vegetation or natural communities, including beaches, will occur to accommodate access or staging.

This alternative would not include any rehabilitation of other existing NPS facilities at Sailors Haven (e.g., the visitor center, ferry terminal waiting area, removal of the old hotel); these activities would be addressed in a separate and future project.

Alternative 2 is the Preferred Alternative because it would best meet the purpose and need for action, while decreasing the overall life cycle cost.

MITIGATION MEASURES INCLUDED IN THE ACTION ALTERNATIVE

Rehabilitation of the marina and ferry dock structures would take approximately six months. Whereas, the marina operates from May 15 to October 15, rehabilitation activities would be scheduled during the off-season to the extent practicable. Proposed construction activities would have little, if any, effect on ferry access to the marina and Sunken Forest, or the use of other public facilities, all of which are normally closed October 15 to May 15.

Use of hydraulic dredge equipment would occur between November 15 to April 1, when water temperature drops below 18 degrees Celsius (64 degrees Fahrenheit) in order to protect sea turtles, which leave the area when temperatures reach that level. Restrictions could continue past November 15 if the water temperature exceeds 18 degrees Celsius. In addition, restricting construction activities to these colder months would also protect common and least tern foraging areas.

Sand placement within the shoreline stabilization areas will not occur between April 1 and September 1 in order to avoid impact to piping plover which could use the shoreline for foraging. A summary of seasonal restrictions associated with the various activities which would be necessary to implement Alternative 2 is provided in Table 1.

If previously unknown cultural resources are discovered during construction, all work in the immediate vicinity of the discovery would be halted until the resources can be identified and documented and an appropriate mitigation strategy developed, if necessary, with the New York State Historic Preservation Office.

To ensure community and visitor awareness of the proposed rehabilitation activities, coordination with local community groups and civic associations would take place.

Table 1: Summary of Seasonal Restrictions for Alternative 2

Project Activity	Seasonal Restriction	Rationale
Dredging - General	No Dredging from June 1 to September 30; this is consistent with the seasonal restrictions established by permit requirements for maintenance dredging.	Protection of finfish and shellfish during spawning periods and early life stages.
Dredging – Hopper or hydraulic ¹ dredge	No use of these dredges between April 1 and November 15, or when water temperature exceeds 18°C.	Protection of sea turtles.
Marina Rehabilitation	No restrictions.	
Shoreline Stabilization		
Fill Placement	No fill placement between April 1 and September 1.	Minimize impacts to foraging areas for common and least terns.
Plantings	No restrictions.	

¹ This seasonal restriction only applies to the types of hydraulic dredges which are known to impinge or entrap sea turtles.

Figure 4: Proposed Site Plan — Sailors Haven Marina

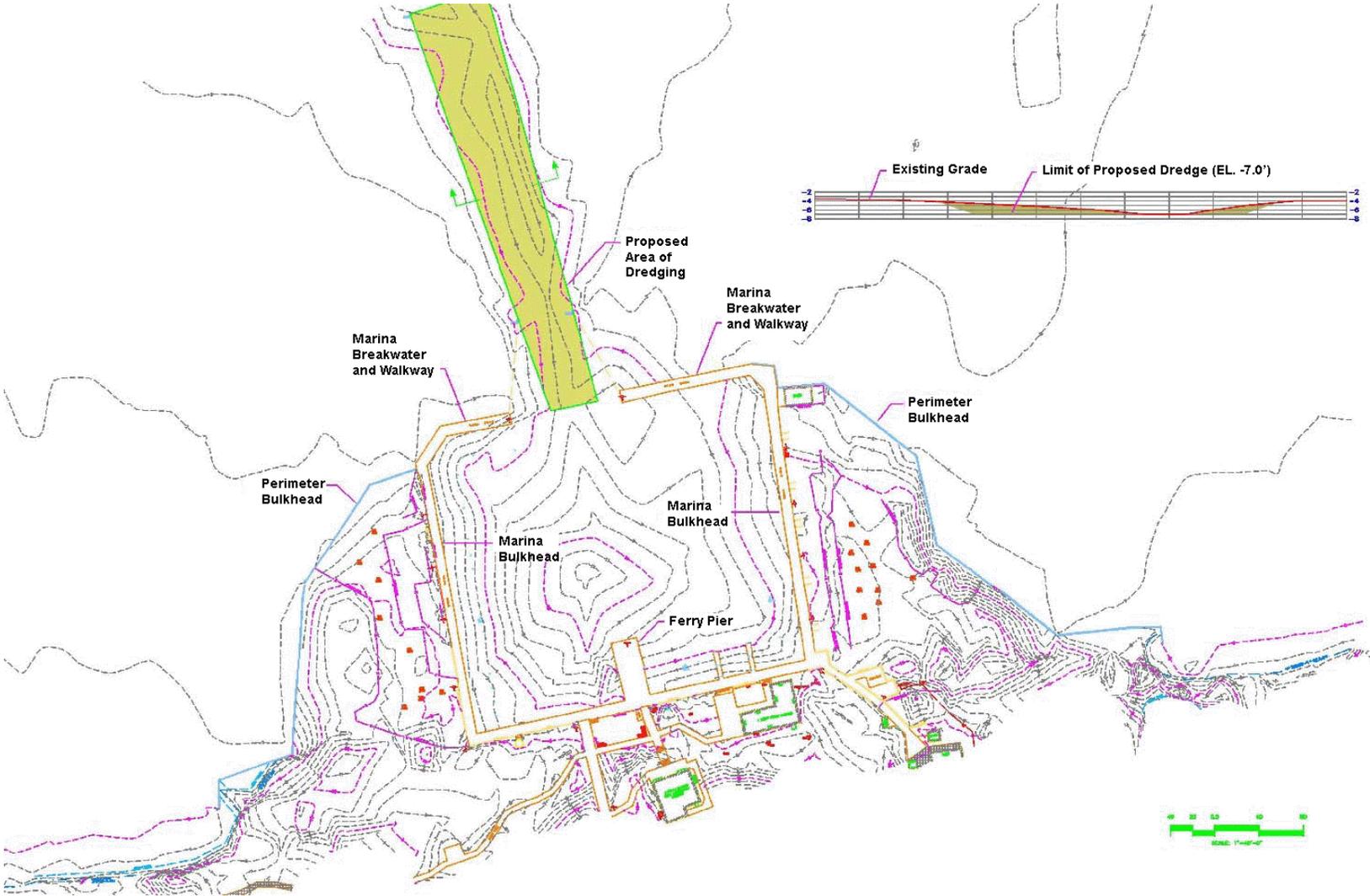
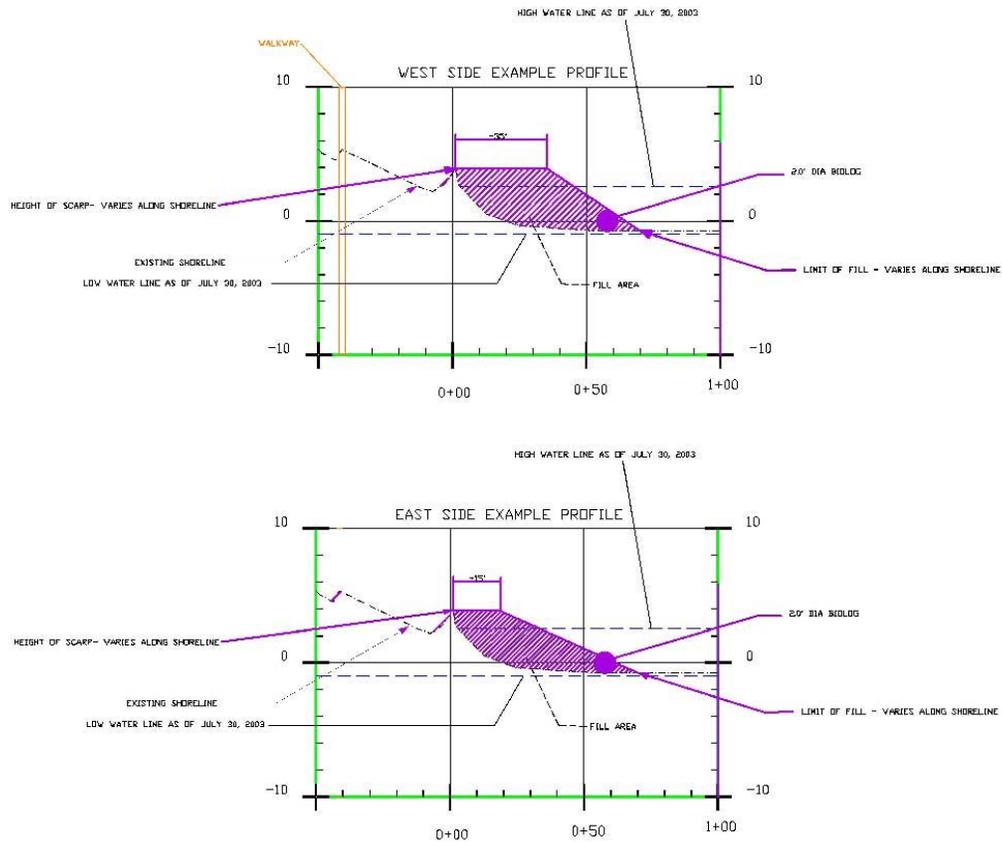


Figure 5: Shoreline Stabilization — Plan View



Figure 6: Shoreline Stabilization — Profiles



ALTERNATIVES CONSIDERED BUT DISMISSED

The following alternatives were considered during a Value Analysis workshop conducted at the park on August 28, 2003 but were dismissed from further consideration for the reasons described below.

REMOVAL OF THE MARINA

Under this alternative, the Sailors Haven marina and ferry dock bulkheading, breakwater, and decking structures would be removed.

This alternative was dismissed because it does not meet project purpose and need. The primary purpose of the project is to allow for continued visitor access, and to improve visitor safety and experience. Removal of the marina would be contrary to this purpose. Until the park's General Management Plan is completed and decisions about the reconfiguration of Sailors Haven Marina can be discussed, the park needs to accomplish the repair and rehabilitation of the marina because the marina is of primary significance related to its Five Year Plan:

“...The NPS is committed to providing access and recreational and educational opportunities to Fire Island National Seashore visitors in this natural and cultural setting...”

The marina is causing shoreline erosion on either side of the existing facility and this erosion requires stabilization.

REHABILITATE MARINA AND INSTALL A REMOVABLE FLOATING FERRY DOCK

This alternative is similar to Alternative 2 with regards to the proposed marina rehabilitation activities, except that the proposed action would also include replacing the existing fixed pier with a removable floating ferry dock, which would accommodate accessibility and eliminate the need for new sheetpiling.

This alternative was dismissed because of a substantial increase in cost over Alternative 2.

IMPLEMENT OTHER TYPES OF STRUCTURAL MEASURES FOR SHORELINE STABILIZATION AS PART OF ALTERNATIVE 2

Several structural measures for shoreline stabilization were discussed. However, these measures were dismissed because they would not be feasible due to zoning restrictions and permitting concerns that would be associated with rip-rap placement, extension of the bulkhead on either side of the marina, floating tires to minimize wave action, and shoreline hardening.

ALTERNATIVES COMPARISON

Table 2 summarizes the effects of the alternatives based on the impact analysis. The terms used to define the magnitude or intensity of the effects (e.g., negligible, minor) are described for each resource under the Environmental Consequences sections.

Table 2: Comparative Summary of Environmental Impacts – All Alternatives

Impact Topic	Alternative 1- No Action Alternative	Alternative 2 – Rehabilitate Marina and Ferry Dock and Include Shoreline Stabilization
Aquatic Communities / Essential Fish Habitat	The no-action alternative would not adversely affect aquatic communities or EFH. No cumulative impacts would result from the implementation of the no action alternative. There would be no impairment of the park's resources or values.	There would be adverse, short-term, moderate impacts to aquatic communities as a result of dredging and construction. These impacts would be limited to the location and duration of dredging and construction. Impacts to EFH would be adverse, minor to moderate, and short-term. Cumulative impacts would also be adverse, short-term, minor to moderate. There would be no impairment of the park's resources or values.

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Impact Topic	Alternative 1- No Action Alternative	Alternative 2 – Rehabilitate Marina and Ferry Dock and Include Shoreline Stabilization
Wildlife	<p>The No Action Alternative would result in moderate, adverse and long-term impacts to wildlife communities due to continued shoreline erosion and associated loss of wildlife habitat, particularly within the Sunken Forest. Cumulative impacts would also be moderate, adverse and long-term.</p> <p>There would be no impairment of the park's resources or values.</p>	<p>There would be adverse, short-term, minor impacts to wildlife communities. These impacts would be limited to the location and duration of construction activities. When also considering shoreline stabilization, there would be beneficial, moderate long-term impacts to wildlife. Overall, cumulative impacts would be beneficial, long-term, and moderate.</p> <p>There would be no impairment of the park's resources or values.</p>
Threatened and Endangered Species	<p>There would be no effect on threatened and endangered species from the No Action Alternative. In addition, no cumulative impacts are expected.</p> <p>There would be no impairment of the park's resources or values.</p>	<p>The project is not likely to affect the common tern or least tern. Beneficial, minor, long-term impacts to common and least tern foraging areas are anticipated due to the creation of tidal wetland vegetation that enhances fish habitat.</p> <p>The project also will not adversely affect sea turtles; impacts to sea turtles as a result of the project would be negligible. Impacts would be limited to the location and duration of construction activities and would not affect "critical" habitat designated by the U.S. Fish and Wildlife Service.</p> <p>The project is not likely to adversely affect piping plovers and there would be no effect on seabeach amaranth.</p> <p>Following the completion of construction, human use of the marina would resume at current levels. Usage of the area by threatened and endangered species would be expected to resume to pre-construction levels. Cumulative impacts would not be expected to adversely affect threatened or endangered species.</p> <p>There would be no impairment of the park's resources or values.</p>
Vegetation	<p>The No Action Alternative would result in adverse, moderate, long-term impacts to vegetative communities, primarily through impacts to the vegetation within the Sunken Forest due to continued shoreline erosion. Cumulative impacts to vegetation would also be adverse moderate and long-term.</p> <p>There would be no impairment of the park's resources or values.</p>	<p>Overall, Alternative 2 would result in moderate, beneficial long-term impacts due to shoreline stabilization and protection of the Sunken Forest. Alternative 2 would result in minor, adverse impacts to small patches of American beachgrass within the marina. Cumulative impacts would be beneficial, moderate, and long-term.</p> <p>There would be no impairment of the park's resources or values.</p>
Littoral Processes	<p>The No Action alternative would have moderate, long-term, adverse impacts on littoral processes. The existing marina structure would continue to influence littoral transport; cumulative impacts would be adverse, moderate, and long-term.</p> <p>There would be no impairment of the park's resources or values.</p>	<p>There would be adverse, long-term, moderate impacts on littoral processes as a result of the proposed project. These impacts would be localized in the vicinity of the marina.. Shoreline stabilization would temporarily offset impacts to littoral transport created by the marina. Cumulative impacts would be adverse, moderate, and long-term.</p> <p>There would be no impairment of the park's resources or values.</p>

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Impact Topic	Alternative 1- No Action Alternative	Alternative 2 – Rehabilitate Marina and Ferry Dock and Include Shoreline Stabilization
Wetlands and Open Water Habitat	The No Action alternative would have, negligible impacts on wetlands and jurisdictional waters over the long term. Intertidal and subtidal estuarine wetland boundaries would shift due to erosion of the shoreline. There would be no impacts to deepwater habitats. Cumulative impacts would also be long-term, and negligible. There would be no impairment of the park's resources or values.	Overall, the rehabilitation of Sailors Haven Marina would have adverse, short-term, moderate impacts related to construction. Shoreline stabilization will fill tidal marine wetlands, resulting in a short-term, moderate adverse impact. Replanting with native wetland vegetation and stabilization of the shoreline would help offset adverse impacts and would result in beneficial, long-term, moderate impacts. Cumulative impacts would be beneficial, long-term and moderate. There would be no impairment of the park's resources or values.
Water Quality	The no-action alternative would result in adverse, long-term, negligible impacts. Although erosion would increase suspended solids in the water column, water quality would not be substantially affected. Cumulative impacts would be adverse and moderate in the short term, and adverse and negligible in the long term. There would be no impairment of the park's resources or values.	Overall, this alternative would result in adverse, short-term, and moderate impacts to water quality. Cumulative impacts would also be adverse, short-term and moderate, as well as adverse, long-term, and negligible. There would be no impairment of the park's resources or values.
Soils	The No Action Alternative would result in moderate adverse, and long-term impacts to soils. Cumulative impacts would be moderate, adverse, and long-term. There would be no impairment of the park's resources or values.	Impacts to soils resulting from the marina rehabilitation portion of the project would be short-term and negligible. These impacts would be limited to the location and duration of construction activities. Impacts to soils resulting from the shoreline stabilization portion of the project would be moderate and beneficial. Cumulative impacts would be moderate, beneficial, and long-term. There would be no impairment of the park's resources or values.
Visitor Use and Experience	Impacts to visitor use and experience would be primarily adverse, moderate, and long-term because the existing marina structures would continue to deteriorate. Short-term impacts related to any ongoing repair and maintenance activities would continue until the eventual complete deterioration of the marina. Cumulative impacts would also be adverse, moderate, and long-term, with short-term, adverse impacts expected from rehabilitation of other visitor facilities.	Overall, rehabilitation improvements at Sailors Haven Marina and shoreline stabilization efforts would result in beneficial, minor to moderate, long-term impacts. Construction-related impacts would be negligible, adverse, and short-term. Cumulative impacts would also be negligible, adverse, and short-term.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with Director's Order #12, the National Park Service is required to identify the "Environmentally Preferred Alternative" in all environmental documents, including Environmental Assessments. The Environmentally Preferred Alternative is determined by applying the criteria suggested in NEPA, which is guided by CEQ. The Environmentally Preferable Alternative is the alternative that will promote the national environmental policy, as expressed in Section 101 of the NEPA, which considers:

1. Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;

2. Assuring for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. Preserving important historic, cultural and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice;
5. Achieving a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
6. Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources.

The No Action Alternative (Alternative 1) does not meet several of the criteria listed above. Criteria 2, 3, and 5 would not be met because there would be continued deterioration of the marina to the point that it may become inaccessible by either ferry or private boat within a few years. Criteria 1 and 4 would not be met, since continued shoreline erosion, particularly west of the marina, would threaten the Sunken Forest, a unique maritime forest community over 250 years old. The No Action Alternative would lead to eventual closure of the marina and essentially prohibit visitor access to the area. Criterion 6 is not applicable to the No Action Alternative.

Alternative 2, the Preferred Alternative, meets the criteria listed above. Alternative 2 would allow for continued use of the marina under safe conditions, and the shoreline stabilization activities would afford protection to the barrier island shoreline and upland vegetation communities. The Environmentally Preferred Alternative in this document is Alternative 2, which is also the NPS Preferred Alternative.

After review of potential resources and other impact topics, and developing appropriate mitigation measures, the Preferred Alternative best ensures the preservation of National Park Service resources and values. The Preferred Alternative addresses the purpose and need for the project as identified during scoping and planning, which contributes to the minimization of environmental impacts on park resources and values.

ENVIRONMENTAL ANALYSIS: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

METHODOLOGY FOR ASSESSING IMPACTS

This chapter describes the affected environment for natural resources, wetlands, littoral processes, water quality, and visitor use and experience, as well as the potential impacts resulting from the implementation of the proposed alternatives. Impacts were identified and assessed with regard to the anticipated level of intensity based on a review of relevant scientific literature, previously prepared environmental documents, and the best professional judgment of resource specialists. These levels (negligible, minor, moderate, and major) are defined for each resource described in this chapter.

Impacts may be direct or indirect, and are described in terms of type, context, duration and intensity, which is consistent with the CEQ regulations. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and occur later in time or are farther removed from the place of impact, but are reasonably foreseeable. Impacts are defined in general terms and are qualified as adverse or beneficial, and as short or long term. The assessment for each impact topic would also address cumulative impacts and impairment, as described below.

METHODOLOGY FOR CUMULATIVE IMPACTS ANALYSIS

The CEQ regulations require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions” (40 CFR 1508.7).

Cumulative impacts were determined by combining the incremental impacts of each alternative with other past, present, and reasonably foreseeable future actions. The projects that were considered in the analysis of cumulative impacts are listed in the “Relationship of the Proposed Action to Current and Previous Planning Efforts” on page 13.

METHODOLOGY FOR IMPAIRMENT ANALYSIS

The NPS *Management Policies 2001* require the determination of whether or not actions would impair park resources or values. The fundamental purpose of the national park system, as established in the Organic Act and reaffirmed by subsequent legislation, is to conserve park resources and values unimpaired for the enjoyment of future generations. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, actions that would adversely affect park resources and values.

These laws give NPS managers the discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, so long as the impact does not constitute impairment of the affected resources and values. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources and values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute impairment.

In this document impairment is a major, adverse impact to a resource or value whose conservation is

- (1) necessary to fulfill specific purposes identified in the establishing legislation for Fire Island National Seashore;
- (2) key to the natural or cultural integrity of the area; or
- (3) identified as a goal in the area's *General Management Plan* or other relevant NPS planning document.

AQUATIC COMMUNITIES/ESSENTIAL FISH HABITAT

AFFECTED ENVIRONMENT

Sailors Haven Marina is located in the central portion of Fire Island on the north shore and projects into Great South Bay, a Significant Habitat Complex of the New York Bight Watershed. This designation was a result of a study conducted by the USFWS to identify significant coastal habitats warranting special protection. Consultation with the USFWS is required prior to implementation of projects that may affect significant coastal habitats. This consultation has been initiated and will continue in order to comply with NEPA and Endangered Species Act (ESA) requirements. A copy of the initial consultation letter from USFWS is included in Appendix A.

The bay occupies an area of 243 square kilometers (151 square miles) and has an estuarine drainage of 1,360 square kilometers (845 miles), with a daily average freshwater inflow of 19.8 cubic meters per second (700 cubic feet per second). The Bay communicates directly with the Atlantic Ocean via Fire Island Inlet and is the only Long Island south shore bay that has riverine inputs. In addition, it receives 11% of its freshwater input from groundwater flow through its floor.

Most of Great South Bay is shallow (typically less than 10 feet). Water depths in the vicinity of Sailors Haven range from 1 to 4 feet below mean low water. The exception is a 60-ft wide marina access channel that was dredged in 2001 to a depth of 6 feet below MLW. Sailors Haven has a semidiurnal tide range averaging 0.7 ft. Water temperatures vary during the year between 34° and 79° F (1° and 26° C), salinity varies between 20.5 and 26 parts per thousand, and dissolved oxygen varies between 3.5 to 18.5 mg/l.

A survey of benthic communities at Sailors Haven (EEA, 2002) documented the occurrence of benthic macroinvertebrates representing 11 taxa. Species diversity was greater at Sailors Haven than at other sites. Annelid worms dominated the benthic community, with approximately 3,500 individuals per square meter of bottom. Arthropods and nematodes also occurred at high densities (1,500 and 750 individuals per square meter, respectively). Flatworms and mollusks were observed in lower densities.

The Mid-Atlantic Fishery Management Council¹, which was established pursuant to the Magnuson Fishery Conservation and Management Act of 1976 to manage fish resources in the Mid-Atlantic region, has identified Essential Fish Habitat (EFH) for the geographic 10-minute block that includes Sailors Haven Marina. Managed fish species reported to occur in this block are listed in Table 3.

Table 3: Managed Fish Species Identified in the Great South Bay Region

Common Name	Latin Name	Eggs	Larvae	Juveniles	Adults
King Mackerel	<i>Scomberomorus cavalla</i>	X	X	X	X
Spanish Mackerel	<i>Scomberomorus maculatus</i>	X	X	X	X
Atlantic Mackerel	<i>Scomber scombrus</i>	X	X	X	X
Skipjack Tuna	<i>Katsuwonus pelamis</i>				X
Atlantic Salmon	<i>Salmo salar</i>				X
Pollock	<i>Pollachius virens</i>			X	
Atlantic Sea Herring	<i>Clupea harengus</i>			X	X
Atlantic Butterfish	<i>Peprilus triacanthus</i>	X	X	X	X
Cobia	<i>Rachycentron canadum</i>	X	X	X	X
Bluefish	<i>Pomatomus saltatrix</i>			X	X
Scup	<i>Stenotomus chrysops</i>			X	X
Black Sea Bass	<i>Centropristus striata</i>				X
Summer Flounder	<i>Paralichthys dentatus</i>			X	X
Windowpane	<i>Scopthalmus aquosus</i>	X	X	X	X
Winter Flounder	<i>Pseudopleuronectes americanus</i>	X	X	X	X
Blue Shark	<i>Prionace glauca</i>				X
Sand Tiger Shark	<i>Odontaspis taurus</i>		X		
Dusky Shark	<i>Charcharinus obscurus</i>		X		
Sandbar Shark	<i>Charcharinus plumbeus</i>		X	X	X

Fishes were also surveyed in Sailors Haven by EEA, Inc. (EEA, 2002) and in other areas of Fire Island by Raposa and Oviatt (1997) using shoreline seining techniques. Several fish species were caught and are expected to utilize Sailors Haven. Of the managed species listed in Table 3, only bluefish, summer flounder, and winter flounder were observed during these surveys. Species caught at Sailors Haven are listed in Table 4.

Table 4: Fish Species Caught at Sailors Haven

¹ The National Marine Fisheries Service (NMFS) division of the National Oceanic and Atmospheric Administration (NOAA) is a voting member of the Council and consultation relative to the Magnuson-Stevens Fishery Conservation and Management Act, as amended October 1996, is conducted through NMFS.

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Common Name	Latin Name
Atlantic Silverside	<i>Menidia menidia</i>
Bay Anchovy	<i>Anchoa mitchilli</i>
Atlantic Croaker	<i>Micropogonias undulatus</i>
Northern Pipefish	<i>Syngnathus fuscus</i>
Permit	<i>Trachinotus falcatus</i>
Threespine Stickleback	<i>Gasterosteus aculeatus</i>
Striped burrfish	<i>Chilomycerus schoepfi</i>
Atlantic Needlefish	<i>Strongylura marina</i>
Lookdown	<i>Selene vomer</i>
Bluefish	<i>Pomatomus saltatrix</i>
Winter Flounder	<i>Pseudopleuronectes americanus</i>
Summer Flounder	<i>Paralichthys dentatus</i>

Based on environmental conditions at Sailors Haven, species and their life history stages were excluded from further consideration based on the determination that Sailors Haven does not constitute EFH for that particular species, or that the species is infrequent or absent from the potential project area. Table 5 presents the species and life history stages excluded from evaluation and the reasons for excluding them.

Table 5: EFH Excluded from Evaluation for the Sailors Haven Marina Rehabilitation

Common Name	Life History Stage	Reason for Rejection	Information Source
King Mackerel	Eggs, Larvae, Juveniles, Adults	Water too shallow, Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Spanish Mackerel	Eggs, Larvae, Juveniles, Adults	Water too shallow, Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Atlantic Mackerel	Eggs, Larvae, Juveniles, Adults	Water too shallow, Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Skipjack Tuna	Adults	Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Atlantic Salmon	Adults	Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Pollock	Juveniles	Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Atlantic Sea Herring	Juveniles, Adults	Water too shallow, Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Atlantic Butterfish	Larvae, Juveniles, Adults	Water too shallow, Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Cobia	Eggs, Larvae, Juveniles, Adults	Water too shallow, Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Scup	Juveniles, Adults	Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Black Sea Bass	Adults	Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Blue Shark	Adults	Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Sand Tiger Shark	Neonates, Subadults	Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Dusky Shark	Neonates, Subadults	Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997
Sandbar Shark	Neonates, Subadults, Adults	Absent from surveys	EEA, 2001; Raposa and Oviatt, 1997

Table 6 lists the EFH species of concern that were selected for evaluation for the Sailors Haven Marina rehabilitation. The time periods indicate the seasonal presence of each life stage in the vicinity of Sailors Haven Marina.

Table 6: Seasonal Presence of EFH Species of Concern and Life Stages in the Vicinity of Sailors Haven Marina

Common Name	Scientific Name	Eggs	Larvae	Juveniles	Adults
Atlantic Butterfish	<i>Peprilus triacanthus</i>	Jun-Aug	--	--	--
Bluefish	<i>Pomatomus saltatrix</i>	--	--	May-Oct	Jul-Nov
Summer Flounder	<i>Paralichthys dentatus</i>	--	--	Year round	Apr-Nov
Windowpane	<i>Scophthalmus aquosus</i>	Mar-Nov	Mar-Nov	Year round	Year round
Winter Flounder	<i>Pseudopleuronectes americanus</i>	Nov-Apr	Nov-Jun	Year round	Year round

ENVIRONMENTAL CONSEQUENCES

IMPACT INTENSITIES

Negligible: There would be no observable or measurable impacts to native species, their habitats, or the natural processes sustaining them. Impacts would be of short duration and well within natural fluctuations. Impacts would have no measurable or perceptible changes in aquatic community size, integrity, or continuity.

Minor: Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on native species, their habitats, or the natural processes sustaining them. Impacts would be measurable or perceptible but would be localized within a relatively small area. The overall viability of the aquatic community would not be affected and, if left alone, would recover.

Moderate: Impacts would be detectable, and they would be expected to be outside the natural range of variability for short periods of time or be temporary. Mortality or interference with activities necessary for survival can be expected on an occasional basis, but would not be expected to threaten the continued existence of the species in the park unit. Impacts would cause a change in aquatic community (e.g. abundance, distribution, quantity, or quality); however, the impact would remain localized. The overall viability of the aquatic community would recover.

Major: Impacts on resident species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be outside the natural range of variability for long periods of time or be permanent. Impacts to the aquatic community would be substantial, highly noticeable, and permanent.

Alternative 1 (No Action Alternative)

Analysis. Any continuing repair or maintenance activities would have no impact to aquatic communities or EFH. There would be no measurable change to existing conditions and no

construction-related impacts to aquatic communities or EFH. Therefore, no impacts are expected to aquatic communities or EFH.

Cumulative Impacts. Because no impacts are expected to aquatic communities under this alternative, no cumulative impacts would result from the implementation of the no action alternative.

Conclusion. The no-action alternative would not adversely affect aquatic communities. No cumulative impacts would result from the implementation of the no action alternative.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the seashore's resources or values.

Alternative 2 (Rehabilitate Marina and Ferry Dock and include Shoreline Stabilization)

Analysis. Activities under Alternative 2 that would potentially impact aquatic communities include the replacement of damaged marina structural elements (i.e. breakwater bulkheads, marina basin bulkheading and decking, and perimeter bulkheading), replacement of the ferry dock, and dredging of the boat basin and 120-foot wide, 1,000 foot long access channel. Approximately 3 acres of the boat basin and the access channel would be dredged to a depth of approximately 6 feet below mean low water. Dredging would alter the depth and substrate of the marina basin and access channel, resulting in short-term, site-specific changes in the benthic community. However, due to the level of activity at the marina basin and since the maintenance dredging occurs regularly within the channel, it is not anticipated that these areas support a high quality benthic community. The species which are present have established since the last dredging operations and will again re-establish in these areas. Therefore, impacts to the benthic community would be short-term and moderate.

Marina rehabilitation components of the project would not impact EFH; however, dredging could affect this resource through entrainment or due to the effects of dredging on water quality. Entrainment of coastal demersal species (summer flounder, winter flounder, and windowpane) and pelagic species (bluefish) during dredging is not likely due to the slow rate of advance of the dredge. The potential for entrainment of Atlantic butterfish eggs exists only during the summer when spawning is known to occur. Dredging may temporarily increase turbidity, resulting in short-term effects on EFH. Potential turbidity related effects on EFH include direct impacts, such as clogging of gills, and indirect impacts, such as reduction in light penetration resulting in reduced photosynthetic activity and consequently lower dissolved oxygen content. Following completion of dredging, turbidity will rapidly return to normal levels. Dredging would not occur between June 1 and September 30 to minimize impacts to finfish and shellfish during spawning and periods when larval and juvenile life stages, which are not as motile as adults, could be present. The overall impact to EFH would be adverse, minor to moderate, and short-term.

Cumulative Impacts. An EA has been developed to evaluate the use of personal watercraft (PWC) at Fire Island National Seashore. Impacts associated with PWC include minor adverse impacts to fishery resources due to noise, human activity, and PWC use in shallow waters. Operation of PWC is prohibited from sunset to sunrise; therefore, aquatic communities would not be impacted during this period.

Maintenance dredging of the marina access channel is the only other project identified in the vicinity of Sailors Haven Marina that may impact aquatic communities and EFH. The quality of

fish foraging habitat would be reduced in the access channel because the benthic community within this area would need to become reestablished following each maintenance dredging event. Considering the size of the entrance channel in relation to the available substrate within Great South Bay, this reduction in foraging habitat equates to a recurring adverse, minor, short-term impact. In addition, maintenance dredging operations would result in adverse, minor to moderate, short-term impacts to aquatic communities due to increases in turbidity. The current maintenance dredging permit prohibits maintenance dredging from June 1 to September 30 to minimize impacts to aquatic communities.

When combined with impacts expected from this alternative, cumulative impacts would be adverse, minor to moderate and short-term.

Conclusion. There would be adverse, short-term, moderate impacts to aquatic communities as a result of dredging and construction. Impacts to EFH would be adverse, minor to moderate and short-term. These impacts would be limited to the location and duration of construction. When combined with the impacts associated with this alternative, cumulative impacts would be adverse, short-term and minor to moderate.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the seashore's resources or values.

WILDLIFE

AFFECTED ENVIRONMENT

A variety of wildlife can be found in the park. Wildlife that uses open water areas and tidal zones surrounding the Sailors Haven Marina include gulls, terns, and shorebirds, such as herring gull (*Larus argentatus*), common tern (*Sterna hirundo*) greater yellowlegs (*Tringa melanoleuca*), and sanderling (*Caladris alba*). Piscivores, such as double-crested cormorants (*Phalacrocorax auritus*) may also forage in the project area. In addition, ducks and geese, including scaups (*Aythya* spp.), scoters (*Melanitta* spp.), long-tailed ducks (*Clangula hyemalis*), and brant (*Branta bernicla*), feed in the area. In general, the nesting and breeding season for these avian species occurs during late spring through early summer.

Wildlife common in other areas of the park include migratory birds such as brown thrashers (*Orpheus rufus*), eastern towhees (*Pipilo erythrophthalmus*), warblers (e.g., *Dendroica* spp.), and sparrows (e.g., *Melospiza* spp.). Mammals found in the park include eastern cottontail rabbit (*Sylvilagus floridanus*), white-footed mouse (*Peromyscus leucopus*), red fox (*Vulpes vulpes*), and white-tailed deer (*Odocoileus virginianus*). Reptiles common in the park include hognose snake (*Heterodon platirhinos*) and black rat snake (*Elaphe obsoleta*). Common insects include ticks, grasshoppers, and butterflies. While these species are not expected to utilize the immediate project area, they could be found within the adjacent Sunken Forest vegetation community.

ENVIRONMENTAL CONSEQUENCES

IMPACT INTENSITIES

Negligible: There would be no observable or measurable impacts to native species, their habitats, or the natural processes sustaining them. Impacts would be of short

duration and well within natural fluctuations. Impacts would have no measurable or perceptible changes in wildlife community size, integrity, or continuity.

- Minor:** Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on native species, their habitats, or the natural processes sustaining them. Impacts would be measurable or perceptible but would be localized within a relatively small area. The overall viability of the wildlife community would not be affected and, if left alone, would recover.
- Moderate:** Impacts would be detectable, and they would be expected to be outside the natural range of variability for short periods of time or be temporary. Mortality or interference with activities necessary for survival can be expected on an occasional basis, but is not expected to threaten the continued existence of the species in the park unit. Impacts would cause a change in wildlife populations (e.g. abundance, distribution, quantity, or diversity); however, the impact would remain localized.
- Major:** Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be outside the natural range of variability for long periods of time or be permanent. Impacts to wildlife would be substantial, highly noticeable, and permanent.

Alternative 1 (No Action Alternative)

Analysis. Any ongoing maintenance or repair activities would have little or no impact to wildlife in the project area. There would be no measurable change to existing conditions and no construction-related impacts to wildlife communities. Continued shoreline erosion would result in a reduction in the Sunken Forest area and consequently would impact wildlife utilizing that vegetation community. Impacts to wildlife would be adverse, long term and moderate.

Cumulative Impacts. As mentioned under the impacts to aquatic communities, impacts from PWC use could result in minor impacts to fishery resources, which could have an indirect impact on wildlife that feeds on these aquatic resources. Maintenance dredging of the entrance channel would continue to impact fish foraging habitat, as identified under the Aquatic Communities topic, which could also affect wildlife for the same reasons. Activities associated with such projects as rehabilitating walkways, boardwalks, the maintenance facility, and public restrooms could also adversely affect wildlife that might be disturbed by associated noise and activity in the area. However, such impacts would be short-term and negligible. Therefore, when combined with the impacts expected under this alternative, cumulative impacts to wildlife would be adverse, long-term, and moderate.

Conclusion. The No Action Alternative would result in adverse, long-term, moderate impacts to wildlife communities, primarily as a result of continued shoreline erosion and associated impacts to the Sunken Forest. Cumulative impacts would also be adverse, long-term and moderate.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park's resources or values.

Alternative 2 (Rehabilitate Marina and Ferry Dock and include Shoreline Stabilization)

Analysis. Under Alternative 2, impacts to wildlife communities are expected to be adverse, minor, and of short duration. Activities under Alternative 2 that would potentially impact wildlife communities include dredging the existing channel, removing and replacing the existing pier and bulkheads, and shoreline stabilization activities. Short-term impacts to fish, macroinvertebrate, and benthic fauna as a result of dredging the channel could temporarily affect food resources of some birds, such as cormorants, terns and gulls. However, the food sources would relocate to other waters within the bay and the birds would follow. Construction activities within the marina may also temporarily displace birds that roost on existing marina structures. These communities would be expected to recover and return to the project area after construction activities are complete. Marina rehabilitation and dredging will result in adverse, minor and short-term impacts to wildlife.

Shoreline stabilization will protect vegetation within the adjacent Sunken Forest, which is important wildlife habitat. The newly established tidal wetland areas will also serve as wildlife habitat and will increase the habitat diversity in the area. Shoreline stabilization will result in beneficial, moderate and long-term impacts to wildlife.

Overall, project impacts would be beneficial, moderate and long-term.

Cumulative Impacts. As mentioned under the impacts to aquatic communities, impacts from PWC use could result in minor impacts to fishery resources, which could have an indirect impact on wildlife that feeds on these aquatic resources. Maintenance dredging of the entrance channel would continue to impact fish foraging habitat, as identified under the Aquatic Communities and Essential Fish Habitat topic, which could also affect wildlife for the same reasons. Activities associated with such projects as rehabilitating walkways, boardwalks, the maintenance facility, visitor center, and public restrooms could also adversely affect wildlife that might be disturbed by associated noise and activity in the area. However, such impacts would be short-term and negligible. Therefore, when combined with the impacts expected under this alternative, cumulative impacts would be beneficial, moderate and long-term.

Conclusion. There would be adverse, short-term, minor impacts to wildlife communities as a result of the proposed project. These impacts would be limited to the location and duration of construction activities. Shoreline stabilization activities would result in beneficial, moderate, long-term impacts to wildlife communities. Overall, cumulative impacts would also be beneficial, long-term, and moderate.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park's resources or values.

THREATENED AND ENDANGERED SPECIES, CANDIDATE SPECIES, AND SPECIES OF CONCERN

AFFECTED ENVIRONMENT

Informal consultation with the US Fish and Wildlife Service indicates one federally listed threatened species, the piping plover (*Charadrius melodus*) occurs in the vicinity of the project area (Table 7). Except for the piping plover and occasional transient individuals, no other

federally listed threatened or endangered species are known to occur in the area. In addition, there is no designated or proposed “critical habitat” in the project vicinity.

Consultation with the New York Natural Heritage Program identified eight state listed species, four listed as threatened and four listed as endangered, potentially in the project area (Table 7). Based on surveys conducted by the National Park Service, these species are not present in the project area. The New York Natural Heritage Program also indicated that the project area is located within or adjacent to an area designated as Significant Coastal Fish and Wildlife Habitat by the New York Department of State. Therefore, a narrative and evaluation would be required to demonstrate that the project would not adversely impact the designated habitat in order to comply with state coastal policies under the coastal management program. This evaluation is included as part of the Coastal Consistency Assessment in Appendix B. Informal consultation with the Protected Resources Division of the National Marine Fisheries Service relative to federally listed threatened and endangered marine species has been conducted.

According to Audubon New York, the state program of the National Audubon Society, sea turtles including the Atlantic Ridley, loggerhead, and green turtles forage in Great South Bay (NASNY, 2004). Long Island’s waters have been identified by NYSDEC as critical habitat for immature Atlantic Ridley. The Atlantic Ridley has an expansive distribution which ranges from the Canadian Maritime Provinces to Mexico. Sea turtles could occur in Long Island waters when water temperatures are warm (i.e., above 18°C), generally between April 1 and November 15; however they are only occasionally observed in Great South Bay and have not been observed in the project vicinity.

Table 7: Special Status Species of Potential Concern in the Project Vicinity

Common Name (Scientific Name)	Status ¹	Documented in Project Area?	Potential Presence in Project Area
Piping plover (<i>Charadrius melodus</i>)	FT, SE	No	Low to Moderate – Piping plovers have been documented as nesting and foraging at many locations in the park in recent years. Nesting piping plovers were observed on the oceanside beach, approximately one-quarter mile southeast of Sailors Haven Marina. Piping plovers typically arrive in the park in mid-March where they commonly nest on beaches, foredunes, and overwash areas from mid-April through July. Adults and juveniles feed on oceanside beaches near the tide line and in shallow, near-shore areas of Great South Bay. Adults and fledged young typically leave the park by early September (NYSDEC 2000). Nesting habitat is not present in the project area. According to park personnel, piping plovers have not been documented foraging in the project area.
Common tern (<i>Sterna hirundo</i>)	ST	Yes	Moderate to High – Common terns have been documented nesting adjacent to the east perimeter bulkhead of the Sailors Haven Marina. Common terns generally arrive at the park in late April, where they nest on sandy, gravelly, or shelly beaches or offshore islands. Adults and fledged offspring begin leaving the park in late

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Common Name (Scientific Name)	Status ¹	Documented in Project Area?	Potential Presence in Project Area
			August or early September (NYSDEC 2003a).
Least tern (<i>Sterna antillarum</i>)	ST	No	Moderate – Least terns have been documented nesting and foraging at several locations in the park, including the Sunken Forest, which is approximately one-half mile west of the project area. Least terns typically arrive at the park in late April. The species nests on sandy beaches or offshore islands. Adults and fledged offspring generally begin leaving the park in late August to early September (NYSDEC 2003b).
Atlantic Ridley Sea Turtle (<i>Lepidochelys kempii</i>)	FE, SE	No	Low – Long Island’s waters have been identified as critical habitat for immature Atlantic Ridleys between 2 to 5 years of age. Preferred habitats include sheltered areas along the coastline, such as large estuaries, bays and lagoons (NYSDEC 2003c).
Leatherback Sea Turtle (<i>Dermochelys coriacea</i>)	FE, SE	No	Low – Leatherback sea turtles are the most pelagic (preferring open water) sea turtle. In the Atlantic, leatherbacks have been found off the coast of Long Island. (NYSDEC, 2003d).
Green Sea Turtle (<i>Chelonia mydas</i>)	FT, ST	No	Low – Green sea turtles inhabit shallow waters such as shoals and lagoons with submerged vegetation including grasses and algae. Inlets, bays and estuaries are preferred habitats. (NYSDEC, 2003e).
Loggerhead Sea Turtle (<i>Caretta caretta</i>)	FT, ST	No	Low – Loggerheads are the most common of the sea turtles and the only one that still nests regularly on the U.S. Atlantic coast. (NYSDEC, 2003f).
Seabeach amaranth (<i>Amaranthus pumilus</i>)	FT, SE	No	Low – Seabeach amaranth has been documented at several locations in the park, including the oceanside of Sailors Haven Marina. Generally occurs on barrier island beaches where habitat consists of overwash flats at accreting ends of islands and lower foredunes and upper strands of non-eroding beaches (USFWS 1993). Suitable habitat is not present in the project area.
¹ FE: federally endangered; FT: federally threatened; SE: state endangered; ST: state threatened			

ENVIRONMENTAL CONSEQUENCES

IMPACT INTENSITIES

- Negligible:** There would be no observable or measurable impacts to threatened or endangered species, or the habitats that support them. Impacts would be of short duration and would not result in the mortality of any individuals or any measurable or perceptible change to the critical habitat of threatened or endangered species.
- Minor:** Impacts to non-critical habitats would be measurable or perceptible, but would not result in the “taking” of any threatened or endangered species as prohibited by the Endangered Species Act. There would be no direct impact to threatened or endangered species or “critical habitat” designated by the USFWS. The overall viability of “non-critical” habitat would not be affected and, if left alone, would recover.
- Moderate:** Impacts to “critical” habitats would be measurable or perceptible, but would not result in the “taking” of any threatened or endangered species. Impacts would cause a change in species behavior or in habitat value (e.g. quantity, or quality); however, the impact would remain localized and would be moderately noticeable and temporary.
- Major:** Impacts to threatened or endangered species, or the habitat supporting them, would be measurable or perceptible. Impacts to the species and/or habitat would be substantial, highly noticeable, and permanent.

Alternative 1 (No Action Alternative)

Analysis. Any continuing maintenance and repair activities that might occur under this alternative would have little or no effect to threatened and endangered species. There would be no measurable change to existing conditions and no construction-related impacts to threatened or endangered species or the habitats that support them.

Cumulative Impacts. Because no impacts are expected to threatened and endangered species under this alternative, no cumulative impacts to such species would result from the implementation of the No Action Alternative.

Conclusion. There would be no effect on threatened and endangered species or potential habitats from the No Action Alternative. In addition, no cumulative impacts are expected.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park’s resources or values.

Alternative 2 (Rehabilitate Marina and Ferry Dock and include Shoreline Stabilization)

Analysis. Sea turtles could potentially be impacted by increased turbidity resulting from dredging operations or physical entrainment if a hopper dredge or certain types of hydraulic dredges are

used. These types of dredges either will not be used, or would only be used with adequate seasonal restrictions so as to avoid impacts to turtles. Hopper dredge or types of hydraulic dredges which could physically entrain sea turtles would not be used between April 1 and November 15, or when water temperatures exceed 18°C. Other types of dredge equipment would not be subject to these timing restrictions since their design and operation prevent impact to turtles. Construction activities associated with marina rehabilitation (including bulkhead replacement) and shoreline stabilization are not expected to adversely affect sea turtles.

Considering the mobility of sea turtles, their limited use of the project vicinity, the lack of suitable foraging habitat in the area, and equipment specific timing restrictions for dredging, the project is not likely to adversely affect sea turtles. Impacts would be short-term and negligible.

Piping plovers have been known to nest on the oceanside of the marina, approximately 0.25 mile from the project area. No nesting habitat is located in the project vicinity. While the shoreline stabilization area could provide limited foraging habitat during low tide, piping plovers have not been observed in this area. With the high level of human activity in the area during spring, summer and fall, piping plovers are not likely to be attracted to this location. Therefore, construction activities in the Sailors Haven Marina are not likely to adversely affect the piping plover.

While the project area does not provide optimal nesting habitat for the common tern and least tern, the common tern has nested in the area in the past. More suitable nesting locations can be found on the oceanside of the marina or near the Sunken Forest, outside of the area to be affected by proposed construction activities. Common or least terns which may nest in the area would be subject to continued disturbance from human activity associated with normal marina operation. Therefore, nests in this location would not have a high potential for fledgling success.

The shoreline stabilization areas do not provide suitable habitat since the beaches in these areas are narrow and exposed mainly during low tide. Common and least terns may forage in the shallow waters in the project area. Project related construction activity could deter use of this foraging habitat and could cause prey to relocate from the area. Effects associated with foraging habitat are anticipated to be adverse, minor, and short-term.

To minimize potential impacts to foraging areas, no dredging would occur between June 1 and September 30. In addition, to minimize potential impact to nesting habitat, no filling would occur in the shoreline stabilization areas between April 1 and September 1. The optimum planting period for wetland vegetation within the shoreline stabilization area is between April 15 and August 15. While shoreline activity during this period may deter common or least tern from foraging just offshore, the impact would be short term, limited to the duration of planting. The shoreline stabilization and associated planting of tidal wetland vegetation will enhance the value of fish habitat in the area. Juvenile fish and small fish species (e.g., mummichog, *Fundulus heteroclitus*) commonly forage and seek protection amongst tidal vegetation. Therefore, the shoreline stabilization will provide increased foraging opportunities for the common and least terns, resulting in beneficial, minor, long-term impacts. Overall, the project is not likely to adversely affect common tern or least tern.

The project activities would have no effect on sea beach amaranth. Although this species has been documented in the vicinity of the project, the occurrences are on the oceanside of the barrier island. All activity associated with the project, including construction activity, access and staging, will be located on the bay side of the island. No seabeach amaranth is present in the project area that would be affected by project activities.

In addition to direct, construction related effects, potential indirect effects to threatened or endangered species due to the potential for the project to influence coastal processes, such as overwash, breaching and sand transport have been considered. Sand transport is discussed under the littoral processes impact topic. Overwash and breaching processes are important in the creation of unvegetated and early successional habitats of coastal dunes. These unvegetated habitats are important to piping plover and seabeach amaranth. The frequency of overwash occurrence in the vicinity of Sailors Haven Marina is very low, likely due to the protective nature of the Sunken Forest community. The forest also provides protection against development of a breach in the area. Since the project is being conducted on the bayside of the island, the potential for overwash occurrence in the area will not be influenced. In addition, if an overwash were to occur, the perched beach proposed for shoreline stabilization would not interfere. Any potential overwash would still occur and would simply “wash-over” the perched beach area. Based on this analysis, potential indirect effects of the project are not likely to affect the piping plover or seabeach amaranth. Nor would sea turtles or least or common terns be affected by potential indirect effects of the project.

The project is not expected to increase visitation to the area. Therefore, indirect effects to threatened or endangered species due to increased recreational use and associated disturbance to foraging activity are not likely to occur. The Park has developed educational brochures on the threatened and endangered species that occur within Fire Island National Seashore. These brochures are distributed at the Sailors Haven Visitor Center. In addition, the visitor center is routinely used for environmental education classes for local schools which are transported via ferry from local communities. Rehabilitation of the marina will allow for continuation of these opportunities to educate the public on endangered species protection.

Cumulative Impacts. PWC use could result in minor impacts to fishery resources, which could impact threatened and endangered species that feed on these aquatic resources. Noise from and/or the presence of PWC could also adversely affect foraging of the least tern and common tern, resulting in adverse, short-term minor impacts. Maintenance dredging of the entrance channel would continue to impact fish foraging habitat, which could also affect these species. Activities associated with such projects as rehabilitating walkways, boardwalks, the maintenance facility, and public restrooms would occur in developed areas where no habitat for threatened and endangered species exists, and would have no effect on these species. Therefore, when combined with the impacts expected under this alternative, cumulative impacts would be adverse, short-term, and minor.

Conclusion. There could be adverse, short-term, minor impacts to foraging areas for common and least terns; however, these impacts would be offset by an overall beneficial, minor, long-term impact to foraging habitat due the shoreline stabilization portion of the project. The project is not likely to affect the common tern or least tern. The project also is not likely to adversely affect sea turtles; impacts to sea turtles as a result of the project would be negligible. Impacts would be limited to the location and duration of construction activities and would not affect “critical” habitat designated by the USFWS. In addition, beneficial, minor, long-term impacts to common and least tern foraging areas are anticipated due to the creation of tidal wetland vegetation which enhances fish habitat. The project is not likely to adversely affect piping plovers and there would be no effect on seabeach amaranth. Following the completion of construction, human use of the marina would resume at current levels. Usage of the area by threatened and endangered species would be expected to resume to pre-construction levels. Cumulative impacts would be adverse, short-term, and minor and would not be expected to adversely affect threatened or endangered species.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park's resources or values.

VEGETATION

AFFECTED ENVIRONMENT

Within the marina rehabilitation area, the only vegetation present consists of several patches of American beachgrass (*Amnophila breviligulata*), and some common reed (*Phragmites australis*) between the perimeter bulkheads. The remaining terrestrial habitat in the proposed area of impact for the marina rehabilitation consists of sand picnic areas that are used extensively by Sailors Haven Marina visitors and boardwalks associated with the marina and visitors center.

Sections of maritime forest community are present along the shoreline stabilization areas. Typical vegetation in these communities includes pitch pine (*Pinus rigida*), black cherry (*Prunus serotina*), winged sumac (*Rhus copallinum*), red chokeberry (*Pyrus arbutifolia*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxiconendron radicans*), bullbrier (*Smilax rotundifolia*) and grape (*Vitis sp.*). One notable vegetative community within the vicinity of the impact area is the Sunken Forest. The Sunken Forest is a maritime forest dominated by American holly (*Ilex opaca*), sassafras (*Sassafras albidum*), and shadbush (*Amelancier canadensis*). The Sunken Forest is 40 acres in size, over 250 years old, and is considered one of the most stable vegetative communities on Fire Island (USFWS 1997; NPS undated). Maritime forests of this age and size are rare on Long Island, as well as on other barrier beaches in the region.

Littoral processes (described under the next section) have resulted in erosion around both the east and west picnic areas of Sailors Haven Marina, as well as along the shoreline stabilization areas, including the bayshore of the Sunken Forest. Particularly along the shoreline stabilization areas, roots are being undermined and vegetation is being lost into the bay. In the past 10 years, erosion in the Sunken Forest area has become a concern. The affects of the project on littoral transport are discussed in more detail under Littoral Processes.

ENVIRONMENTAL CONSEQUENCES

IMPACT INTENSITIES

Negligible: There would be no observable or measurable impacts to native species, their habitats, or the natural processes sustaining them. Impacts would be of short duration and well within natural fluctuations. Impacts would have no measurable or perceptible changes in vegetative community size, integrity, or continuity.

Minor: Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on native species, their habitats, or the natural processes sustaining them. Impacts would be measurable or perceptible but would be localized within a relatively small area. The overall viability of the vegetative community would not be affected and, if left alone, would recover.

Moderate: Impacts would be detectable, and they would be expected to be outside the natural range of variability for short periods of time or be temporary. Mortality

or interference with activities necessary for survival can be expected on an occasional basis, but is not expected to threaten the continued existence of the species in the park unit. Impacts would cause a change in vegetative populations (e.g. abundance, distribution, quantity, or diversity); however, the impact would remain localized.

Major: Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be outside the natural range of variability for long periods of time or be permanent. Impacts to vegetative would be substantial, highly noticeable, and permanent.

Alternative 1 (No Action Alternative)

Analysis. Any ongoing repair or maintenance of the marina would have no impact to vegetation. However, due to continued erosion, vegetated areas, including the Sunken Forest, would continue to be lost, resulting in adverse, long-term, moderate, impacts to vegetation in the project area.

Cumulative Impacts. Future maintenance dredging activities could adversely affect beachgrass, depending on where dredged material is deposited. Several of the miscellaneous other projects planned in the area, such as boardwalk rehabilitation, may result in minor impacts to vegetation in the immediate vicinity of these projects. When combined with this alternative, cumulative impacts to vegetation would be adverse, moderate, and long-term.

Conclusion. The No Action Alternative would result in adverse, moderate, long-term impacts to vegetative communities. Cumulative impacts to vegetation would also be adverse moderate and long-term.

Because there would be no major, adverse impacts to vegetation, there would be no impairment of the park's resources or values.

Alternative 2 (Rehabilitate Marina and Ferry Dock and include Shoreline Stabilization)

Analysis. Alternative 2 would initially result in moderate, adverse impacts to vegetative communities within the marina area. The existing American beachgrass communities within the marina would likely be buried by dredged material. However, due to the small size of these vegetation patches, impacts would be considered adverse and minor. The shoreline stabilization portion of the project would provide protection of landward vegetation communities, such as the Sunken Forest, by counteracting shoreline erosion. This component of the project would also enhance the vegetative diversity in the area by establishing high marsh and low marsh tidal wetland vegetation which is not currently in the project vicinity. The sand placement would result in moderate, adverse short-term impacts during construction. However, due to the protective nature of the project and the proposed plantings, the shoreline stabilization component of the project would result in moderate, beneficial long-term impacts.

Cumulative Impacts. Cumulative impacts would be similar to those expected under the No Action Alternative. However, stabilizing the shoreline would help offset some adverse impacts expected from other projects. Therefore, when combined with impacts expected under this alternative, cumulative impacts to vegetation would be moderate, beneficial and adverse, and long-term.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park's resources or values.

Conclusion. Overall, Alternative 2 would result in moderate, beneficial long-term impacts to vegetation. Alternative 2 would result in minor, adverse impacts to small patches of American beachgrass within the marina. Cumulative impacts to vegetation would be moderate, beneficial and adverse, and long-term.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park's resources or values.

LITTORAL PROCESSES

AFFECTED ENVIRONMENT

Littoral processes include interactions among waves, currents, winds, tides, sediments, and other materials near the shoreline. Littoral currents generally run parallel to the shoreline (e.g., longshore currents); however, currents may also run perpendicular to the shoreline. In association with waves, winds, and tides, littoral currents transport coastal materials to and away from beaches. Coastal materials, collectively referred to as "littoral drift," include sand, gravel, other sediments, and organic material. Littoral transport is the movement of littoral drift in the littoral zone by waves and currents. Depending on the rate and direction of littoral transport, beaches erode, accrete, or remain relatively stable (USACOE, 1975). Other littoral processes associated with barrier islands include overwash and breach formation. Overwash occurs when tidal flows and waves wash over the island, transporting sand from the oceanside to the bayside of the island. Breaching occurs when a new opening is created across a barrier island, connecting the ocean and bay waters.

Structures that extend perpendicular to shorelines interfere with natural littoral processes and sediment transport. Such structures block the near-shore movement of littoral materials. In areas where currents run predominantly parallel to the shoreline, structures can cause accretion at "up-current" beaches and erosion of "down-current" beaches.

Waves are the primary cause of sediment transport in the littoral zone and are the principal cause of most shoreline change (USACOE, 1975). A variety of factors influence the direction and energy of waves, including wind and water depth. In shallower waters, the energy of waves is dissipated through friction with bottom sediments. Additional energy is lost as waves break on shorelines or other objects. In general, waves that approach the shore through deeper water or channels retain greater energy that is spent in closer proximity to the shore. When greater energy is expended by waves in the littoral zone, erosive forces increase the transport of littoral drift.

Prevailing currents along the north shore of Fire Island generally run from east to west (Conley, 2000). Littoral currents typically transport littoral drift to the west, although transport to the east also may occur. However, based on a review of local currents and observations of site conditions, there is no substantial long shore littoral current in the immediate vicinity of Sailors Haven Marina. There is substantial shoreline undercutting at the east and west ends of the perimeter bulkheads; however, there is no substantial accretion at either the east or west ends of the marina. Furthermore, it appears that littoral transport mechanisms are primarily perpendicular to the shoreline. Perpendicular wave energy, as well as reflected wave energy produced by waves rebounding off the perimeter bulkheads, is the primary cause of erosion at the ends of the

bulkheads and sediment transport offshore. Based on a review of aerial photography, the shoreline in the vicinity of Sailors Haven Marina has eroded by approximately 131 feet between 1830 and 2002. This calculates to an average erosion rate of 9.2 inches per year over this 172 year period.

Maintenance of deep water in the project area also interferes with littoral processes. The approach channel for Sailors Haven Marina extends approximately 1,000 feet offshore. In addition, the marina basin is maintained as deep water to accommodate boats. Maintenance of near-shore basins and channels increases the amount of energy conserved by approaching waves and contributes to increased sediment suspension and coastal erosion. These deepwater areas also act as sediment sinks, accumulating sediment that may otherwise be deposited in shoreline areas.

ENVIRONMENTAL CONSEQUENCES

IMPACT INTENSITIES

- Negligible:** There would be no observable or measurable change in natural littoral processes. Impacts would be of short duration and well within natural fluctuations. There would be no measurable or perceptible change in sediment transport or shoreline profile, as compared to natural shorelines.
- Minor:** Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on shoreline conditions. Impacts would be measurable or perceptible but would be localized within a relatively small area. Changes to the shoreline would not threaten landward features or structures.
- Moderate:** Impacts would be detectable, they would be expected to be outside the natural range of variability for short periods of time or be temporary, or long term and highly localized. Littoral processes would be moderately altered and over time, shoreline changes would be evident in the immediate vicinity of the project.
- Major:** Impacts on littoral processes would be detectable, and they would be expected to be outside the natural range of variability for long periods of time, be permanent or widespread. Littoral processes would be grossly altered. Impacts to the shoreline would extend well beyond the project area. Impacts would be substantial, highly noticeable, and permanent. Without mitigation, impacts would eventually threaten landward features or structures.

Alternative 1 (No Action Alternative)

Analysis. Any ongoing maintenance and repair activities would result in no change to existing conditions; however the existing marina structures would continue to deteriorate and interrupt littoral processes and adjoining shoreline erosion, resulting in adverse, moderate, long-term impacts. With continued deterioration of the marina and gradual filling of the maintained channel and marina basin, the interruption of natural littoral processes would gradually diminish over time, resulting in a beneficial impact to littoral processes.

Cumulative Impacts. Maintenance dredging of the entrance channel to Sailors Haven Marina would result in moderate, adverse, long-term impacts to littoral processes; however, with continued deterioration and eventual closure of the marina, there would not be a continued need to maintain the channel. Since the dredged channel may serve as a sediment sink to trap materials that would otherwise be transported and deposited onshore, cessation of maintenance dredging operations could result in a moderate, beneficial long-term impact.

The incremental contributions of past, present, and reasonably foreseeable actions have affected littoral processes in park waters along the shoreline of Great South Bay. The Sailors Haven Marina is one of many artificial features that have been constructed along the bayside shoreline of the park. For instance, constructed headlands associated with marinas at Davis Park, Atlantique Beach, and formerly Barrett Beach, as well as numerous smaller private marinas and bulkheads, extend into the bay and interfere with littoral processes. In other areas, such as Fire Island Pines and Watch Hill, boat basins excavated into previously solid land have brought littoral energy associated with deeper waters into closer proximity to the park's shoreline. Channels dredged to facilitate boat access to all of these areas may serve as sediment sinks to trap materials that would otherwise be transported and deposited onshore.

When combined with the impacts expected under this alternative, cumulative impacts would be adverse, moderate, and long-term.

Conclusion. The No Action alternative would have adverse, moderate, long-term, effects on littoral processes. The existing marina structure would continue to influence littoral transport; cumulative impacts would be adverse, moderate, and long-term.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park's resources or values.

Alternative 2 (Rehabilitate Marina and Ferry Dock and include Shoreline Stabilization)

Analysis. Activities under Alternative 2 that would impact littoral processes include dredging the existing channel, replacing the existing marina structures, and stabilizing the shoreline east and west of the marina. Impacts to littoral processes would be confined to the project area and would be comparable to existing conditions. Shoreline stabilization would counteract historic erosion in the area and would temporarily offset the impacts to littoral processes created by the marina structure. Since the shoreline stabilization will be occurring on the bayside of the island and the area and volume of sand placement is small compared with the width of the island, it would not interfere with the natural potential for overwash occurrence or breach formation in the area. The protective presence of the Sunken Forest makes the potential for overwash or breach in the project area unlikely. Therefore, the project would primarily influence sand transport and there would be adverse, long-term, moderate impacts on littoral processes as a result of the proposed project.

Cumulative Impacts. Maintenance dredging of the entrance channel to Sailors Haven Marina would result in adverse, long-term, moderate impacts to littoral processes. Along with other features within the park, the marina structure would continue to interrupt natural littoral processes. Other features along the south shore of Great South Bay described under Cumulative Impacts for the No Action alternative would also affect littoral processes under this alternative. These artificial features, including bulkheads, headlands, and dredged boat channels and basins, have been constructed along the park's shoreline in Great South Bay and continue to

incrementally affect littoral processes under this alternative. When combined with impacts expected under this alternative, cumulative impacts would be adverse, long-term, and moderate.

Conclusion. There would be adverse, long-term, moderate impacts on littoral processes as a result of the proposed project. These impacts would be localized in the vicinity of the marina. Cumulative impacts would also be adverse, long-term, and moderate.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park's resources or values.

WETLANDS AND OPEN WATER HABITATS

AFFECTED ENVIRONMENT

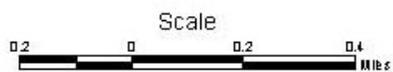
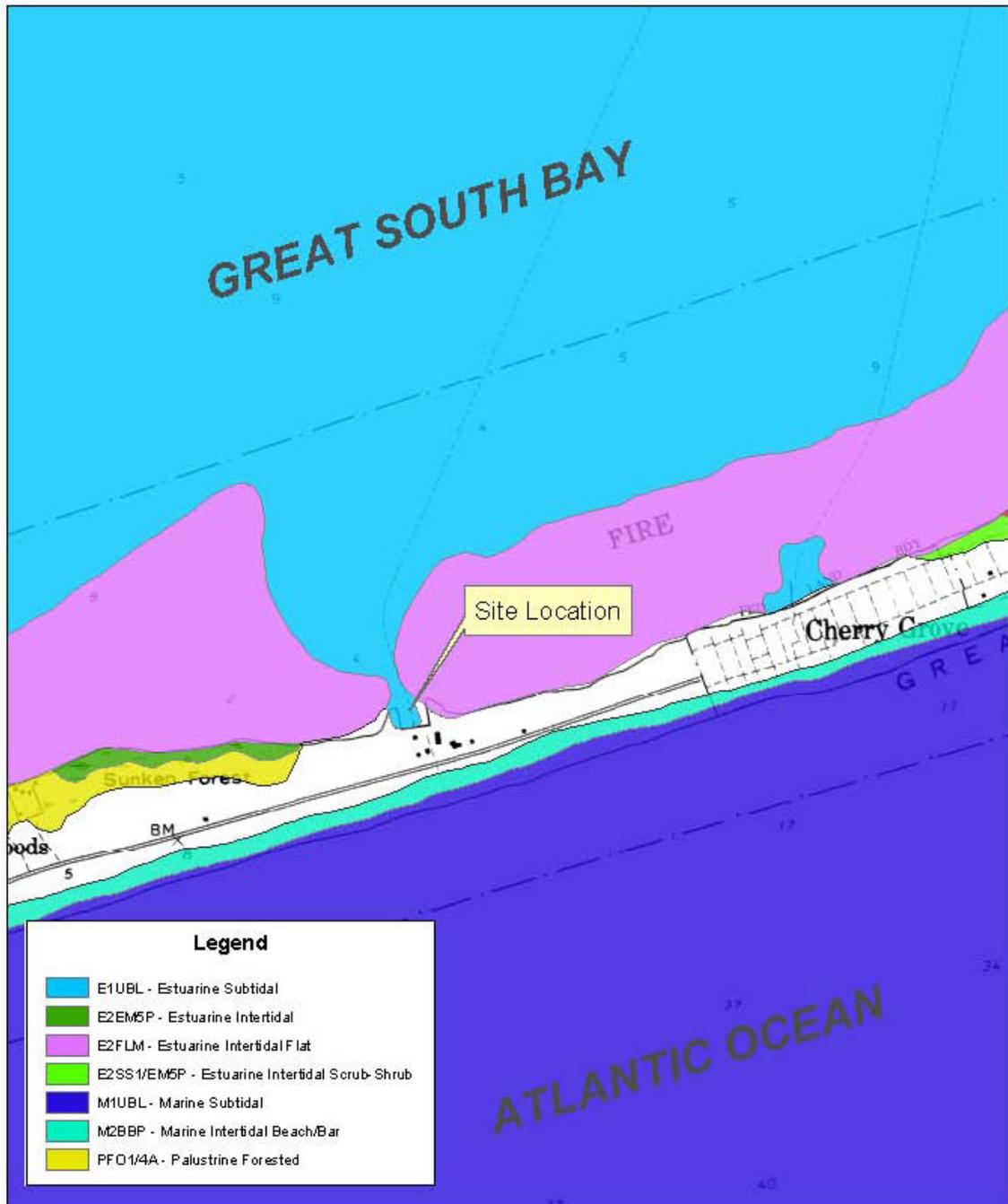
Wetlands, deepwater habitats, and jurisdictional waters of the United States (jurisdictional waters) are present in the project area. The type of wetlands and deepwater habitats were determined in accordance with the USACOE regulations (40 CFR Part 110 et al.) and NPS Procedural Manual 77-1, *Wetland Protection* (NPS99-1), which implements Executive Order 11990, *Protection of Wetlands*. NPS 77-1 uses the USFWS' methodology (USFWS 1979) for determining the extent of wetlands. Wetlands in the project area would also be regulated under the New York Tidal Wetlands Law in accordance with the New York Tidal Wetlands Land Use Regulations (6NYCRR Part 661).

According to USFWS and the USACOE, wetlands must meet the following three criteria: they must include wetland hydrology, support wetland vegetation, and contain hydric soils and/or a nonsoil substrate that is saturated or covered by shallow water at some time during the growing season. Wetland hydrology is defined as a water table that is at or near the ground surface or land surface covered by water.

Based on National Wetlands Inventory (NWI) mapping, there are two wetland types in the project area (Figure 7). NWI wetland classifications are based on the system developed for the USFWS (Cowardin, 1979). The marina basin and channel are classified as estuarine, subtidal, unconsolidated bottom permanently flooded (E1UBL). The shoreline stabilization areas east and west of the marina are classified as estuarine intertidal, irregularly exposed (E2M). Under NPS criteria, unvegetated tidally influenced beaches, such as the shoreline stabilization area, are considered wetlands, while permanently inundated areas, such as the marina basin and access channel, are considered deepwater habitats. Both of these areas would be regulated under NYSDEC tidal wetland regulations, which would consider unvegetated tidally influenced areas (i.e., beaches) as "coastal shoals, bars or mudflats," and areas permanently inundated (to a depth of 6 feet at mean low water) as "littoral zone" wetlands.

Although sandy beaches do not meet the USACOE definition of a jurisdictional wetland, all beach areas below the high tide line are considered jurisdictional waters of the U.S. Permanently flooded marine habitats in the project area would also be considered jurisdictional waters. These areas would be subject to the USACOE regulatory program under the Clean Water Act of 1972, as amended, and the Rivers and Harbors Act of 1899, as amended.

Figure 7: National Wetland Inventory



Map Sources:
USGS Topographic Data (angle taken from)
New York State GIS Clearing House
NOI map taken from
U.S. Fish and Wildlife Service

There are approximately 1.9 acres of estuarine intertidal wetlands (E2M), and approximately 4.5 acres of estuarine subtidal wetlands (E1UBL) or deepwater habitat in the project footprint. There are no vegetated tidal or nontidal wetlands within the proposed impact area.

Statement of Findings. In accordance with NPS 77-1, a “Statement of Findings” is required for certain actions that cause the loss of wetlands. Areas classified as wetlands according to the USFWS methodology as defined in “Classification of Wetlands and Deepwater Habitats of the United States” (Cowardin et al. 1979) are subject to NPS 77-1 procedures. Deepwater habitats are not subject to NPS 77-1. Actions associated with water-dependent activities (e.g., boat rams, piers, docks) that affect 0.1 acre or less of wetlands are exempt from Statement of Findings requirements pursuant to section 4.2(A)(b) of NPS 77-1. Activities associated with the maintenance, repair, or renovation of currently serviceable facilities or structures are also exempt from a Statement of Findings provided they were completed prior to May 28, 1980 (the date of the original “NPS Floodplain Management and Wetland Protection Guidelines”), were completed after May 28, 1980 in compliance with the guidelines (and compliance is on record), and are minor (i.e., involve less than 0.1 acres of fill). In addition, projects specifically intended to restore degraded wetlands, or ecological processes are exempt from Statement of Findings requirements, provided they do not result in more than 0.25 acre of adverse, long-term wetland impacts.

The marina rehabilitation will be conducted within the existing marina footprint, with repairs extending approximately 12 to 18 inches from the existing structure. Based on the a perimeter length of approximately 1,100 feet, and assuming a conservative 2-feet of impact beyond the existing bulkheads, the project will disturb approximately 0.05 acre of estuarine intertidal wetland. In addition, the shoreline stabilization portion of the project will not result in more than 0.025 acre of adverse, long-term impacts to wetlands. Therefore, a Statement of Findings for Wetlands is not required for this project.

ENVIRONMENTAL CONSEQUENCES

IMPACT INTENSITIES

- Negligible:** There would be no observable or measurable impacts to wetlands, or the natural processes sustaining them. Impacts would be of short duration and well within natural fluctuations. Impacts would have no measurable or perceptible changes in wetland size, integrity, or continuity.
- Minor:** Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on wetlands, or the natural processes sustaining them. Impacts would be measurable or perceptible but would be localized within a relatively small area. The overall viability of the wetland community would not be affected and, if left alone, would recover.
- Moderate:** Impacts would be detectable, and they would be expected to be outside the natural range of variability for short periods of time or be temporary. Impacts would cause a change in wetlands (e.g. quantity, or quality); however, the impact would remain localized and would be moderately noticeable and temporary.

Major: Impacts on wetlands, or the natural processes sustaining them, would be detectable, and they would be expected to be outside the natural range of variability for long periods of time or be permanent. Impacts to the wetland community would be substantial, highly noticeable, and permanent.

Alternative 1 (No Action Alternative)

Analysis. Any continuing maintenance or repair activities would not affect wetlands. No construction-related impacts to wetlands, deepwater habitats, or jurisdictional waters would occur under the No Action Alternative. Over time, erosion of sand from behind the bulkheads and within the breakwater could contribute to the development or relocation of intertidal or subtidal shallows in the area, resulting in long-term, negligible impacts to wetlands. Boundaries of intertidal and subtidal estuarine wetlands would shift due to erosion of the shoreline; however overall area of these resources would not be lost. There would be no impact to deepwater habitats.

Cumulative Impacts. None of the past, present, or future projects identified for the general area would have any impacts on wetlands in the vicinity of Sailors Haven Marina or the shoreline stabilization area. Therefore, when combined with impacts expected from this alternative, cumulative impacts would be long-term, and negligible.

Conclusion. The No Action alternative would have negligible impacts on intertidal and subtidal estuarine wetlands over the long term. There would be no impacts to deepwater habitats. Cumulative impacts would also be long-term, and negligible.

Because there would be no major, adverse impacts to wetlands, there would be no impairment of the park's resources or values.

Alternative 2 (Rehabilitate Marina and Ferry Dock and include Shoreline Stabilization)

Analysis. The marina rehabilitation and dredging operations would impact approximately 4.5 acres of estuarine subtidal wetlands or deepwater habitat. While rehabilitation of the marina would be conducted within the existing marina footprint, the bulkheads would be extended approximately 12 to 18 inches beyond the existing profile, impacting approximately 0.05 acre of estuarine intertidal wetlands. The new bulkhead structures would be constructed over this area. Due to the small area affected, impacts would be adverse, minor, and long-term. Dredging would disturb and displace the existing substrate within the deepwater habitat; however, the benthic community would be expected to reestablish quickly, resulting in a short-term, moderate impact to the dredged area.

The shoreline stabilization component of the project would impact approximately 1.9 acres of estuarine intertidal wetland. This component of the project would essentially bury the existing coastal and littoral zone wetlands in the project area; however, stabilization of the shoreline would reverse historic erosion losses, and restoration plantings with native wetland vegetation would result in an overall enhancement of these wetland areas. Direct impacts to existing estuarine intertidal wetlands would be considered adverse, short-term and moderate; however, long-term, moderate benefits would be realized.

The National Park Service would obtain a Section 10/404 permit from the U.S. Army Corps of Engineers in accordance with the Rivers and Harbors Act and the Clean Water Act. The NPS anticipates conducting the marina rehabilitation component of the project under either Nationwide Permit 3, *Maintenance*, which authorizes the replacement of structures or fill provided the structure or fill is not put to different uses. Alternatively, the NPS would obtain a Nationwide Permit 28, *Modification of Existing Marinas*. It is anticipated that the shoreline stabilization component of the project would be conducted under Nationwide Permit 27, *Stream and Wetland Restoration Activities*. All activities would be conducted in accordance with permit conditions. In addition, a NYDEC Tidal Wetlands permit would be obtained prior to initiating project activities.

Cumulative Impacts: None of the past, present, or future projects identified for the general area would have any impacts on wetlands in the vicinity of Sailors Haven Marina or the shoreline stabilization area. When combined with impacts expected from this alternative, cumulative impacts would be beneficial, long-term and moderate.

Conclusion: Overall, the rehabilitation of Sailors Haven Marina would have adverse, short-term, moderate impacts related to construction. Replanting with native wetland vegetation and stabilization of the shoreline would help offset adverse impacts and would result in beneficial, long-term, moderate impacts. Cumulative impacts would also be beneficial, long-term and moderate.

Because there would be no major, adverse impacts to wetlands, there would be no impairment of the park's resources or values.

WATER QUALITY

AFFECTED ENVIRONMENT

The project location lies within Sailors Haven, an embayment in Great South Bay. The entire 64,000 acres (25, 920 hectares) of surface water comprising Great South Bay is designated a Significant Habitat Complex by the US Fish and Wildlife Service (see the Aquatic Communities section for more information). It is the largest shallow saltwater bay in New York State and the only one of the Long Island south shore bays that has major riverine input. The bay receives 11% of its freshwater input directly from groundwater flows through its floor.

Water quality monitoring in Great South Bay was initiated in 1976 with the advent of the "208" program (Section 208 of the Federal Water Pollution Control Act of 1972). Several environmental parameters are monitored on a monthly basis by Suffolk County, including salinity, temperature, dissolved oxygen, nutrients (nitrogen, phosphorus, and carbon), coliform bacteria, chlorophyll-a, and *Aureococcus* (the "brown tide" organism). Data from over 2,600 samples collected between 1977-1997 indicate "an estuary of good water quality" (Suffolk County, 1999).

The water quality of the bay is most influenced by the influx of stormwater run-off and stream inflows. In addition to these influences, fluctuations in water quality are caused by environmental factors, such as tidal mixing, vertical mixing in the water column, scouring and suspension of bottom sediments by currents, precipitation events, sediment and water column biological and chemical oxygen demand, phytoplankton production, and water temperature.

The proposed project is not likely to influence salinity, temperature, pH, chlorophyll-a, or total or fecal coliform; therefore, these parameters are not discussed further. Those parameters that may be affected by the proposed activities include water clarity and dissolved oxygen. The following tables present water clarity (secchi) data and dissolved oxygen data from the Suffolk County monitoring station near Sailors Haven (Station 150; Suffolk County, 1999) and represent the existing water quality conditions.

Table 8: Summary of Available Secchi Disk Data

Suffolk County Monitoring Location near Sailors Haven

Date	Average Secchi (ft)	Minimum Secchi (ft)	Maximum Secchi (ft)	Number of Samples (N)
1990	3.1	2.0	4.5	9
1994	3.0	1.0	5.0	12
1997	3.2	2.0	5.0	8

Surface water quality standards are set forth by NYSDEC for specific water classes (6 NYCRR Part 703). These standards state that no increase in turbidity is permissible that creates a substantial visible contrast to existing conditions.

The following table presents data showing the available dissolved oxygen data from the Suffolk County monitoring station near Sailors Haven.

Table 9: Summary of Available Dissolved Oxygen Data

Suffolk County Monitoring Location near Sailors Haven

Date	Average Dissolved Oxygen Concentration (mg/L)	Minimum Dissolved Oxygen Concentration (mg/L)	Maximum Dissolved Oxygen Concentration (mg/L)	Number of Samples (N)
1990	8.4	5.7	13.5	9
1994	7.9	6.2	10.9	9
1997	8.6	5.9	11.3	8

Dissolved oxygen standards for saline surface water shall not be less than 5.0 mg/L at any time (6 NYCRR Part 703).

ENVIRONMENTAL CONSEQUENCES

IMPACT INTENSITIES

- Negligible:** There would be no observable or measurable difference in water quality characteristics. Differences would be well within natural fluctuations.
- Minor:** Differences in water quality would be detectable, but they would not be expected to be outside the natural range of variability. There would be no long-term impact to water quality, and, if left alone, water quality would return to pre-disturbance conditions.
- Moderate:** Differences in water quality would be detectable, and they would be expected to be outside the natural range of variability. Changes in water quality would occur; however, the impact would remain localized and would be moderately noticeable

and temporary. Within a short time frame, the water quality would return to pre-disturbance conditions.

Major: Differences in water quality would be detectable, and they would be expected to be outside the natural range of variability. Changes in water quality would be substantial, highly noticeable, and permanent.

Alternative 1 (No-Action Alternative)

Analysis. Any ongoing repair or rehabilitation activities would not affect water quality. There would be no change to existing conditions; however the existing marina structures would continue to deteriorate. Fill behind the bulkheads would continue to erode and be transported by littoral processes. Erosion and transport of bulkhead fill would affect water quality by increasing suspended solids in the water column, resulting in adverse, long-term, negligible impacts.

Cumulative Impacts. Personal watercraft use in the project vicinity could result in negligible impacts to water quality. The maintenance dredging project would result in adverse, short-term, moderate impacts to water quality due to increases in turbidity during dredging operations. When combined with this alternative, cumulative impacts would be adverse, and negligible over the long-term and adverse and moderate over the short-term.

Conclusion. The no-action alternative would result in adverse, long-term, negligible impacts. Although erosion would increase suspended solids in the water column, water quality would not be substantially affected. Cumulative impacts would be adverse and moderate in the short-term, and adverse and negligible in the long-term.

Because there would be no major, adverse impacts to water quality, there would be no impairment of the seashore's resources or values.

Alternative 2 (Rehabilitate Marina and Ferry Dock and include Shoreline Stabilization)

Analysis. Activities under Alternative 2 that would impact water quality include dredging the marina basin and access channel and replacing the existing marina structures, as well as placing fill for shoreline stabilization. Impacts to water quality under Alternative 2 would be adverse, short-term, and moderate due to construction activities, which would temporarily increase turbidity in the marina basin, decreasing water clarity and dissolved oxygen. These impacts would likely be confined to the project vicinity. Dilution in the bay and mixing due to tidal action and other factors will reduce the level of impact within the bay.

Cumulative Impacts: Cumulative impacts would be similar to those expected under the No Action Alternative. However, continued erosion of bulkhead fill expected under the No Action Alternative would not occur under Alternative 2, adding a slight cumulative benefit. When combined with this alternative, cumulative impacts would be adverse and negligible over the long-term, and adverse and moderate over the short-term.

Conclusion: Overall, this alternative would result in adverse, short-term, and moderate impacts to water quality. Cumulative impacts would be adverse and negligible over the long-term, and adverse and moderate over the short-term.

Because there would be no major, adverse impacts to water quality, there would be no impairment of the seashore's resources or values.

SOILS

AFFECTED ENVIRONMENT

One soil type, filled land, is present within the proposed area of impact for the marina rehabilitation portion of the project. Filled land is located between the east and west perimeter bulkheads and the boat basin. The picnic areas at Sailors Haven Marina are located on this soil type. Filled land is composed of sandy material collected and deposited along the shoreline during dredging operations (NRCS 1975).

Within the shoreline stabilization portion of the project, the beach soil type is present. The NRCS (1975) describes the beach soil type as having generally level topography and being composed primarily of sand.

ENVIRONMENTAL CONSEQUENCES

IMPACT INTENSITIES

- Negligible:** There would be no observable or measurable impacts to existing soil conditions. Impacts would be of short duration and well within natural fluctuations. Impacts would have no measurable or perceptible changes in soil composition.
- Minor:** Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on soil conditions. Impacts would be measurable or perceptible but would be localized within a relatively small area.
- Moderate:** Impacts would be detectable, they would be expected to be outside the natural range of variability for short periods of time or be temporary, or long term and highly localized. Soil structure would be moderately altered and over time, changes to soils would be evident in the immediate vicinity of the project.
- Major:** Impacts on soils would be detectable, and they would be expected to be outside the natural range of variability for long periods of time, be permanent or widespread. Soil composition would be grossly altered. Impacts to the soils would extend well beyond the project area. Impacts would be substantial, highly noticeable, and permanent. Without mitigation, impacts would result in permanent changes to the soil.

Alternative 1 (No Action Alternative)

Analysis. Any continuing repair or maintenance activities would not affect soils. There would be no change to existing conditions within the marina and no construction-related impacts to marina soils. Within the shoreline stabilization area, soil loss due to erosion would continue, resulting in moderate, adverse, long-term impacts to soils.

Cumulative Impacts. Maintenance dredging activities could result in placement of dredged material on soils; however, in the past such material was placed on fill material behind the perimeter bulkheads. Therefore, no to negligible impacts would be expected from this activity. When combined with impacts expected under this alternative, cumulative impacts would be moderate, adverse, and long term.

Conclusion. The No Action Alternative would result in moderate adverse, and long-term impacts to soils. Cumulative impacts would also be moderate, adverse, and long term.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park's resources or values.

Alternative 2 (Rehabilitate Marina and Ferry Dock and include Shoreline Stabilization)

Analysis. Alternative 2 would result in negligible impacts to soils. Heavy equipment may be located in the picnic area for the duration of construction. Additional dredged material may also be placed in the picnic area. Since this area is already compacted and is comprised of filled land, there would be no substantial impacts to soils. The shoreline stabilization portion of the project would result in moderate, beneficial, long-term impacts to beach soils as a result of stabilization of the area, which would minimize erosion and preserve beach soils.

Cumulative Impacts. Cumulative impacts would be similar to those defined under the No Action Alternative. However, additional benefits from shoreline stabilization would be combined to offset any possible adverse impacts. Therefore, when combined with impacts expected from this alternative, cumulative impacts would be moderate, beneficial, and long-term.

Conclusion. Impacts to soils resulting from the marina rehabilitation portion of the project would be short-term and negligible. These impacts would be limited to the location and duration of construction activities. Impacts to soils resulting from the shoreline stabilization portion of the project would be moderate and beneficial. Cumulative impacts would be moderate, beneficial, and long-term.

Because there would be no major, adverse impacts to resources or values, there would be no impairment of the park's resources or values.

VISITOR USE AND EXPERIENCE

AFFECTED ENVIRONMENT

Visitation to Sailors Haven Marina is highest in the summer, with fewer visitors in spring and fall; visitation is lowest in the winter. Activities permitted within the project area are boating, fishing, walking on established trails, and picnicking. Most visitation at Sailors Haven takes place around the Sunken Forest, and most visitor use occurs on weekends, peaking from late morning to mid afternoon. Numerous school groups visit the marina during the week for educational programs at Sunken Forest in the spring and fall. In addition to a one and a half mile long boardwalk trail through the Sunken Forest, Sailors Haven offers a visitor center, snack bar, gift shop, picnic tables, lifeguarded beach (summer only), a 42-slip marina with electricity and coin pumpout, restrooms and bathhouse. Ranger-led interpretive activities are conducted daily

throughout the summer months, and by reservation for schools and other organized groups (NPS 2004).

Visitors arrive by either ferry or boat, and the marina is essentially full by mid morning on weekends when weather is favorable. School groups generally arrive by commercial ferry during the week, so there are no conflicts with other individuals coming by boat on weekends.

Table 1010 shows visitation trends throughout the national seashore. Prior to 2002, visitation peaked in 1994 and decreased substantially two years after. Visitation has been steadily increasing since then, peaking in 2002.

Table 10: Park Visitation 1993-2003

Year	Visitation
1993	639,741
1994	688,974
1995	348,788
1996	385,706
1997	534,888
1998	558,479
1999	559,764
2000	600,333
2001	661,692
2002	763,992
2003	629,858

Source: NPS 2004b

There are no public roads within Fire Island National Seashore; visitors may explore the park on foot or transfer to other park sites via water taxis. Sailors Haven and Watch Hill units are dependent on water travel, and are generally open from May 15 through October 15 each year (NPS 2004).

ENVIRONMENTAL CONSEQUENCES

IMPACT INTENSITIES

- Negligible:** Visitors would not likely be aware of the effects associated with changes in proposed visitor use and enjoyment of marina and nearby resources.
- Minor:** Visitors would likely be aware of the effects associated with changes proposed for visitor use and enjoyment of marina and nearby resources; however the changes in visitor use and experience would be slight and likely short term. Other areas in the marina would remain available for similar visitor experience and use without derogation of resources and values.
- Moderate:** Visitors would be aware of the effects associated with changes proposed for visitor use and enjoyment of marina and nearby resources. Changes in visitor use and experience would be readily apparent and likely long term. Other areas in the marina would remain available for similar visitor experience and use without derogation of resources and values, but visitor satisfaction might be measurably affected (visitor could be either satisfied or dissatisfied). Some visitors who

desire to continue their use and enjoyment of the activity/visitor experience would be required to pursue their choice in other available areas.

Major: Visitors would be highly aware of the effects associated with changes proposed for visitor use and enjoyment of marina and nearby resources. Changes in visitor use and experience would be readily apparent and long term. The change in visitor use and experience proposed in the alternative would preclude future generations of some visitors from enjoying resources and values. Some visitors who desire to continue their use and enjoyment of the activity/visitor experience would be required to pursue their choice in other available local or regional areas.

Alternative 1 (No-Action Alternative)

Analysis. Visitors could be adversely impacted by any ongoing repair and maintenance activities at the marina, resulting in short-term, negligible impacts, although no construction-related activities would be associated with this alternative to impact visitor experiences. However, the existing marina structures would continue to deteriorate to the point where the marina might not be accessible by either ferry or private boat within a few years. In addition, the existing marina currently does not meet ADA standards, thus impeding access by visitors with physical disabilities — an adverse impact. Eventual closure of the marina and ferry dock would result in adverse, long-term moderate, impacts to visitors, especially those wishing to see the Sunken Forest.

Without shoreline stabilization efforts that would protect the Sunken Forest, this natural resource may continue to experience adverse impacts, which would indirectly affect visitors in the short-term until the marina becomes no longer accessible. Those visitors who may continue to access the area without the marina, for example sea kayakers, would experience long-term impacts associated with damage to the Sunken Forest.

Cumulative Impacts. Visitors would be impacted by other planning or construction projects expected within or near the project vicinity, such as rehabilitation of the visitor center, public restrooms, boardwalks, and walkways at the marina, as well as demolition of the motel complex. However, such impacts are primarily expected to be short-term. When combined with the short-term, negligible, adverse impacts that might occur from any ongoing repair activities, cumulative impacts would be short-term, adverse, and range from negligible to minor, depending on the extent of rehabilitation to other facilities. When combined with the moderate, adverse impacts expected in the long-term due to the eventual deterioration of the marina, cumulative impacts would also be adverse, long-term, and moderate.

Conclusion. Impacts to visitor use and experience would be primarily adverse, moderate, and long-term because the existing marina structures would continue to deteriorate. Short-term impacts related to any ongoing repair and maintenance activities would continue until the eventual complete deterioration of the marina. Cumulative impacts would also be adverse, moderate, and long-term, with short-term, adverse impacts expected from rehabilitation of other visitor facilities.

An impairment analysis is not required for Visitor Use and Experience because it is not a park resource or value.

Alternative 2 (Rehabilitate Marina and Ferry Dock and include Shoreline Stabilization)

Analysis. By replacing the marina and ferry dock in the existing footprint of disturbance, visitors would experience temporary construction-related impacts. However, in the long-term, rehabilitation improvements would enhance the overall visitor experience. Improvements to the marina, including incorporation of current ADA standards, would result in beneficial, moderate, long-term impacts on visitor experiences. In addition, as mentioned under Vegetation, shoreline stabilization would protect the Sunken Forest, which is a visitor attraction that draws people to the marina. Therefore, protection of this natural resource would also provide a beneficial, long-term, minor to moderate impact to visitors.

Construction activities would introduce temporary visual, audible, and atmospheric intrusions into the marina setting. Such intrusions could temporarily reduce the quality of visitor experiences. However, the marina is normally closed after October 15, and construction activities anticipated under this alternative would begin no sooner than November 15. Therefore, the marina would be closed to public use during construction, minimizing the amount of adverse impacts visitors would experience from such activities. Overall, such impacts would be negligible, adverse, and short term. In addition, park staff do not expect an increase in visitor use as a result of the marina rehabilitation project. Therefore, no adverse impacts related to increased visitation are expected.

Cumulative Impacts: Visitors would experience the same short-term impacts related to other rehabilitation projects mentioned under the No Action alternative. However, when combined with the short-term, negligible, adverse impacts expected under this alternative, cumulative impacts related to these rehabilitation projects would also be short-term, negligible, and adverse because construction-related impacts expected under Alternative 2 would occur primarily when the marina and other facilities are closed.

Conclusion: Overall, rehabilitation improvements at Sailors Haven Marina and shoreline stabilization efforts would result in beneficial, minor to moderate, long-term impacts. Construction-related impacts would be negligible, adverse, and short-term. Cumulative impacts would also be negligible, adverse, and short-term.

CONSULTATION AND COORDINATION

AGENCIES AND ORGANIZATIONS

Agencies and organizations contacted for information; or that assisted in identifying important issues, developing alternatives, or analyzing impacts, or that will review and comment upon the EA include the following. Copies of letters received from agencies during the consultation process are included in Appendix A.

FEDERAL AGENCIES

U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers
National Marine Fisheries Service

STATE AGENCIES

New York State Department of Environmental Conservation
New York State Department of State Coastal Management Program
New York State Historic Preservation Office

LOCAL AGENCIES

Town of Brookhaven

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APPENDIX A: CONSULTATION

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, Albany, New York 12233-4757
Phone: (518) 402-8935 • FAX: (518) 402-8925
Website: www.dec.state.ny.us



September 25, 2003

Sherri Albrecht
URS Corporation
201 Willowbrook Blvd, Bx 290
Wayne, NJ 07474-0290

Dear Ms. Albrecht:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to the Environmental Assessment for the proposed Sailors Haven Marina Rehabilitation, site as indicated on the map you provided, located on the Fire Island National Seashore, Suffolk County, New York State.

Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

Your project location is within, or adjacent to, a designated Significant Coastal Fish and Wildlife Habitat. This habitat is part of New York State's Coastal Management Program (CMP), which is administered by the NYS Department of State (DOS). Projects which may impact the habitat are reviewed by DOS for consistency with the CMP. For more information regarding this designated habitat and applicable consistency review requirements, please contact:

Jeff Zappieri or Vance Barr - (518) 474-6000
NYS Department of State
Division of Coastal Resources
41 State Street, Albany, NY 12231

The presence of rare species may result in your project requiring additional permits, permit conditions, or review. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

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Environmental Assessment*

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should NOT be substituted for on-site surveys that may be required for environmental impact assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Sincerely,



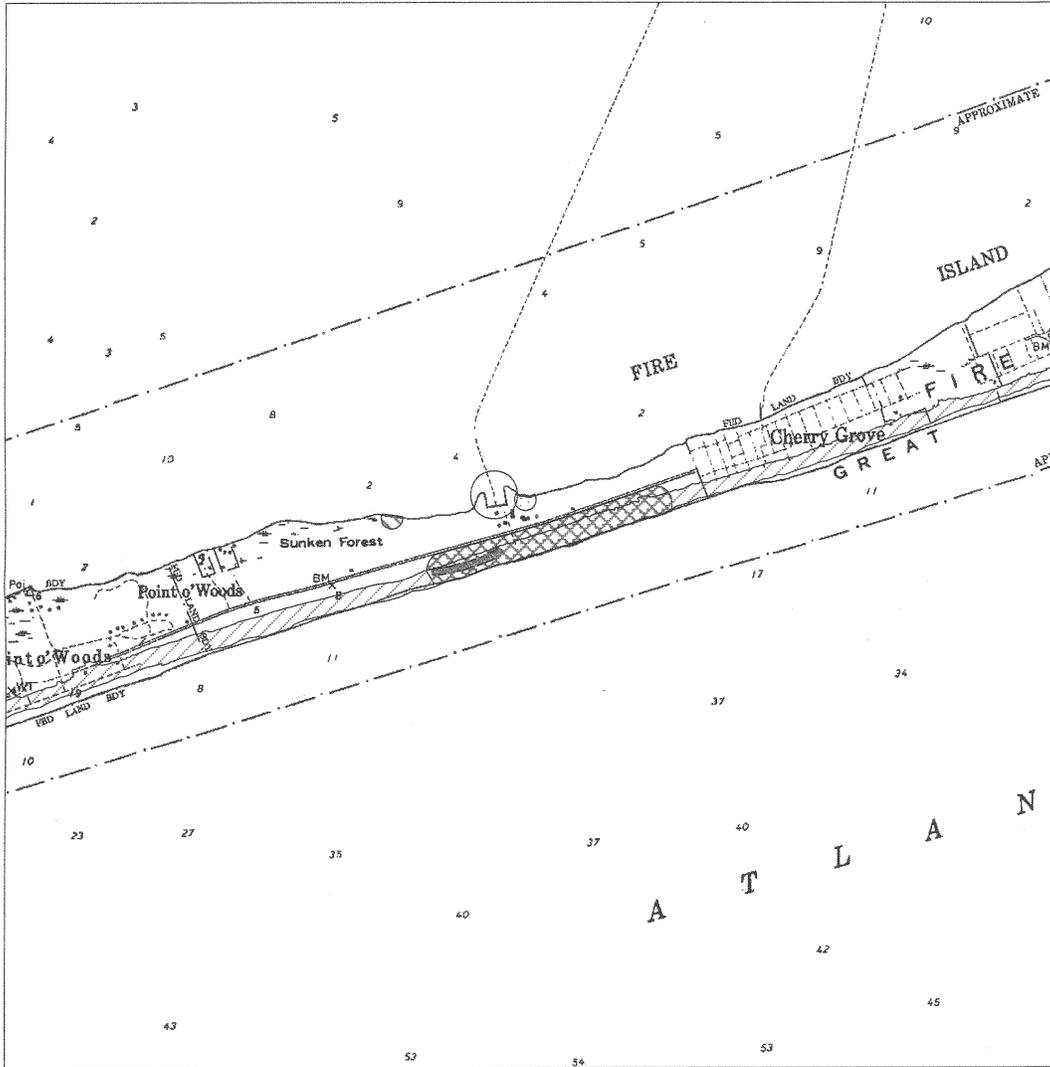
Charlene Houle
Information Services
NY Natural Heritage Program

Encs.

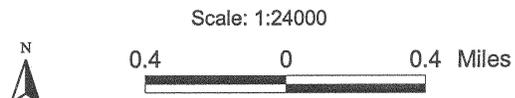
cc: Reg. 1, Wildlife Mgr.
Reg. 1, Fisheries Mgr.
Peter Nye, Endangered Species Unit, Albany

Natural Heritage Map of Rare Species and Ecological Communities

Prepared September 24 2003 by NY Natural Heritage Program, NYS DEC, Albany, New York



- PROJECT SITES**
 New York Natural Heritage Program Database Records
- AMARANTHUS PUMILUS
 - MARITIME BEACH
 - STERNA ANTILLARUM
 - STERNA HIRUNDO
 - C. MELODUS, S. ANTILLARUM, AND S. HIRUNDO



*The locations that are displayed are considered sensitive and cannot be released to the public without permission. We do not provide map locations for all records. Please see report for details.

Natural Heritage Report on Rare Species and Ecological Communities

Prepared 25 September 2003 by NY Natural Heritage Program, NYS DEC, Albany, New York

This report contains SENSITIVE information that should be treated in a sensitive manner -- Please see cover letter. Refer to the Users' Guide for explanations of codes, ranks, and fields. We do not always provide maps of locations of species most vulnerable to disturbance, nor of some records whose locations and/or extents are not precisely known or are too large to display.

Page 1

* County							
** Town	Scientific Name, COMMON NAME, & Group Name	NY Legal Status, Heritage Ranks, & Federal Status	EO Rank & Last Seen	Detailed Location	General Habitat and Quality	Office Use	
* NY STATE WATERS, SUFFOLK							
** BABYLON, NY STATE WATERS, BROOKHAVEN, ISLIP							
	MARITIME BEACH Community	UNPROTECTED G5 S5	AB 2001-09-28	FIRE ISLAND The beach along the south shore of Fire Island from Democrat Point east to Moriches Inlet. Access to Fire Island is via Robert Moses Causeway or William Floyd Parkway or by ferry.	A large sandy maritime beach along the south shore of a barrier island. The maritime beach extends 32 miles along the south shore of Fire Island from Democrat Point east to Moriches Inlet. A 32 mile long maritime beach along the south shore of Fire Island, 7 miles of which is designated as Federal Wilderness Area where driving is not allowed for most of the year.	4007363	
* SUFFOLK							
** BROOKHAVEN							
	<i>Amaranthus pumilus</i> SEABEACH AMARANTH Vascular Plant	ENDANGERED G2 S2 LT	C 2001-08-09	FIRE ISLAND SUNKEN FOREST Fire Island National Seashore at the Sunken Forest Natural Area west of Cherry Grove. 1990. The plants are along the beach. 1996. The plants are in the western half of Sailors Haven vehicle free beach.	A barrier beach. No plants were found, but the seed bank is probably still there.	4007361	
	<i>Sterna hirundo</i> COMMON TERN Bird	THREATENED G5 S3B		FIRE ISLAND SUNKEN FOREST Fire Island National Seashore, west of Cherry Grove. Access is by boat or 4wd vehicle. Drive down the beach to the vehicle-free area; park and walk to the nesting area. In 1999 birds nested on the bay side.	For information on the population at this location and management considerations, please contact the NYS DEC Regional Wildlife Manager or NYS DEC Endangered Species Unit at 518-402-8859.	4007361 ESU	
	<i>Charadrius melodus</i> PIPING PLOVER Bird	ENDANGERED G3 S3B LE		FIRE ISLAND SUNKEN FOREST Fire Island National Seashore. West of Cherry Grove. Access is by boat or 4wd vehicle. Drive down the beach to the vehicle-free area, then park and walk to the nesting area.	For information on the population at this location and management considerations, please contact the NYS DEC Regional Wildlife Manager or NYS DEC Endangered Species Unit at 518-402-8859.	4007361 ESU	

Natural Heritage Report on Rare Species and Ecological Communities

Prepared 25 September 2003 by NY Natural Heritage Program, NYS DEC, Albany, New York

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Page 2

* County

** Town

Scientific Name, COMMON NAME, & Group Name	NY Legal Status, Heritage Ranks, & Federal Status	EO Rank & Last Seen	Detailed Location	General Habitat and Quality	Office Use
* SUFFOLK					
** BROOKHAVEN					
<i>Sterna antillarum</i> LEAST TERN Bird	THREATENED G4 S3B (PS:LE)		FIRE ISLAND SUNKEN FOREST Fire Island National Seashore, west of Cherry Grove. Access is by boat or 4wd vehicle. Drive down the beach to the vehicle-free area; park and walk to the nesting area. In 1999 the birds nested on the bay side.	For information on the population at this location and management considerations, please contact the NYS DEC Regional Wildlife Manager or NYS DEC Endangered Species Unit at 518-402-8859.	4007361 ESU

5 Records Processed

Significant Habitats

DATE 9/25/2003

REPORT ID #	NAME OF AREA	TYPE OF AREA	COUNTY	TOWN OR CITY	QUADRANGLE
SW 52-501	Great South Bay	Protected Coastal Bay	Suffolk	Brookhaven	Sayville

USERS GUIDE TO NY NATURAL HERITAGE DATA

NATURAL HERITAGE PROGRAM: The Natural Heritage Program is an ongoing, systematic, scientific inventory whose goal is to compile and maintain data on the rare plants and animals native to New York State, and significant ecological communities. The data provided in the report facilitate sound planning, conservation, and natural resource management and help to conserve the plants, animals and ecological communities that represent New York's natural heritage.

DATA SENSITIVITY: The data provided in the report are ecologically sensitive and should be treated in a sensitive manner. The report is for your in-house use and should not be released, distributed or incorporated in a public document without prior permission from the Natural Heritage Program.

NATURAL HERITAGE REPORTS (may contain any of the following types of data):

COUNTY NAME: County where the occurrence of a rare species or significant ecological community is located.

TOWN NAME: Town where the occurrence of a rare species or significant ecological community is located.

USGS 7 1/2' TOPOGRAPHIC MAP: Name of 7.5 minute US Geological Survey (USGS) quadrangle map (scale 1:24,000).

SIZE (acres): Approximate acres occupied by the rare species or significant ecological community at this location. A blank indicates unknown size.

SCIENTIFIC NAME: Scientific name of the occurrence of a rare species or significant ecological community.

COMMON NAME: Common name of the occurrence of a rare species or significant ecological community.

ELEMENT TYPE: Type of element (i.e. plant, animal, significant ecological community, other, etc.)

LAST SEEN: Year rare species or significant ecological community last observed extant at this location.

EO RANK: Comparative evaluation summarizing the quality, condition, viability and defensibility of this occurrence. Use with LAST SEEN.

A-E = Extant: A=excellent, B=good, C=marginal, D=poor, E=extant but with insufficient data to assign a rank of A - D.

F = Failed to find. Did not locate species, but habitat is still there and further field work is justified.

H = Historical. Historical occurrence without any recent field information.

X = Extirpated. Field/other data indicates element/habitat is destroyed and the element no longer exists at this location.

? = Unknown.

Blank = Not assigned.

NEW YORK STATE STATUS (animals): Categories of Endangered and Threatened species are defined in New York State Environmental Conservation Law section 11-0535. Endangered, Threatened, and Special Concern species are listed in regulation 6NYCRR 182.5.

E = Endangered Species: any species which meet one of the following criteria:

1) Any native species in imminent danger of extirpation or extinction in New York.

2) Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

T = Threatened Species: any species which meet one of the following criteria:

1) Any native species likely to become an endangered species within the foreseeable future in NY.

2) Any species listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of the Federal Regulations 50 CFR 17.11.

SC = Special Concern Species: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York. Unlike the first two categories, species of special concern receive no additional legal protection under Environmental Conservation Law section 11-0535 (Endangered and Threatened Species).

P = Protected Wildlife (defined in Environmental Conservation Law section 11-0103): wild game, protected wild birds, and endangered species of wildlife.

U = Unprotected (defined in Environmental Conservation Law section 11-0103): the species may be taken at any time without limit, however a license to take may be required.

G = Game (defined in Environmental Conservation Law section 11-0103): any of a variety of big game or small game species as stated in the Environmental Conservation Law; many normally have an open season for at least part of the year, and are protected at other times.

NEW YORK STATE STATUS (plants): The following categories are defined in regulation 6NYCRR part 193.3 and apply to NYS Environmental Conservation Law section 9-1503.

E = Endangered Species: listed species are those with:

1) 5 or fewer extant sites, or

2) fewer than 1,000 individuals, or

3) restricted to fewer than 4 U.S.G.S. 7 1/2 minute topographical maps, or

4) species listed as endangered by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

T = Threatened: listed species are those with:

1) 6 to fewer than 20 extant sites, or

2) 1,000 to fewer than 3,000 individuals, or

3) restricted to not less than 4 or more than 7 U.S.G.S. 7 and 1/2 minute topographical maps, or

4) listed as threatened by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

R = Rare: listed species have:

1) 20 to 35 extant sites, or

2) 3,000 to 5,000 individuals statewide.

continued on next page

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page 2 Users Guide to Natural Heritage Data

V = Exploitably vulnerable: listed species are likely to become threatened in the near future throughout all or a significant portion of their range within the state if causal factors continue unchecked.
U = Unprotected; no state status.

NEW YORK STATE STATUS (communities): At this time there are no categories defined for communities.

FEDERAL STATUS (plants and animals): The categories of federal status are defined by the United States Department of the Interior as part of the 1974 Endangered Species Act (see Code of Federal Regulations 50 CFR 17). The species listed under this law are enumerated in the Federal Register vol. 50, no. 188, pp. 39526 - 39527.

(blank) = No Federal Endangered Species Act status.
LE = The element is formally listed as endangered.
LT = The element is formally listed as threatened.
E/SA = The element is treated as endangered because of similarity of appearance to other endangered species or subspecies.
PE = The element is proposed as endangered.
PT = The element is proposed as threatened.
C = The element is a candidate for listing.
(LE) = If the element is a full species, all subspecies or varieties are listed as endangered; if the element is a subspecies, the full species is listed as endangered.
(LE-LT) = The species is formally listed as endangered in part of its range, and as threatened in the other part; or, one or more subspecies or varieties is listed as endangered, and the others are listed as threatened.
(LT-C) = The species is formally listed as threatened in part of its range, and as a candidate for listing in the other part; or, one or more subspecies or varieties is listed as threatened, and the others are candidates for listing.
(LT-(T/SA)) = One or more subspecies or populations of the species is formally listed as threatened, and the others are treated as threatened because of similarity of appearance to the listed threatened subspecies or populations.
(PS) = Partial status: the species is listed in parts of its range and not in others; or, one or more subspecies or varieties is listed, while the others are not listed.

GLOBAL AND STATE RANKS (animals, plants, ecological communities and others): Each element has a global and state rank as determined by the NY Natural Heritage Program. These ranks carry no legal weight. The global rank reflects the rarity of the element throughout the world and the state rank reflects the rarity within New York State. Intraspecific taxa are also assigned a taxon rank to reflect the intraspecific taxon's rank throughout the world. ? = Indicates a question exists about the rank. Range ranks, e.g. S1S2, indicate not enough information is available to distinguish between two ranks.

GLOBAL RANK:

G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or very few remaining acres, or miles of stream) or especially vulnerable to extinction because of some factor of its biology.
G2 = Imperiled globally because of rarity (6 - 20 occurrences, or few remaining acres, or miles of stream) or very vulnerable to extinction throughout its range because of other factors.
G3 = Either rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g. a physiographic region), or vulnerable to extinction throughout its range because of other factors.
G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
GH = Historically known, with the expectation that it might be rediscovered.
GX = Species believed to be extinct.

STATE RANK:

S1 = Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vulnerable in New York State.
S2 = Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.
S3 = Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.
S4 = Apparently secure in New York State.
S5 = Demonstrably secure in New York State.
SH = Historically known from New York State, but not seen in the past 15 years.
SX = Apparently extirpated from New York State.
SZ = Present in New York State only as a transient migrant.

SxB and SxN, where Sx is one of the codes above, are used for migratory animals, and refer to the rarity within New York State of the breeding (B) populations and the non-breeding populations (N), respectively, of the species.

TAXON (T) RANK: The T-ranks (T1 - T5) are defined the same way as the Global ranks (G1 - G5), but the T-rank refers only to the rarity of the subspecific taxon.

T1 through T5 = See Global Rank definitions above.
Q = Indicates a question exists whether or not the taxon is a good taxonomic entity.

OFFICE USE: Information for use by the Natural Heritage Program.

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*Fire Island National Seashore
Rehabilitation of Sailors Haven Marina and Ferry Dock
Environmental Assessment*

DIVISION OF ENVIRONMENTAL PERMITS

June 2001

REGION	COUNTIES	REGIONAL PERMIT ADMINISTRATORS
1	Nassau & Suffolk Telephone: (631) 444-0365	John Pavacic NYS-DEC BLDG. 40 SUNY at Stony Brook Stony Brook, NY 11790-2356
2	New York City (Boroughs of Manhattan, Brooklyn, Bronx, Queens, & Staten Island) Telephone: (718) 482-4997	John Cryan NYS-DEC One Hunters Point Plaza 47-40 21st Street Long Island City, NY 11101-5407
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster & Westchester Telephone: (845) 256-3054	Margaret Duke (Peg) NYS-DEC 21 South Putt Corners Road New Paltz, NY 12561-1696
4	Albany, Columbia, Greene, Montgomery, Rensselaer & Schenectady Telephone: (518) 357-2069	William Clarke NYS-DEC 1150 North Wescott Road Schenectady, NY 12306-2014
4 (sub-office)	Delaware, Otsego & Schoharie Telephone: (607) 652-7741	John Feltman NYS-DEC Route 10 HCR#1, Box 3A Stamford, NY 12167-9503
5	Clinton, Essex, Franklin & Hamilton Telephone: (518) 897-1234	Richard Wild NYS-DEC Route 86, PO Box 296 Ray Brook, NY 12977-0296
5 (sub-office)	Fulton, Saratoga, Warren & Washington Telephone: (518) 623- 1281	Thomas Hall* NYS-DEC County Route 40 PO Box 220 Warrensburg, NY 12885-0220
6	Jefferson, Lewis & St. Lawrence Telephone: (315) 785-2245	Brian Fenlon NYS-DEC State Office Building 317 Washington Street Watertown, NY 13601-3787
6 (sub-office)	Herkimer & Oneida Telephone: (315) 793-2555	J. Joseph Homburger* NYS-DEC State Office Building 207 Genesee Street Utica, NY 13501-2885

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7	Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga & Tompkins	Ralph Manna NYS-DEC 615 Erie Blvd. West (Env. Permits Room 206) Syracuse, NY 13204-2400
	Telephone: (315) 426-7438	
7 (sub-office)		Michael Barylski* NYS-DEC 1285 Fisher Avenue Cortland, NY 13045-1090
	Telephone: (607) 753-3095	
8	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne & Yates	Peter Lent NYS-DEC 6274 East Avon Lima Road Avon, NY 14414-9519
	Telephone: (716) 226-5390	
9	Allegany, Cattaraugus, Chautauqua, Erie, Niagara & Wyoming	Steve Doleski NYS-DEC 270 Michigan Avenue Buffalo, NY 14203-2999
	Telephone: (716) 851-7165	
9 (sub-office)		Ken Taft* NYS-DEC 182 East Union, Suite 3 Allegany, NY 14706-1328
	Telephone: (716) 372-0645	

* Deputy Regional Permit Administrator

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

NOV -8 2004

Courtney Lowrance
URS Corporation
PO Box 290
Wayne, New Jersey 07474-0290

Dear Ms. Lowrance,

This is in response to your letter dated November 1, 2004 requesting information on the presence of any federally listed threatened or endangered species and/or designated critical habitat for listed species in the vicinity of a Sailor's Haven Marina and Visitor Center, located within the Fire Island National Seashore, just west of the community of Cherry Grove, New York. The National Park Service (NPS) is preparing an environmental assessment for the proposed marina rehabilitation.

Four species of federally threatened or endangered sea turtles under the jurisdiction of the National Marine Fisheries Service (NOAA Fisheries) may be found seasonally in the waters off Long Island, including Great South Bay. Sea turtles are expected to be present in Great South Bay in warmer months, typically from May 1 to November 15. The sea turtles in these waters are typically small juveniles with the most abundant being the federally threatened loggerhead (*Caretta caretta*) followed by the federally endangered Kemp's ridley (*Lepidochelys kempi*). The waters of Long Island, including Great South Bay, have also been found to be warm enough to support federally endangered green sea turtles (*Chelonia mydas*) from June through October. These three species of turtles remain very briefly in open ocean waters, spending most of their time during the summer months in harbors and estuarine waters. Federally endangered leatherback sea turtles (*Dermochelys coriacea*) may be found in the waters off Long Island during the warmer months as well. Leatherbacks in these waters are thought to be pursuing their preferred jellyfish prey. Federally endangered North Atlantic right whales (*Eubalaena glacialis*), humpback whales (*Megaptera novaeangliae*), and fin whales (*Balaenoptera physalus*) may all also be found seasonally in New York waters, however, whales are not known to occur in Great South Bay.

Section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended, states that each Federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Any discretionary federal action that may affect a listed species must undergo Section 7 consultation. If the proposed project is conducted from May 1 – November 15, listed species may be present in the project area and the federal action agency (i.e., NPS) will be responsible for determining whether the proposed action is likely to affect any listed species. The NPS should then submit their



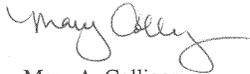
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determination along with a request for concurrence, to the attention of the Endangered Species Coordinator, NOAA Fisheries, Northeast Regional Office, Protected Resources Division, One Blackburn Drive, Gloucester, MA 01930. After reviewing this information, NOAA Fisheries would then be able to conduct a consultation under section 7 of the ESA.

Essential Fish Habitat (EFH) as designated under the Magnuson-Stevens Fishery Conservation and Management Act may be present near the proposed project. A guide to essential fish habitat designations in the Northeastern United States is located on the NOAA Fisheries' Habitat Conservation Division web site at <http://www.nero.nmfs.gov/ro/doc/index2a.htm>. Questions regarding EFH assessments in the New York area can be directed to Diane Rusanowsky, NOAA Fisheries Habitat Conservation Division at (203) 579-7071.

Should you have any questions about these comments or about the section 7 consultation process in general, please contact Julie Crocker at (978)281-9328 ext. 6530.

Sincerely,



Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

Cc: Rusanowsky, F/NER4

File Code: Sec 7 NPS NY District - Long Island Spp. Presence

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

3817 Luker Road
Cortland, NY 13045



September 25, 2003

Ms. Sherri Albrecht
Senior Environmental Scientist
URS Corporation
P.O. Box 290
Wayne, NJ 07474-0290

Dear Ms. Albrecht:

This responds to your letter of September 3, 2003, requesting information on the presence of endangered or threatened species in the vicinity of the proposed rehabilitation by the National Park Service of Sailor's Haven Marina and Visitor Center on Fire Island near Cherry Grove in Suffolk County, New York.

The piping plover (*Charadrius melodus*), a Federally listed threatened species, is known to occur in the vicinity of the proposed project site. The project's environmental documents should, therefore, include an evaluation of the potential direct, indirect, and cumulative effects of specific project-related activities on the piping plover or its habitat, and include appropriate measures, if necessary, to protect this species and its habitat. This information should be forwarded to this office and it will be used to evaluate potential impacts on the piping plover or its habitat, and to determine the need for further coordination or consultation pursuant to the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

Except for the piping plover and occasional transient individuals, no other Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. In addition, no habitat in the project impact area is currently designated or proposed "critical habitat" in accordance with provisions of the Endangered Species Act. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of Federally listed and proposed endangered and threatened species in New York* is available for your information.

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the Endangered Species Act. This response does not preclude additional Service comments under the Fish and Wildlife Coordination Act or other legislation.

Federally listed endangered and threatened marine species may be found near the project area. These species are under the jurisdiction of the National Marine Fisheries Service. You should contact Mr. Stanley Gorski, Habitat and Protected Resources Division, Area Coordinator,

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National Marine Fisheries Service, James J. Howard Marine Sciences Laboratory, 74 Magruder Road, Highlands, NJ 07732, for additional information (telephone: [732] 872-3037).

The piping plover is listed as endangered by the State of New York. The State contact for the piping plover is Mr. Dan Rosenblatt, New York State Department of Environmental Conservation, Building 40, SUNY, Stony Brook, NY 11794 (telephone: [631] 444-0305).

For additional information on fish and wildlife resources or State-listed species, we suggest you contact the appropriate New York State Department of Environmental Conservation regional office(s),* and:

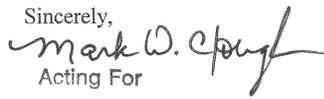
New York State Department of Environmental Conservation
New York Natural Heritage Program Information Services
625 Broadway
Albany, NY 12233-4757
(518) 402-8935

Since wetlands may be present, you are advised that National Wetlands Inventory (NWI) maps may or may not be available for the project area. However, while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes. Copies of specific NWI maps can be obtained from:

Cornell Institute for Resource Information Systems
302 Rice Hall
Cornell University
Ithaca, NY 14853
(607) 255-4864

Work in certain waters of the United States, including wetlands, may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act, the Service may concur, with or without recommending additional permit conditions, or recommend denial of the permit depending upon potential adverse impacts on fish and wildlife resources associated with project construction or implementation. The need for a Corps permit may be determined by contacting the appropriate Corps office(s).*

If you require additional information or assistance please contact Michael Stoll at (607) 753-9334.

Sincerely,

Acting For
David A. Stilwell
Field Supervisor

*Additional information referred to above may be found on our website at:
<http://nyfo.fws.gov/es/esdesc.htm>.

cc: NYSDEC, Stony Brook, NY (Environmental Permits, Attn: D. Rosenblatt)
NYSDEC, Albany, NY (Natural Heritage Program)
NMFS, Highlands, NJ (Attn: S. Gorski)
NMFS, Milford, CT (Attn: M. Ludwig)
EPA, Div. of Environmental Planning & Protection, New York, NY
COE, New York, NY
NPS, Patchogue, NY

APPENDIX B: COASTAL ZONE MANAGEMENT POLICIES

NEW YORK STATE DEPARTMENT OF STATE

COASTAL MANAGEMENT PROGRAM

Federal Consistency Assessment Form

An applicant, seeking a permit, license, waiver, certification or similar type of approval from a federal agency which is subject to the New York State Coastal Management Program (CMP), shall complete this assessment form for any proposed activity that will occur within and/or directly affect the State's Coastal Area. This form is intended to assist an applicant in certifying that the proposed activity is consistent with New York State's CMP as required by U.S. Department of Commerce regulations (15 CFR 930.57). It should be completed at the time when the federal application is prepared. The Department of State will use the completed form and accompanying information in its review of the applicant's certification of consistency.

A. APPLICANT (please print)

1. Name: National Park Service, Fire Island National Seashore

2. Address: 120 Laurel Street, Patchogue, NY 11772

3. Telephone: Area Code (631) 289-
4810_____

B. PROPOSED ACTIVITY

1. Brief description of activity:

The National Park Service is proposing to rehabilitate the existing Sailors Haven Marina and ferry dock by repairing damaged portions of the marina including bulkheads, decks, breakwaters, docks, piers, moorings, and their substructures; stabilize the structures against future damage and deterioration; correct deficiencies in the existing ferry dock to make it stable, operational, and safe for public use; dredge materials and/or otherwise make improvements to boaters' navigation in, and the functional use of the marina; and stabilize the shoreline on either side of the marina site by creating a "perched beach" through placement of coir logs/biologs and subsequent sand fill behind the log followed by planting of wetland vegetation.

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2. Purpose of activity:

The purpose of this project is to improve visitor safety and experience, and restore the eroded shoreline in order to increase the value and extent of habitat available to fish and wildlife.

3. Location of activity:

<u>Suffolk</u>	<u>East of Cherry Grove, NY</u>	<u>At Sailor's Haven Visitor Center, within Fire Island National Seashore</u>
County	City, Town, or Village	Street or Site Description

4. Type of federal permit/license required: Section 404, Section 10 - Nationwide Permits: US Army Corps of Engineers

5. Federal application number, if known: permits not yet applied for

6. If a state permit/license was issued or is required for the proposed activity, identify the state agency and provide the application or permit number, if known:

The following permits may be required for the proposed project:

NYS Dept. of Environmental Conservation – State Environmental Quality Review Act (SEORA), Navigable Waters, 401 Water Quality Certification, Tidal Wetlands, Coastal Erosion Control,

NYS Office of General Services – State owned underwater lands – Permit and Easement of use of state owned lands

permits not yet applied for

C. COASTAL ASSESSMENT Check either "YES" or "NO" for each of these questions. The numbers following each question refer to the policies described in the CMP document (see footnote on page 2) which may be affected by the proposed activity.

1. Will the proposed activity result in any of the following: YES NO

a. Large physical change to a site within the coastal area which will require the preparation of an environmental impact statement? (11, 22, 25, 32, 37, 38, 41, 43) X

b. Physical alteration of more than two acres of land along the shoreline, land under water or coastal waters? (2, 11, 12, 20, 28, 35, 44)..... X

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- c. Revitalization/redevelopment of a deteriorated or underutilized waterfront site? (1)..... X
 - d. Reduction of existing or potential public access to or along coastal waters? (19, 20)..... X
 - e. Adverse effect upon the commercial or recreational use of coastal fish resources? (9,10)..... X
 - f. Siting of a facility essential to the exploration, development and production of energy resources in coastal waters or on the Outer Continental Shelf? (29)..... X
 - g. Siting of a facility essential to the generation or transmission of energy? (27)..... X
 - h. Mining, excavation, or dredging activities, or the placement of dredged or fill material in coastal waters? (15, 35)..... X
 - i. Discharge of toxics, hazardous substances or other pollutants into coastal waters? (8, 15, 35)... X
 - j. Draining of stormwater runoff or sewer overflows into coastal waters? (33)..... X
 - k. Transport, storage, treatment, or disposal of solid wastes or hazardous materials? (36, 39)..... X
 - l. Adverse effect upon land or water uses within the State's small harbors? (4)..... X
2. Will the proposed activity affect or be located in, on, or adjacent to any of the following: YES NO
- a. State designated freshwater or tidal wetland? (44)..... X
 - b. Federally designated flood and/or state designated erosion hazard area? (11, 12, 17,)..... X
 - c. State designated significant fish and/or wildlife habitat? (7) X
 - d. State designated significant scenic resource or area? (24) X
 - e. State designated important agricultural lands? (26) X
 - f. Beach, dune or barrier island? (12) X
 - g. Major ports of Albany, Buffalo, Ogdensburg, Oswego or New York? (3) X
 - h. State, county, or local park? (19, 20) X
 - i. Historic resource listed on the National or State Register of Historic Places? (23) X
3. Will the proposed activity require any of the following: YES NO
- a. Waterfront site? (2, 21, 22) X
 - b. Provision of new public services or infrastructure in undeveloped or sparsely populated sections of the coastal area? (5)..... X
 - c. Construction or reconstruction of a flood or erosion control structure? (13, 14, 16) X

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- d. State water quality permit or certification? (30, 38, 40)..... X ___
- e. State air quality permit or certification? (41, 43) ___ X
- 4. Will the proposed activity occur within and/or affect an area covered by a State approved local waterfront revitalization program? (see policies in local program document) ___ X

D. ADDITIONAL STEPS

- 1. If all of the questions in Section C are answered "NO", then the applicant or agency shall complete Section E and submit the documentation required by Section F.
- 2. If any of the questions in Section C are answered "YES", then the applicant or agent is advised to consult the CMP, or where appropriate, the local waterfront revitalization program document*. The proposed activity must be analyzed in more detail with respect to the applicable state or local coastal policies. On a separate page(s), the applicant or agent shall: (a) identify, by their policy numbers, which coastal policies are affected by the activity, (b) briefly assess the effects of the activity upon the policy; and, (c) state how the activity is consistent with each policy. Following the completion of this written assessment, the applicant or agency shall complete Section E and submit the documentation required by Section F.

E. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with the State's CMP or the approved local waterfront revitalization program, as appropriate. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program, or with the applicable approved local waterfront revitalization program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: National Park Service; Fire Island National Seashore

Address: 120 Laurel Street, Patchogue, NY 11772

Telephone: Area Code (631) 289-4810

Applicant/Agent's Signature: _____

Date: _____

F. SUBMISSION REQUIREMENTS

- 1. The applicant or agent shall submit the following documents to the New York State Department of State, Division of Coastal Resources, 41 State Street - 8th Floor, Albany, New York 12231.
 - a. Copy of original signed form.
 - b. Copy of the completed federal agency application.

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- c. Other available information which would support the certification of consistency.
2. The applicant or agent shall also submit a copy of this completed form along with his/her application to the federal agency.
3. If there are any questions regarding the submission of this form, contact the Department of State at (518) 474-6000.

*These state and local documents are available for inspection at the offices of many federal agencies, Department of environmental Conservation and Department of State regional offices, and the appropriate regional and county planning agencies. Local program documents are also available for inspection at the offices of the appropriate local government.

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(revised 10/15/99)

DEVELOPMENT POLICIES

Policy 2 Facilitate The Siting Of Water-Dependent Uses And Facilities On Or Adjacent To Coastal Waters.

The proposed rehabilitation of Sailors Haven Marina and shoreline stabilization is consistent with this policy. The marina is a water dependent use, which currently exists in the project area and is consistent with the surrounding land uses. Repair of the marina is important in order to allow safe public access to this area of the park.

FISH AND WILDLIFE POLICIES

Policy 7 Significant Coastal Fish And Wildlife Habitats Will Be Protected, Preserved, And Where Practical, Restored So As To Maintain Their Viability As Habitats.

Sailors Haven is within the Long Island Significant Coastal Fish and Wildlife Habitat Region as designated by the New York Department of State and shown on the New York State Coastal Atlas. In addition, a unique vegetation community, the Sunken Forest Preserve, is located in close proximity to Sailors Haven Marina. As described in detail below, the project will not impair the viability of the Significant Coastal Fish and Wildlife Habitat in the area and will protect the Sunken Forest Preserve. Therefore, the project is consistent with this policy.

The Sailors Haven Marina is a heavily used visitor area within Fire Island National Seashore. The area currently contains the marina, including the ferry dock, a visitor center, and concession stand. The existing level of human use at Sailors Haven Marina reduces the value of fish and wildlife habitat in the project area. The project involves repair of an existing marina, dredging of the marina access channel and marina basin, and stabilization of the shoreline east and west of the marina. Shoreline stabilization is necessary to prevent further erosion from threatening the Sunken Forest, thereby protecting this unique natural resource.

Maintenance dredging has been conducted previously in these same areas; channel dredging was conducted in 2001 and as recently as 2004. Dredging will temporarily alter the benthic habitat and affect water quality by increasing turbidity. Fish habitat in the project area will not be significantly impaired by project activities due to the short-term nature of the dredging, applicable timing restrictions that will be adhered to, and the current level of human use of the area.

The marina will be re-constructed using the existing footprint. Disturbances to terrestrial habitats will be limited to the sand picnic areas between the marina and perimeter bulkheads. These areas have limited vegetation (small, isolated stands of beach grass) and are not viable wildlife habitats.

Shoreline stabilization activities will provide a long-term benefit and improvement to wildlife habitat since bio-engineering techniques will be utilized and the area will be planted with native wetland vegetation.

FLOODING AND EROSION HAZARDS POLICIES

Policy 11 Buildings And Other Structures Will Be Sited In The Coastal Area So As To Minimize Damage To Property And The Endangering Of Human Lives Caused By Flooding And Erosion.

There is no alternative location for the marina; it is a water dependent function with the primary purpose of facilitating access to coastal waters. It is the policy of the park to close the marina during severe storm events; the marina is not intended nor designed to be a “safe haven” in a major coastal storm. The marina is closed and boaters are directed to marina facilities on the mainland during major coastal storms. Therefore, the location of the marina should not contribute to the endangerment of human lives during major coastal storms. The continued presence of the marina will not contribute to property damage caused by flooding and erosion. The shoreline stabilization will protect landward vegetation and property from erosion. The project is consistent with this policy.

Policy 12 Activities Or Development In The Coastal Area Will Be Undertaken So As To Minimize Damage To Natural Resources And Property From Flooding And Erosion By Protecting Natural Protective Features Including Beaches, Dunes, Barrier Islands And Bluffs.

Rehabilitation of the marina will protect onshore park facilities, such as the visitor center and concession stand from erosion. There are no natural protective features in the project area. The shoreline stabilization component of the project will protect natural resources (specifically the Sunken Forest which is located adjacent to a portion of the shoreline stabilization area) from flooding and erosion. The project is consistent with this policy.

Policy 15 Mining, Excavation Or Dredging In Coastal Waters Shall Not Significantly Interfere With The Natural Coastal Processes Which Supply Beach Materials To Land Adjacent To Such Waters And Shall Be Undertaken In A Manner Which Will Not Cause An Increase In Erosion Of Such Land.

Dredging, to a depth of 6 feet below mean sea level (MSL), will be limited to the channel approaching the marina and the marina basin. Approximately 6,500 cubic yards of material will be removed from these areas and placed within the breakwater and behind the bulkheads to add stability to the structures. Material not required for the marina structure will be placed in the shoreline stabilization areas on either side of the marina. The dredging associated with the marina will have no more than an incremental impact when considered with past, present and future dredging projects along Fire Island and the shoreline stabilization component of the project will restore eroded areas. The project is consistent with this policy.

Policy 17 Non-Structural Measures To Minimize Damage To Natural Resources And Property From Flooding And Erosion Shall Be Used Whenever Possible.

It is not possible to meet all of the project goals and objectives with non-structural measures. Replacement of the marina bulkheads is necessary for continued operation of the marina; this cannot be accomplished with non-structural methods.

Non-structural measures will be utilized for shoreline stabilization. Shoreline stabilization will consist of placement of biologs (also referred to as coir logs), which are made of biodegradable materials, below mean low water. The biologs will serve as support for sand fill which will be

placed landward of the logs, creating what is referred to as a “perched beach”. Native high and low marsh vegetation will be planted at appropriate elevations to provide for long term stability of the restored area. Since non-structural methods will be implemented where feasible, the project is consistent with this policy.

RECREATION POLICIES

Policy 20 Access To The Publicly-Owned Foreshore And To Lands Immediately Adjacent To The Foreshore Or The Water’s Edge That Are Publicly-Owned Shall Be Provided And It Shall Be Provided In A Manner Compatible With Adjoining Uses.

The project is consistent with this policy; it will allow for the continuation of safe access to publicly-owned foreshore and water’s edge areas.

Policy 21 Water-Dependent And Water-Enhanced Recreation Will Be Encouraged And Facilitated, And Will Be Given Priority Over Non-Water-Related Used Along The Coast.

The project is consistent with this policy; the project is water-dependent and the primary purpose is to provide for water-dependent recreation. There are no paved roads providing public access to this section of FIIS. For all essential purposes, public access to this section of the park is via ferries and boats only. The current marina, as well as the design for the rehabilitated marina, includes pump-out facilities. Toilet facilities are provided in the adjacent visitor center.

Policy 22 Development, When Located Adjacent To The Shore, Will Provide For Water-Related Recreation, Whenever Such Use Is Compatible With Reasonably Anticipated Demand For Such Activities, And Is Compatible With The Primary Purpose Of The Development.

The project is consistent with this policy; the primary purpose of the project is to provide for water related recreation within FIIS and facilitate water transportation to the park.

EMERGENCY AND ICE MANAGEMENT POLICIES

Policy 28 Ice Management Practices Shall Not Interfere With The Production Of Hydroelectric Power, Damage Significant Fish And Wildlife And Their Habitats, Or Increase Shoreline Erosion Or Flooding.

The marina is closed seasonally and ice management practices are not employed; therefore, this policy is not applicable.

WATER AND AIR RESOURCES POLICIES

Policy 30 Municipal, Industrial, And Commercial Discharge Of Pollutants, Including But Not Limited To, Toxic And Hazardous Substances, Into Coastal Waters Will Conform To State And National Water Quality Standards.

There will be no municipal, industrial, or commercial discharge of pollutants, as defined by this policy, associated with the marina rehabilitation. A newly designed pump-out facility for boaters

will be stationed at the end of the marina and will be available for public use. Use of the pump-out facility will lead to overall water quality improvements in the area. The project is consistent with this policy.

Policy 35 Dredging And Filling In Coastal Waters And Disposal Of Dredged Material Will Be Undertaken In A Manner That Meets Existing State Permit Requirements, And Protects Significant Fish And Wildlife Habitats, Scenic Resources, Natural Protective Features, Important Agricultural Lands, And Wetlands.

Consultation with the National Marine Fisheries Service (NMFS) and the US Fish and Wildlife Service (USFWS) has been conducted to ensure that impacts to fish and other aquatic species will be minimized. Dredged material, if of suitable grain size, will be deposited within the re-constructed breakwater, and between the bulkheads to provide stability to the structure. Excess material will be used to stabilize the shoreline east and west of the marina. State and federal permits will be obtained prior to project initiation. Dredging activities will take place in accordance with all permit conditions. The project is consistent with this policy.

Policy 38 The Quality And Quantity Of Surface Water And Groundwater Supplies, Will Be Conserved And Protected, Particularly Where Such Waters Constitute The Primary Or Sole Source Of Water Supply.

The project will not affect surface water or groundwater drinking supplies; therefore, this policy is not applicable.

Policy 40 Effluent Discharged From Major Steam Electric Generating And Industrial Facilities Into Coastal Waters Will Not Be Unduly Injurious To Fish And Wildlife And Shall Conform To State Water Quality Standards.

No effluent will be generated by the proposed project. In addition, the project is not a steam electric generating facility or industrial facility; therefore, this policy is not applicable.

Policy 44 Preserve And Protect Tidal And Freshwater Wetlands And Preserve The Benefits Derived From These Areas.

To minimize impacts to wetlands, the marina will be re-constructed using the footprint of the existing marina, and shoreline stabilization will be limited to unvegetated areas. Approximately 1.9 acres of estuarine intertidal wetlands will be impacted as a result of the shoreline stabilization component of the project. The shoreline stabilization will be conducted using non-structural measures and native wetland vegetation will be planted at appropriate elevations. Therefore, the project is consistent with this policy.

National Park Service

U.S. Department of the Interior



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.