

National Park Service
U.S. Department of the Interior

Cape Lookout National Seashore
North Carolina



Harkers Island Passenger Ferry Departure Site

Environmental Assessment

CALO189473



February 2013

**United States Department of the Interior
National Park Service**

**Cape Lookout National Seashore
Harkers Island, North Carolina**

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Located 3 miles off the North Carolina mainland coast and occupying more than 29,000 acres of land and water in Carteret County, North Carolina, Cape Lookout National Seashore (the park) is home to the historic Cape Lookout Lighthouse and surrounding structures, unique natural resources, prime fishing locations, and miles of beaches that support a variety of recreational activities. The Harkers Island Visitor Center serves as the primary gateway to the park and will serve as a passenger ferry departure site beginning in 2014. The National Park Service (NPS) proposes to improve existing gateway facilities at the Harkers Island Visitor Center to better serve as a departure site for passenger ferry service. Actions needed to achieve this goal include the improvement of existing facilities to provide areas for orientation, ticketing, passenger staging/waiting, parking, and adequate mooring space for both NPS and ferry concessioner boats.

This document examines two alternatives: a no-action alternative (alternative A) and proposed improvements (alternative B). The National Park Service has identified alternative B as the NPS Preferred Alternative because alternative B best meets the project objectives to provide visitor's with an overall gateway experience at the park, dedicated areas for ferry passenger ticketing and staging, additional restroom facilities, increased dock space that meets federal accessibility standards, improved circulation, and a safe and high-quality visitor experience. In addition, alternative B was identified as the environmentally preferable alternative that least damages the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources.

Implementation of the NPS Preferred Alternative would result in short-term minor adverse impacts on water quality and essential fish habitat; long-term negligible adverse impacts on water quality and essential fish habitat; long-term minor adverse impacts on shellfish waters, floodplains, vegetation, and operations and infrastructure; and long-term beneficial impacts on visitor use and experience, operations and infrastructure, and socioeconomic resources.

Note to Reviewers and Respondents:

If you wish to comment on this Environmental Assessment, you may mail comments by March 27, 2013 to the name and address below or you may post them electronically at <http://parkplanning.nps.gov/caloc>. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. While you

can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. Requests for further information can be directed to the address below:

Patrick Kenney, Superintendent
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131 Charles St.
Harkers Island, NC 28531

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ACRONYMS AND ABBREVIATIONS

CFR – Code of Federal Regulations

Core Sound Museum – Core Sounds Waterfowl & Heritage Center

National Register – National Register of Historic Places

NPS – National Park Service

the park – Cape Lookout National Seashore

Shellfish Section – Shellfish Sanitation and Recreational Water Quality Section

U.S. – United States

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INTRODUCTION: PURPOSE AND NEED

Located 3 miles off the North Carolina mainland coast and occupying more than 29,000 acres of land and water in Carteret County, North Carolina, Cape Lookout National Seashore (the park) was established to “preserve for public use and enjoyment an area in the State of North Carolina possessing outstanding natural and recreational values” (NPS 1982). Included within the park is the historic Cape Lookout Lighthouse and surrounding structures, noteworthy natural resources, prime fishing locations, and miles of beaches that support a variety of recreational activities. The only access to these resources is by National Park Service (NPS) authorized ferry and tour operators or private boats. In the southern portion of the park, ferry service to Shackleford Banks and the Cape Lookout Lighthouse is generally based out of the Towns of Beaufort and Morehead City and from Harkers Island (figure 1). As part of the *Commercial Services Plan Environmental Assessment/Assessment of Effect*, the National Park Service plans to provide passenger ferry service from the Harkers Island Visitor Center boat basin to Shackleford Banks and the Cape Lookout Lighthouse area on the southern South Core Banks, as well as service from either Beaufort and Morehead City to Shackleford Banks and the Cape Lookout Lighthouse area. The *Cape Lookout National Seashore Passenger Ferry Departure Site Environmental Assessment/Assessment of Effect* identified the NPS ferry departure site as the Front Street site in Beaufort. The National Park Service proposes to improve existing gateway facilities at the Harkers Island Visitor Center to better serve as a departure site for passenger ferry service. Actions needed to achieve this goal include the improvement of existing facilities to provide areas for orientation, ticketing, passenger staging/waiting, parking, and adequate mooring space for both NPS and ferry concessioner boats.

This environmental assessment evaluates two alternatives: a no-action alternative and one action alternative. The environmental assessment analyzes the potential impacts these alternatives would have on the natural, cultural, and human environment. This document has been prepared in accordance with the National Environmental Policy Act of 1969, as amended; regulations of the Council on Environmental Quality (40 CFR 1508.9); and NPS Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making. An assessment of effect will be prepared concurrently with but separately from this environmental assessment to comply with section 106 of the National Historic Preservation Act of 1966, as amended.

This environmental assessment also fulfills several other compliance needs. First, the Magnuson-Stevens Fishery Conservation and Management Act requires that federal agencies consult with the National Marine Fisheries Service to determine potential impacts on essential fish habitat and what measures to avoid, minimize, mitigate, or otherwise offset adverse effects on essential fish habitat. The discussion of

essential fish habitat included in this environmental assessment serves as an essential fish habitat assessment. Second, all portions of the study area are within the 100-year floodplain, and the addition of the restroom and ticketing facilities qualify as a Class I action under Director's Order 77-2. Therefore, a Statement of Findings for floodplains has been prepared and is included in appendix B. Third, the proposed improvements would take place within the coastal zone; therefore, a Consistency Determination is included in appendix C as required by the Coastal Zone Management Act.

PURPOSE OF AND NEED FOR ACTION

The purpose of the proposed action is to improve the gateway facilities at the Harkers Island Visitor Center to better serve as a departure site for passenger ferry service. This project further identifies and implements the improvements outlined in the park's 2008 Commercial Service Plan.

Starting in 2014, the existing facilities at the Harkers Island Visitor Center will serve as a departure site for a concession ferry service to the Cape Lookout Lighthouse area on South Core Banks and to Shackleford Banks. Annual ferry passenger forecasts predict between 30,000 and 40,000 visitors per year in the next few years. Within 10 years, the park could see over 50,000 ferry passengers per year (NPS 2010). These forecasts are based on multiple years of data as provided by authorized ferry operators for recent years. The project is needed at this time to improve the capacity of the existing facilities at the Harkers Island area to accommodate the concession ferry operation consistent with the high level of service that the National Park Service desires to provide park visitors.

Visitor contact for Cape Lookout National Seashore, especially for those visiting the lighthouse on South Core Banks, is currently provided in the existing Harkers Island Visitor Center. Without improvements to the existing facilities, when ferry service begins at this site in 2014, ticketing, passenger staging/waiting for ferries, and orientation would take place at the existing visitor center. A counter within the existing visitor center serves purchases from the gift store and as the primary visitor information desk. This counter may also serve ferry ticketing unless another area of the visitor center was repurposed. Some passenger staging could take place outside; however, visitors would be exposed to the elements during their wait. The existing public restroom facilities would serve all visitors (including the ferry passengers) and would also be used for limited changing and filling of water bottles. During times when the visitor center is closed and the ferry is still operating, the facilities would not be available without alterations to the building that would allow for the restrooms to be open while securing the rest of the building. The project is needed because current facilities at the Harkers Island area offer limited capacity to accommodate the anticipated increase in visitors at this site.

The project would also address needs related to vehicular circulation, which is inefficient and offers limited connectivity to the Core Sound Waterfowl Museum and Heritage Center (Core Sound Museum). The current infrastructure for vehicular circulation includes three parking lots (a main visitor center parking area with 66 spaces, the picnic area parking lot with 40 spaces, and the Core Sound Museum parking lot with 78 parking spaces), a single main access road (Island Road), and Cape Point Drive (connecting Island Road and the Core Sound Museum). Island Road provides access to and egress from the visitor center area before ending next to the boat basin.



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0 30 Miles (approx.)

Figure 1
Project Location Map

The park's Passenger Ferry Transportation Feasibility Study anticipated that approximately 100 parking spaces would be needed for the ferry service, in addition to the current number of parking spaces used, exceeding the capacity of the main visitor center lot (NPS 2010). During peak periods, visitors would need to use parking spaces at the Core Sound Museum and the picnic area. Visitors who may need to use parking at the Core Sound Museum would have to turn around in one of the parking lots at the Harkers Island Visitor Center before going back out on Island Road to turn onto Cape Point Drive and then turning into the Core Sound Museum parking lot. The full capacity of the visitor center and picnic area parking lots may not be realized during heavy use due to the lack of lines delineating the parking spots in the lots (otherwise known as striping). The lack of striping also increases the likelihood of cars cutting through the parking lot, independent of desired circulation patterns.

Current pedestrian circulation through the site does not fully integrate the Core Sound Museum and the Harkers Island Visitor Center facilities. There is an informal connection to the nature trail system, limited pedestrian pathways separate from vehicle roads, and limited accessibility. The current infrastructure for pedestrian circulation includes a gravel pathway between the Core Sound Museum and the Harkers Island Visitor Center, concrete walkways connecting the visitor center parking lot and boat basin to the visitor center, and nature trails north of the visitor center and adjacent to the Core Sound Museum. Visitors parking in the Core Sound Museum lot walk back to the visitor center area either along the existing gravel pathway north of Harkers Island Road or along Harkers Island Road itself. Visitors depend on signs to guide them to this path because the visitor center cannot be seen from the Core Sound Museum. No crosswalks are currently provided across Cape Point Drive.

Similarly, there are no crosswalks provided across Harkers Island Road for visitors walking between the picnic area and the main parking lot. These visitors must walk in the grass or share the roadway with vehicles. Lastly, there is currently no continuous walkway connecting the visitor center to the nature trails that showcase the island's ecosystems further to the north.

The existing boat basin provides dock space for up to 12 slips (depending upon boat size), which includes the boat ramp and associated piers. The current dock configuration provides sufficient capacity to provide mooring for the boats used for NPS operations but would not be able to provide overnight mooring for the anticipated ferry fleet. As a result, the National Park Service would not be able to offer overnight mooring for the ferry fleet. In addition, passenger loading and unloading would likely occur in the area of the boat ramp and docks, an area that is also used for loading/unloading bulk materials and for park operations fueling. The infrastructure surrounding the boat basin provides basic walkways for NPS staff use, and current design presents a tripping hazard where the wooden walkway interfaces with the concrete walkway. These existing facilities are not compliant with Architectural Barriers Act Accessibility Standards. The project is needed at this time because the existing dock facilities would not easily and safely provide for accessible loading and unloading of passengers.

Objectives for the proposed action are in line with the park's Commercial Service Plan and include:

- Improve the visitor's overall gateway experience to the park
- Prepare visitors for their visit to the islands
- Provide dedicated areas for ferry passenger ticketing and staging
- Provide additional public restroom facilities

- Provide increased dock space, with sufficient dedicated mooring locations to serve NPS operations and to allow the ferry fleet to moor in the basin
- Provide improved circulation through reconfiguration of roadways and walkways at the site, including road striping, crosswalks, and both pedestrian and vehicle signage
- Provide dock facilities that meet federal accessibility standards
- Provide a safe environment for staff and visitors
- Provide a high-quality visitor experience in which visitors to the site are able to intuitively find their way and are aware of the opportunities available to them

PROJECT AREA DESCRIPTION

Cape Lookout National Seashore’s Harkers Island area and visitor center is approximately 30 minutes driving distance from the Town of Beaufort, North Carolina. The project area includes approximately 91 acres on the eastern end of Harkers Island managed by the National Park Service (figure 2). The visitor center and associated facilities provide the only NPS-managed gateway to the park’s barrier islands. The project area includes a cluster of structures at the southern end of the NPS property (Shell Point) as well as trails throughout the northern portion of the property.

The proposed improvements discussed in this environmental assessment are focused on the developed area surrounding the Harkers Island Visitor Center, mostly in the southeastern corner of the NPS property. This area includes the following key elements:

- Harkers Island Visitor Center
- Boat basin, docks, and boat ramp
- Main visitor parking lot
- Core Sound Museum parking lot
- Picnic area and parking lot
- Access roads
- Area walkways and trails



Harkers Island Visitor Center

HISTORY AND SIGNIFICANCE OF CAPE LOOKOUT NATIONAL SEASHORE

The park was authorized in 1966 to “preserve for public use and enjoyment an area in the State of North Carolina possessing outstanding natural and recreational values” (NPS 1982). The establishment of the park allowed the National Park Service to provide visitors with the opportunity to experience major natural systems in conjunction with broad themes of American history. The history of the United States in this area is presented by the National Park Service through the Cape Lookout Village and Portsmouth Village. These historic districts and the Core Sound Museum exhibits present American life as it existed in the 19th century along the coast of North Carolina.

Despite the difficulties associated with living on dynamic barrier islands, the Outer Banks have been inhabited for centuries by fishermen, farmers, and others. The lighthouses found on these coastal islands, in addition to the Coast Guard and Life-Saving Stations, have provided for safe navigation for ships traveling along the coast. Lighthouses have been located at Cape Lookout since 1812 to direct ships away from its dangerous shoals. The current lighthouse stands 163 feet tall, was constructed in 1859, and is the most popular historic resource in the park, attracting tens of thousands of visitors a year. Until recently, the United States (U.S.) Coast Guard has been responsible for maintaining and administering the lighthouse. Today, the National Park Service maintains the structure, while the U.S. Coast Guard maintains the operation of the light (NPS 2005).

The islands contained within the park are dynamic barrier islands along the Atlantic Coastal Plain. This dynamic environment includes the ever changing profile of the islands and the wildlife species that inhabit the islands. The park also provides recreational fishing, shellfishing, hunting, beach combing, swimming, camping, and picnicking (NPS 1982).

PROJECT BACKGROUND

Previous and related planning studies have been completed for the park, as well as specific plans for the ferry service. These plans were reviewed to provide additional information and guidance for the proposed action. In addition, internal and public scoping was undertaken to allow agencies and interested parties to provide additional information regarding specific portions of the proposed action. The studies used and scoping efforts undertaken are summarized below.

PREVIOUS AND RELATED PLANNING STUDIES

Several plans and studies have informed and contributed to the development of alternatives for the *Harkers Island Passenger Ferry Departure Site Environmental Assessment*. These include the *Cape Lookout National Seashore General Management Plan/Development Concept Plan* (NPS 1982), the *Cape Lookout National Seashore Amendment to the General Management Plan/Environmental Assessment* (NPS 2001), the *Commercial Services Plan Environmental Assessment/Assessment of Effect* and *Commercial Services Plan “Finding of No Significant Impact”* (NPS 2007 and 2008, respectively), the *Cape Lookout National Seashore Passenger Ferry Transportation Feasibility Study* (NPS 2010), and the *Cape Lookout National Seashore Passenger Ferry Departure Site Environmental Assessment/Assessment of Effect* (NPS 2011).

The *Cape Lookout National Seashore General Management Plan/Development Concept Plan and Environmental Impact Statement* (NPS 1982) laid out the initial planning and management policy for the park. The plans in the general management plan/development concept plan included providing ferry service to the South Core Banks and Shackleford Banks from a marina at the “gateway port.” Since the publication of the general management plan/development concept plan, the National Park Service has identified two gateway passenger ferry departure sites to serve the lighthouse area of South Core Banks and Shackleford Banks.



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Figure 2
Project Area Map

The *Cape Lookout National Seashore Amendment to the General Management Plan/Environmental Assessment* (NPS 2001) was developed to improve plans for overnight accommodations and transportation within the park. Transportation would be improved through long-term concessions contracts to provide ferry service within the park. The amendment suggested that contract holders would transport visitors from Harkers Island to the Cape Lookout Lighthouse Keeper's Quarters area. The recommendation for using long-term concessions contracts was further examined in the Commercial Services Plan and analyzed in this document.

The *Commercial Services Plan Environmental Assessment* (NPS 2007) and “**Finding of No Significant Impact**” (NPS 2008) provide guidance for NPS managers to authorize and implement the actions necessary to conduct commercial visitor services at the park. It describes the existing commercial visitor services at the park and makes recommendations on how to improve the management and operation of commercial services while sustaining a rustic and mostly unstructured visitor experience. In part, it directs the National Park Service to provide passenger ferry service from the Harkers Island Visitor Center boat basin to Shackleford Banks and the Cape Lookout Lighthouse area on the southern South Core Banks and also to provide service from either Beaufort or Morehead City to Shackleford Banks and the Cape Lookout Lighthouse area. Establishment of a long-term concessions contract to manage this service would allow the park to be consistent with the Concessions Management Improvement Act of 1998.

The *Cape Lookout National Seashore Passenger Ferry Transportation Feasibility Study* (NPS 2010) identifies options for establishment of ferry service operating under long-term concession contracts from two gateway ferry departure sites. It is a technical study documenting the capital investment and operational considerations associated with establishment of passenger ferry service from Harkers Island and the Beaufort/Morehead City area to the park. Many of the program elements proposed in this environmental assessment are detailed in this study, and the data gathered and developed as part of this study inform this environmental assessment.

The *Cape Lookout National Seashore Passenger Ferry Departure Site Environmental Assessment/Assessment of Effect* (NPS 2011) examines NPS alternatives analyzed with the purpose of allowing for the park to be consistent with the Concessions Management Improvement Act of 1998 by establishing and managing a concessions contract for a passenger ferry system that would provide access to the park from public lands, while providing a unified message and interpretation of the park and its resources. The NPS selected alternative included a ferry departure site at Front Street in Beaufort and at the Harkers Island area of the park.

SCOPING

The scoping process is initiated at the beginning of a National Environmental Policy Act project to identify the range of issues, resources, and alternatives to address in the environmental assessment. Typically, both internal and public scoping is conducted to address these elements. Public scoping includes any interested agency or agency with jurisdiction by law or expertise and interested members of the general public to obtain early input. The planning process for the proposed action was initiated during the internal, agency, and public scoping for the Commercial Services Plan in 2007. Additional study to document the capital investment and operational considerations associated with establishing ferry service at the Harkers Island Visitor Center took place as part of the Passenger Ferry Transportation Feasibility Study (NPS 2010) mentioned above. Public scoping continued with the *Passenger Ferry Departure Site Environmental*

Assessment/Assessment of Effect. This process introduced plans to address ferry service and initiated discussions with interested agencies and individuals.

Formal scoping for the *Harkers Island Passenger Ferry Departure Site Environmental Assessment* began in September 2012, when staff from the park and their consultants conducted internal scoping. The National Park Service sent out a press release on September 13, 2012 to notify interested parties of the project and of the upcoming public meeting. The National Park Service held a public comment period from September 14, 2012 to October 15, 2012 to solicit input on the proposed action. The National Park Service hosted a public open house the evening of September 20, 2012 at the Core Sound Museum. At this time, the National Park Service solicited public input on the site improvements proposed to better accommodate ferry service at the Harkers Island Visitor Center area. The meeting also provided the public with information on the purpose and need of the project, the planning process that would be followed, and instructions on how to provide feedback. As part of this scoping effort, several agencies were contacted, including the North Carolina State Historic Preservation Officer, the North Carolina State Environmental Review Clearinghouse, the U.S. Fish and Wildlife Service, and the National Oceanic and Atmospheric Association. For further scoping and public participation information, see “Chapter 5: Consultation and Coordination” and “Appendix A: Relevant Correspondence.”

PLANNING ISSUES AND CONCERNS

During the scoping process, specific considerations and concerns were identified as critical to providing ferry service at the Harkers Island Visitor Center area. The following issues and concerns were identified as part of the planning process: providing visitors with a cohesive gateway experience, maintaining the connection to the Core Sound Museum, and improving visitor safety and the Architectural Barriers Accessibility Act Standards accessibility of the site. Along with the purpose and need for the proposed action, these topics guided the development of alternatives and contributed to the selection of impact topics, as identified in the next section.

Providing visitors with a cohesive gateway experience. Currently, the Harkers Island Visitor Center is the only gateway to the outer banks within the park. The National Park Service orients visitors to the park’s resources at this location and offers a number of ways to experience the park at this site, as well. Through the established facilities, the National Park Service is able to provide interpretation of the park’s natural and cultural resources and an introduction to relevant safety and resource protection information. The gateway experience is enhanced by improvements for visitor comfort and accessibility where visitors can easily access information as well as amenities such as restrooms and adequate parking. Any proposals made in this plan should seek to provide visitors with a cohesive gateway experience.

Maintaining the connection to the Core Sound Museum. The Core Sound Museum interprets coastal communities of the Down East Carteret County in which culture, community, education, economy, and the environment are fully integrated for a high quality of life for all residents. It operates on land leased from the National Park Service and complements the interpretation offered at the Harkers Island Visitor Center. Therefore, any proposals made in this plan should seek to maintain a continued connection to the Core Sound Museum.

Improving visitor safety and the Architectural Barriers Accessibility Act Standards accessibility of the site. The infrastructure surrounding the boat basin currently presents a tripping hazard where the wooden walkway interfaces with the concrete walkway, and the existing boat basin facilities are not compliant with the Architectural Barriers Accessibility Act Standards, limiting universal access. The proposed alternatives should seek to improve visitor safety within the project area and comply with the Architectural Barriers Accessibility Act Standards to the greatest extent possible.

REGULATORY ISSUES AND MANAGEMENT CONCERNS

Based on discussions with NPS staff and planning team members, implementation of the Harkers Island Passenger Ferry Departure Site Environmental Assessment should not require any changes to existing legislation or management policies. Prior to the implementation of the proposed action, the National Park Service would need to obtain appropriate local, state, and federal approval for some of the proposed activities. A list of permits, approvals, and regulatory requirements associated with the proposed action are as follows:

- Federal Consistency Determination concurrence for an action in the coastal zone from the North Carolina Division of Coastal Management
- National Pollution Discharge and Elimination System Stormwater Permit
- Approved Erosion and Sedimentation Control Plan
- Section 10 of the Rivers and Harbors Appropriations Act permit for an action in navigable waters
- Section 404 of the Clean Water Act for fill in waters of the United States.
- concurrence from the State Historic Preservation Officer per Section 106 of the National Historic Preservation Act
- concurrence from the U.S. Fish and Wildlife Service and National Marine Fisheries Service per Section 7 of the Endangered Species Act
- concurrence from National Marine Fisheries Service regarding impacts on essential fish habitat per the Magnuson-Stevens Fishery Conservation and Management Act

These are described further in “Chapter 5: Consultation and Coordination.”

IMPACT TOPICS RETAINED FOR ANALYSIS

Impact topics are resources of concern within the project area that could be affected, either beneficially or adversely, by the range of alternatives presented in this environmental assessment. They were identified based on the issues raised during scoping; site conditions; federal laws, regulations, Executive Orders, NPS *Management Policies 2006* (NPS 2006), and Director’s Orders; and staff knowledge of the park’s resources.

Impact topics identified and analyzed in this environmental assessment are listed below along with a brief rationale for the selection of each impact topic. They include water quality, essential fish habitat, shellfish waters, floodplains, vegetation, visitor use and experience, operations and infrastructure, and socioeconomic resources. Each impact topic is further discussed in detail in “Chapter 3: Affected Environment” of this document.

Water Quality. NPS *Management Policies 2006* (NPS 2006) states that the National Park Service will “take all necessary actions to maintain or restore the quality of surface waters and ground waters within the parks consistent with the Clean Water Act and all other applicable federal, state, and local laws and regulations.” The project area is located next to the confluence of Core and Back Sounds. The proposed action would develop new infrastructure within the existing boat basin and has the potential to release pollutants into the water. Therefore, the impact topic of water quality is addressed.

Essential Fish Habitat. The Magnuson-Stevens Fishery Conservation and Management Act requires that federal agencies consult with the National Marine Fisheries Service to determine potential impacts on essential fish habitat and what measures to avoid, minimize, mitigate, or otherwise offset adverse effects on essential fish habitat. There is a small area, approximately 175 square feet in size, of submerged aquatic vegetation in the southeast corner of the boat basin. This submerged aquatic vegetation is protected under the Magnuson-Stevens Fishery Conservation and Management Act as essential fish habitat. Proposed construction activities could result in temporary impacts to this essential fish habitat; therefore, the impact topic of essential fish habitat is addressed. As required for compliance with Magnuson-Stevens Fishery Conservation and Management Act, this environmental assessment will serve as an essential fish habitat assessment.

Shellfish Waters. The North Carolina Division of Marine Fisheries Shellfish Sanitation Section (Shellfish Section) classifies coastal waters by their suitability for shellfish harvesting for human consumption in accordance with the National Shellfish Sanitation Program. Proposed construction of new docks would take place in a way so that impacts on shellfish waters are mitigated. Therefore, the impact topic of shellfish waters is addressed.

Floodplains. Executive Order 11988, “Floodplain Management,” and NPS Director’s Order 77-2: *Floodplain Management*, require an examination of impacts to floodplains and potential risk involved in placing facilities within floodplains. All portions of the study area are within the 100-year floodplain, and the addition of the restroom and ticketing facilities qualify as a Class I action under Director’s Order 77-2. Therefore, the impact topic of floodplains is addressed, and a Statement of Findings for floodplains has been prepared and is included in appendix B.

Vegetation. The NPS *Management Policies 2006* (NPS 2006) and other NPS and park policies provide general direction for the protection of vegetation. Selective thinning of the wooded area west of the main parking lot would alter the species composition in this area. Therefore, the impact topic of vegetation is addressed.

Visitor Use and Experience. Enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks (NPS 2006). The National Park Service strives to provide opportunities for forms of enjoyment that are uniquely suited and appropriate to the natural and cultural resources found in parks. The proposed action is meant to enhance the visitor experience, which encompasses interpretation, understanding, enjoyment, safety, circulation, and accessibility of the park. Because the proposed action would result in changes to the visitor experience, the impact topic of visitor use and experience is addressed.

Operations and Infrastructure. The proposed action could result in changes to park operations and infrastructure within the project area. Therefore, the impact topic of operations and infrastructure is addressed.

Socioeconomic Resources. NPS *Management Policies 2006* (NPS 2006) requires the National Park Service to identify any impact to socioeconomic resources when determining the feasibility of a proposed action. The proposed action could result in temporary and long-term changes to the economics of the local community. Therefore, the impact topic of socioeconomic resources is addressed.

IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

Geologic Resources. The Coastal Plain in North Carolina is a relatively flat area that emerged from the former continental shelf of the Cretaceous and Tertiary Periods. This plain extends from New Jersey down to Georgia and continues on westward as the Gulf Coastal Plain. No unique geologic formations exist beneath the study area, and the proposed action would be confined to upper layers of terrestrial and submerged soils. Therefore, the impact topic of geologic resources was considered but dismissed from further analysis.

Soils and Topography. NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. NPS *Management Policies 2006* (NPS 2006) and other NPS and park policies provide general direction for the protection of soils. Topography in the terrestrial portion of the study is relatively flat (the highest point being approximately 6 feet above mean sea level). The proposed action would not noticeably alter the existing topography. The soils within the area of proposed improvements are predominantly Leon sands, which are poorly drained and have a relatively shallow (12 inches or less) depth to the water table (NRCS 2012). There would be a relatively small (less than 0.17 acres scattered among minor improvements within the project area) increase in impervious surface, but otherwise, the soil composition and characteristics of the project area would remain unchanged. Therefore, the impact topic of soils and topography was considered but dismissed from further analysis.

Prime and Unique Farmland. Prime farmland is one of several designations made by the U.S. Department of Agriculture to identify important farmlands in the United States. It is important because it contributes to the nation's short- and long-range needs for food and fiber. In general, prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable level of acidity or alkalinity, an acceptable content of salt or sodium, few to no rocks, and permeable soils (designated as prime farmland soils). Although Leon sands are classified as a farmland of unique importance (NRCS 2012), agricultural use of this small developed site is not practical and no permanent change in these soils would result from the proposed action. Therefore, the impact topic of prime and unique farmland was considered but dismissed from further analysis.

Wetlands. Executive Order 11990, "Protection of Wetlands" and NPS Director's Order 77-1: *Wetland Protection* require an examination of impacts on wetlands. According to a review of the U.S. Fish and Wildlife Service National Wetland Inventory and confirmation by park staff, wetland habitat within the area of proposed improvements is limited to the estuarine area within the boat basin. Impacts on water quality and submerged aquatic vegetation associated with these actions are discussed under the impact topics of water quality and essential fish habitat. These impacts are not expected to cause any permanent change in the functions or values of this wetland area. Therefore, the impact topic of wetlands was considered but dismissed from further analysis.

According to NPS Director's Order 77-1: *Wetland Protection*, a Statement of Findings is required when an action is to occur within a wetland. Section 4.2 (b) of NPS Procedural Manual 77-1: *Wetland Protection* identifies actions that are excepted from a Statement of Findings, including small boat ramps/launches, piers, or docks with total wetland impact of 0.1 acre or less (NPS 2008). The proposed action meets this exception criteria, as there would be less than 0.1 acres of wetland impact. Therefore, a Statement of Findings for wetlands is not required.

Wilderness. The Wilderness Act (Public Law 88-577) defines wilderness as “an area where the earth and its community of life are untrammelled by man, where man himself is a visitor and does not remain.” The intent of the act is to “secure for the American people of present and future generations the benefits of an enduring resource of wilderness.” There is no wilderness within the project area. Therefore, the impact topic of wilderness was considered but dismissed from further analysis.

Wildlife and Wildlife Habitat. NPS policy is to protect the natural abundance and diversity of all naturally occurring wildlife communities. The NPS *Management Policies 2006* (NPS 2006), NPS Director's Order 77: Natural Resources Management, and other NPS policies provide general direction for the protection of wildlife and wildlife habitat. The study area contains a variety of upland and aquatic species. Many of the upland wildlife species are adapted to the dynamic processes that govern barrier island ecosystems and would not be noticeably affected by the proposed action; however, some marine species such as shellfish or fish managed by the Magnuson-Stevens Fishery Conservation and Management Act may be more sensitive to disturbance; therefore, impacts on these species are covered under the impact topic of shellfish waters and essential fish habitat, respectively. Essential fish habitat is the limit of ecologically critical areas, Wild and Scenic Rivers, or other unique natural resources identified within the area of proposed improvements. The impact topic of wildlife and wildlife habitat was considered but dismissed from further analysis.

Special Status Species. The Endangered Species Act mandates that all federal agencies consider the potential impacts of their actions on species listed as threatened or endangered in order to protect the species and preserve their habitats. Although a number of special status species are found throughout the park, no federally threatened or endangered species or their critical habitat are known to exist within the area of proposed improvements. The National Park Service has coordinated with the U.S. Fish and Wildlife Service and National Marine Fisheries Service on this project and has incorporated mitigation measures recommended for a similar project (found in chapter 2) to avoid impacts on sea turtles and manatees, although encounters with these animals within the project area are highly unlikely. Additionally, although it would be unexpected, if any federally threatened or endangered species was encountered during construction activities, work would cease and consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service would resume. Because no federally threatened or endangered species or their critical habitat are known to exist within the area of proposed improvements, the National Park Service anticipates no effect under the Endangered Species Act on those species potentially found within the park and within Carteret County.

Archeological Resources. The NPS Southeast Archeological Center conducted archeological testing in the areas proposed for improvement as of June 2012. The only cultural materials identified during this testing were interpreted as modern materials in construction fill. The Southeast Archeological Center report notes that all the soil profiles appeared to be natural with no evidence of prehistoric or significant historic artifacts, features, or evidence of intact cultural deposits (NPS 2012a). If, during future design

phases, improvements are proposed outside the footprint of those areas covered by the June 2012 testing, the park would conduct additional testing prior to construction. No archeological resources would be expected; however, if any were encountered, the NPS would consult with the North Carolina State Historic Preservation Officer regarding treatment. Therefore, the impact topic of archeological resources was considered but dismissed from further analysis.

In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) would be followed.

Cultural Landscapes. According to the National Park Service's *Cultural Resource Management Guideline* (Director's Order 28), a cultural landscape is "a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions" (NPS 2002). There are no cultural landscapes within the project area. Therefore, the impact topic of cultural landscapes was considered but dismissed from further analysis.

Historic Structures. A historic structure is defined by the National Park Service as "a constructed work, usually immovable by nature or design, consciously created to serve some human act" (NPS 2002). To be listed on or eligible for listing on the National Register of Historic Places (National Register), a site, structure, object or district must possess historic integrity of those features necessary to convey its significance, particularly with respect to location, setting, design, feeling, association, workmanship, and materials. The National Register Bulletin #15: *How to Apply the National Register Criteria for Evaluation* provides a comprehensive discussion of these characteristics. There are no structures listed on or eligible for listing in the National Register within the project area. Therefore, the impact topic of historic structures was considered but dismissed from further analysis.

Ethnographic Resources and Sacred Sites. An ethnographic resource is defined 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" (NPS 2002). There are no known ethnographic resources, including sacred sites, within the study area. Therefore, the impact topic of ethnographic resources and sacred sites was considered but dismissed from further analysis.

Indian Trust Resources. Secretarial Order 3175 requires that any anticipated impacts on Indian Trust resources from a proposed project or action by U.S. Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian Trust responsibility is a legally enforceable obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal laws with respect to Native American tribes. There are no known Indian Trust resources in the study area, and the lands comprising the park are not held in trust by the secretary of the interior for the benefit of Indians due to their status as Indians. Therefore, the impact topic of Indian Trust resources was considered but dismissed from further analysis.

Museum Collections. A museum collection is an assemblage of objects, works of art, historic documents, and/or natural history specimens collected according to a rational scheme and maintained so that they can be preserved, studied, and interpreted for public benefit. The proposed action would not impact any

museum collections in the project area. Therefore, the impact topic of museum collections was considered but dismissed from further analysis.

Air Quality. The park is designated as Class II for the prevention of significant deterioration of air quality as defined in section 164 of the Clean Air Act amendments. Although there is some pollution from industrial operations and vehicular engines, the ambient air quality is well within North Carolina standards and air quality is not a major concern (NPS 2001). There would be a slight temporary increase in vehicle emissions related to the proposed action during the construction period and could be quickly dissipated by the windy conditions that are common in this area. Emissions are not expected to be at a level that would contribute noticeably to greenhouse gasses on a wider scale. Therefore, the impact topic of air quality was considered but dismissed from further analysis.

Soundscapes. The National Park Service strives to maintain or reduce existing noise impacts within the park, so the so as to preserve to the greatest extent practicable the natural sounds of the park. The area of proposed improvements is developed and subject to regular noise emissions from cars and boats. During construction activities, there may be a temporary increase in noise generation due to the use of heavy equipment; however, overall, the soundscape of the project area would not be noticeably altered. Therefore, the impact topic of soundscapes was considered but dismissed from further analysis.

Lightscaapes. In accordance with NPS *Management Policies 2006* (NPS 2006), the National Park Service strives to preserve natural ambient lightscaapes and other values that exist in the absence of man-made light. There would be a negligible impact to lightscaapes related to the addition of trail lighting on the path that runs between the visitor center and the Core Sound Museum in order to enhance safety on the pedestrian trail. Impacts would be negligible, considering the project area is already illuminated from existing lighting at the site and in the surrounding area, and the increase in light from the addition of trail lighting would be undetectable. Therefore, the impact topic of lightscaapes was considered but dismissed from further analysis.

Land Use Planning and Design. There are no identified conflicts between the proposed action and land use plans, policies, or controls for the area concerned. Urban quality would not be affected by the proposed action. The design of the built environment would remain relatively consistent throughout the site. Therefore, the impact topic of land use planning and design was considered but dismissed from further analysis.

Energy Requirements and Conservation Potential. The Council on Environmental Quality guidelines for implementing the National Environmental Policy Act require an examination of energy requirements and conservation potential as a possible impact topic in environmental documents. The park strives to incorporate the principles of sustainable design and development into all facilities and operations. The objectives of sustainability are to design structures to minimize adverse impacts on natural and cultural values; to reflect their environmental setting; to maintain and encourage biodiversity; to construct and retrofit facilities using energy efficient materials and building techniques; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use. Essentially, sustainability is living within the environment with the least impact on the environment.

The proposed action would not result in noticeable changes to energy requirements or the ability to conserve energy resources. Consequently, any impacts relating to energy use, availability, or conservation would be negligible. Therefore, the impact topic of energy requirements and conservation potential was considered but dismissed from further analysis.

Environmental Justice. Executive Order 12898, “General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low income populations and communities. According to the Environmental Protection Agency, environmental justice is the “...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”

The goal of “fair treatment” is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts. Environmental justice was considered but dismissed from further analysis for the following reasons:

- The park staff and planning team solicited public participation as part of the planning process and gave equal consideration to all input from persons regardless of age, race, income status, or other socioeconomic or demographic factors.
- Implementation of the proposed action would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse impacts on any minority or low-income population.
- The impacts associated with implementation of the proposed action would not disproportionately affect any minority or low-income population or community.
- Implementation of the proposed action would not result in any identified effects that would be specific to any minority or low-income community.

2

ALTERNATIVES

This chapter describes two alternatives for the improvement of existing gateway facilities at the Harkers Island Visitor Center to better serve as a departure site for passenger ferry service. The alternatives for the proposed action were designed to provide dedicated areas for ferry passenger ticketing and staging/waiting, additional public restroom facilities, increased dock spaces, improved circulation, and a high-quality visitor experience. The environmental assessment examines two alternatives: a No-Action Alternative (alternative A) and Proposed Improvements (alternative B). Additional alternatives were considered during early stages of planning but were dismissed from further analysis for the reasons documented below.

DEVELOPMENT OF ALTERNATIVES

The alternatives presented in this document were developed as part of the 2007 Commercial Services Plan, which provided guidance for the National Park Service to authorize and implement the actions needed to conduct commercial visitor services at the park. As part of the plan, the National Park Service has decided to provide passenger ferry service from the Harkers Island Visitor Center to Shackleford Banks and the Cape Lookout Lighthouse, as well as service from Beaufort or Morehead City to Shackleford Banks and the Cape Lookout Lighthouse. In order to provide these services, the park conducted the *Cape Lookout National Seashore Passenger Ferry Transportation Feasibility Study* in 2010 (NPS 2010) to identify program elements necessary to fully carry out ferry service at Harkers Island, as well as at Beaufort/Morehead City. The data gathered and developed as part of the feasibility study was used to inform the preliminary site design proposed in this environmental assessment.

ALTERNATIVE A: NO-ACTION

Under the no-action alternative, the park would provide ferry service from the Harkers Island Visitor Center using existing facilities (figure 3), including the following buildings and infrastructure:

- the current visitor center building
- the existing boat basin and docks, including existing fueling station
- the existing parking lots (including the main parking lot, the picnic parking lot, and the Core Sound Museum parking lot)
- the existing vehicular circulation using existing roads
- the existing pedestrian routes, including concrete walkways and both formal and informal trails

HARKERS ISLAND VISITOR CENTER

Under the no-action alternative, passenger ticketing, passenger staging/waiting, and orientation would all take place in the existing visitor center building. The building currently provides an information desk, a bookstore, a theater for the viewing of orientation videos and holding of lectures, an interpretive area with exhibits, public restrooms, and NPS staff offices. Ferry passengers would purchase tickets, receive orientation within the current visitor center, and would wait for the ferries either inside the visitor center or outside. Visitors waiting to ride the ferry during times where a storm is passing would most likely wait inside the visitor center, creating congestion and interfering with the orientation of other visitors. The visitors would continue to use the current visitor center restrooms, which provide capacity for five women and five men.

BOAT BASIN

Under the no-action alternative, the boat basin would remain in its existing configuration. The boat basin provides dock space for up to 12 slips (depending upon the size of the vessels), which includes the piers associated with the boat ramp. Slips provide secure tie-ups on both sides of the vessel. Additional mooring could take place along the seawall. The park would continue to moor all of their vessels within the boat basin; however, the park would not be able to provide overnight mooring for the concessioner's ferry vessels under the no-action alternative. The concessioner would load and unload at the docks located on the boat ramp on the southern side of the boat basin. Visitors may walk through an area where park operations are taking place (on the western side of the boat basin) in order to access the ferries. Compliance with Architectural Barriers Accessibility Act Standards at the boat basin is currently limited and would remain so. The ferry concessioner would be required to meet Architectural Barriers Accessibility Act Standards between the vessel and the docks.

PARKING AND CIRCULATION

Adjacent to the visitor center, the National Park Service provides two parking areas, picnic tables, picnic shelters, and two nature trails. The main parking lot has a total capacity of approximately 66 parking spaces (57 standard spaces and nine spaces for recreational vehicles/busses/trailers), although these spaces are not striped. Three spaces are reserved for disabled permit holders. Circulation would remain one way in and one way out, as it is currently configured, with both access to and egress from the main parking lot taking place from and onto Harkers Island Road. Vehicles wishing to access the Core Sound Museum (which would serve as overflow ferry service parking as well as a stand-alone visitor destination) from the main parking lot must go back out to Harkers Island Road and turn right onto Cape Point Drive. Stormwater currently flows from the area of Charles Street and the employee parking lot into a shallow drainage basin between the parking lot and the visitor center.

There is a double-track, unlit, pedestrian trail providing access between the main parking lot and the Core Sound Museum parking lot and Willow Pond Nature Trail; however, even though this trail is only about 200 feet long, the dense patch of maritime scrub through which this trail passes prevents a visual connection between the two locations. A brown sign indicates the connection.

KEY

- ① CORE SOUND MUSEUM
PARKING AREA (78 SPACES)
- ② TRAIL TO CORE SOUND MUSEUM
- ③ TREE GROVE REMAINS AS IS
- ④ EXISTING VISITOR CENTER
(FERRY TICKETING INSIDE)
- ⑤ CONCRETE SIDEWALKS
- ⑥ EXISTING PARKING AREA
(57 SPACES)
- ⑦ EXISTING RV PARKING (9 SPACES)
- ⑧ NPS DOCKS SHARED BY FERRY FLEET
- ⑨ FUEL PUMP
- ⑩ EXISTING PICNIC SHELTERS
- ⑪ EXISTING PARKING AREA
PROVIDES 40 SPACES TOTAL



Harkers Island Passenger Ferry Departure Site
Environmental Assessment



National Park Service
U.S. Department of the Interior

Cape Lookout National Seashore



Figure 3
Alternative A: No-action Alternative

There is no crosswalk across Cape Point Road. Some pedestrians walk along Cape Point Road and Harkers Island Road, despite the lack of any formal trail or safety accommodations. Many visitors would continue to park in the main visitor center parking lot, access the visitor center, and get back into their cars if they are looking to visit the Core Sound Museum, instead of using the informal pedestrian pathway through the woods that connects the visitor center parking lot to the museum.



Wayfinding sign indicating turn into Cape Point Road from Harkers Island Road to access the Core Sound Museum from the main visitor center parking lot.



Pedestrian trail connecting the Core Sound Museum to the Harkers Island Visitor Center.

The picnic area would remain the same under the no-action alternative and would continue to offer visitors an opportunity to view the lighthouse from the comfort of their vehicles. There are no pedestrian accommodations (i.e., crosswalks or separate sidewalks) to connect the picnic area to the rest of the site. As such, pedestrians would continue to walk along the roads and parking lot, sharing this infrastructure with vehicular traffic. The picnic area provides four picnic shelters (15 by 15 feet), one larger (45 by 25 feet) picnic shelter, and three charcoal grills. The parking lot between the picnic area and the water would remain unstriped but with a capacity for approximately 40 standard size vehicles. Water would continue to pond in the parking lot after heavy rains due to a lack of drainage.

The living seawall located along the edge of the water would remain in place. The park would continue to offer the canoe and kayak launch site at the picnic area parking lot. Day and overnight parking would remain the same for paddlers, and they would continue to park during the day and overnight at the picnic area parking lot, as well as in the main visitor parking lot. Visitors would continue to walk through the middle of the main visitor center parking lot to travel between the picnic area and the visitor center, because there would continue to be no formalized walkway between the two sites.

There are a number of concrete walkways connecting the visitor center to the boat basin and providing visitors with opportunities to walk along the seawall on the eastern side of the project area. These walkways stop short of connection to the network of nature trails on the northern side of the project area.

ALTERNATIVE B: PROPOSED ALTERNATIVE (NPS PREFERRED)

Under alternative B, the park would provide ferry service from the Harkers Island Visitor Center using improved park facilities (figure 4), including the following buildings and infrastructure:

- the visitor center building, including a new ticketing office/porch
- the existing boat basin with expanded, specifically designed, accessible ferry docks and a relocated fueling station
- reconfigured parking lots with lines and designated short-term parking
- improved vehicular circulation using existing roads and a new one-way drive leading to the Core Sound Museum, including wayfinding signs
- improved pedestrian circulation, including additional sidewalks and crosswalks connecting site elements, and pedestrian wayfinding signs
- orientation exhibits near the ticket office and passenger staging/waiting shelter

The park would phase the construction and implementation of the various improvements, based on funding.

HARKERS ISLAND VISITOR CENTER

Under this alternative, the park would provide additional facilities to accommodate passenger ticketing, staging/waiting, and orientation (figures 4 and 5). The existing visitor center would continue to provide an information desk, a bookstore, a theater for the viewing of orientation videos and holding of lectures, an interpretive area with park exhibits, public restrooms, and NPS staff offices. Ticketing would take place at a ferry ticketing office and porch. This porch and office would be an extension off of the existing visitor center building. The ticket office would measure approximately 10 feet by 13 feet in size and the porch would measure approximately 10 feet by 90 feet in size. When ferry service begins at this site, ferry visitors would purchase tickets at the ferry ticketing office. The porch next to the ticket booth and the separate staging shelter adjacent to the boat basin (described below) would be available for visitors to wait for the ferry and be sheltered from the sun and rain.

The park would install a separate 600-square-foot restroom facility to the west of the proposed ticketing office/porch. Visitors could continue to use the restrooms located inside the visitor center; however, the new facility would provide facilities that could be made available during times when the Harkers Island Visitor Center is closed, and allow for some separation between those visitors only using the ferry service and those visitors seeking interpretive and/or orientation information in the visitor center. The new restroom facility would include rinse off showers and changing areas. As part of the installation of the new outdoor restroom facility, the park would install an additional septic field and tank system.

BOAT BASIN

Under this alternative, the docks within the boat basin would be reconfigured to better serve NPS operations and the ferry service (figure 5). The two finger piers on the northwestern side of the basin, located closest to the visitor center, would be removed and replaced by a floating dock system. The park would also add two finger piers to the southern side of the boat basin. The park would continue to moor all of their vessels within the boat basin, and as part of the dock reconfiguration, the National Park Service would be able to offer space at the boat basin for the ferry concessioner to moor up to three ferry vessels overnight. The NPS operations would take place on the southern side of the boat basin, allowing for separate NPS operations and the ferry passenger operations. The visitors would access the ferries on the western side of the boat basin, closer to the existing visitor center.

A new shade/rain shelter (approximately 350 square feet) would be built along the western side of the basin near the ferry docks to allow for passenger staging/waiting outside in close vicinity to the ferries. The shelter would also allow for protection from the elements during loading operations at the boat basin. The shade/rain shelter would be designed to aesthetically match the visitor center and would be built on top of a new concrete pad that would connect into the existing sidewalk system in front of the existing visitor center. The NPS fuel pump would be relocated to the southern side of the boat basin, next to the docks that would be the focus of NPS operations.

PARKING AND CIRCULATION

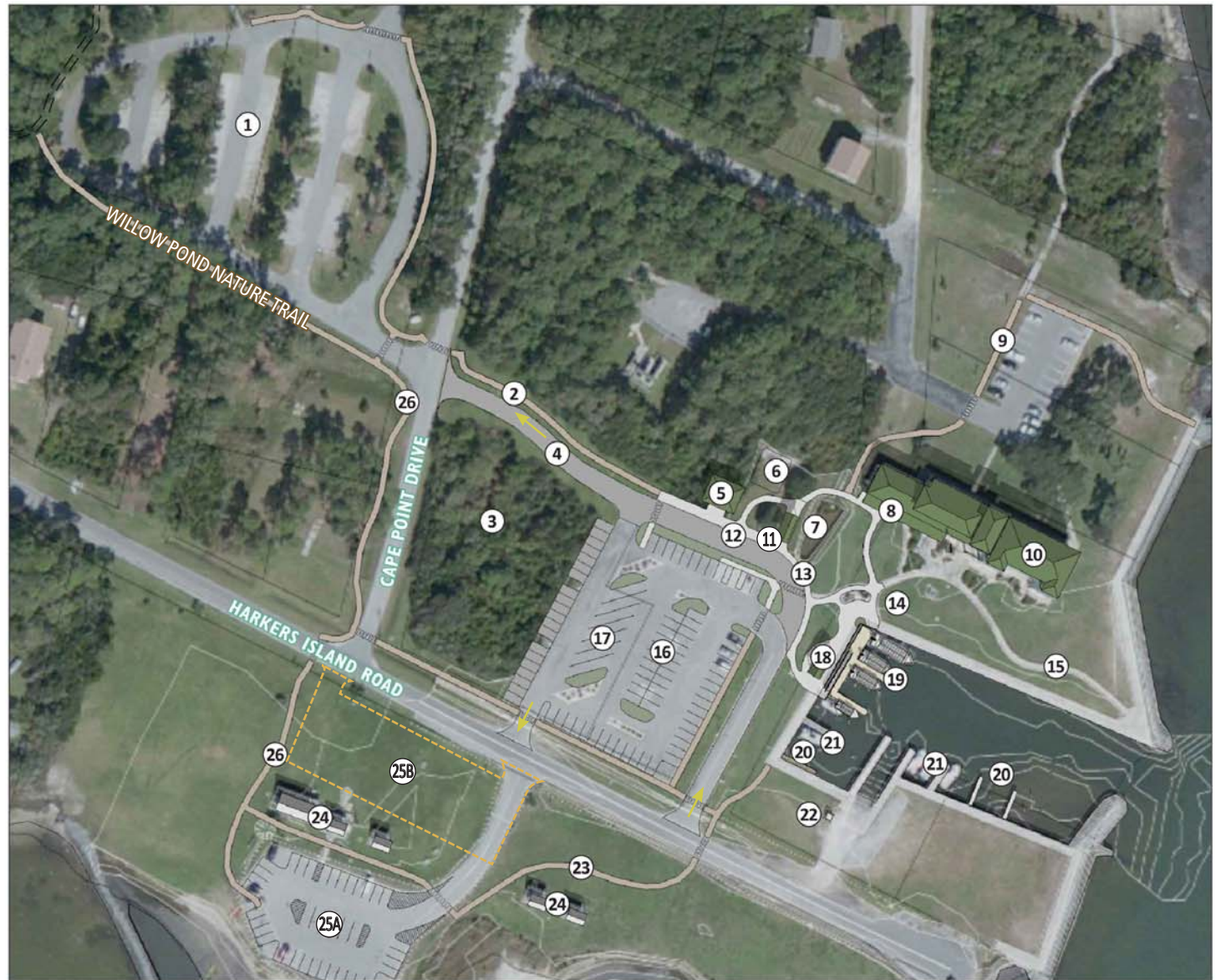
Under this alternative, the main parking lot would be reconfigured on the existing asphalt with new striping to produce 84 parking spaces, plus seven recreational vehicle/bus/trailer parking spaces. There would be an expansion in the parking lot of one row of 20 parking spaces on the western edge of the parking lot, adjacent to the grove of trees in between the parking lot and Cape Point Drive. The addition of these parking spaces would increase the total lot capacity to 91 spaces. The restriping of the parking lot would allow for the park to dedicate seven recreational vehicle parking spots, several short-term parking spaces, and the required disabled permit holder spaces and would help ensure full use of the lot capacity. Some of the existing parking lot islands would also need to be reconfigured as part of the parking lot improvements. The park would also make drainage improvements in the main parking lot area, and best management practices would be included in the design.

As part of the parking lot changes, the access to and egress from the parking lot would also be reconfigured. The trail that provides a pedestrian access/connection between the visitor center and the Core Sound Museum would become a one-way vehicular exit from the main parking lot onto Cape Point Drive. There would be a one-way access drive into the main parking lot from Harkers Island Road and a one-way access drive out of the main parking lot onto Harkers Island Road. A bus and vehicle drop-off lane would be provided to allow for individuals to drop off equipment and for large visitor groups to be dropped off separately from parking traffic.

The picnic area would remain mostly unchanged. The picnic area would continue to provide the same picnic facilities as described under the no-action alternative, but the parking lot would be subject to improvements. The park is considering options for reconfiguration of the lot. One option would keep the parking lot in its current location, would add striping to maximize capacity at approximately 40 vehicle

KEY

- ① CORE SOUND MUSEUM
PARKING AREA (78 SPACES)*
- ② TRAIL TO CORE SOUND MUSEUM
- ③ THIN TREE GROVE
- ④ ONE WAY LOOP ROAD
- ⑤ RESTROOMS
- ⑥ SEPTIC FIELD
- ⑦ EXISTING DRAINAGE BASIN
- ⑧ FERRY TICKETING PORCH
- ⑨ TRAIL CONNECTION
- ⑩ EXISTING VISITOR CENTER
- ⑪ PICNIC SHELTER
- ⑫ BUS & VEHICLE DROP-OFF
- ⑬ NEW SIDEWALKS
- ⑭ QUEUING AREA*
- ⑮ EXISTING SIDEWALKS*
- ⑯ EXISTING PARKING AREA
MODIFIED (84 SPACES)
- ⑰ RV PARKING
RECONFIGURED (7 SPACES)
- ⑱ SHADE/RAIN SHELTER
- ⑲ NEW FERRY DOCKS (FLOATING)
- ⑳ NEW NPS DOCKS (FIXED)
- ㉑ EXISTING NPS DOCKS (FIXED)*
- ㉒ RELOCATED FUEL PUMPS
- ㉓ TRAIL TO PICNIC SHELTERS
- ㉔ EXISTING PICNIC SHELTERS*
- ㉕A ADD STRIPING TO EXISTING
PARKING LOT (40 SPACES)
- ㉕B RELOCATE EXISTING PARKING
LOT (40 SPACES)
- ㉖ LOOP TRAIL



*NO IMPROVEMENTS PROPOSED

Harkers Island Passenger Ferry Departure Site
Environmental Assessment

Figure 4
Alternative B: Proposed Alternative
(Overall)



National Park Service
U.S. Department of the Interior

Cape Lookout National Seashore



0 100 200 Feet
(approx.)



*NO IMPROVEMENTS PROPOSED

Harkers Island Passenger Ferry Departure Site Environmental Assessment

Figure 5
Alternative B: Proposed Alternatives
(Enlargement)



National Park Service
U.S. Department of the Interior

Cape Lookout National Seashore



spaces, and would improve the drainage to avoid standing water, while preventing stormwater runoff from the lot and entrance road directly into the sound. During rain events, water ponds on the parking lot pavement. The reconfiguration is expected to take place mostly within the existing footprint of the parking lot because there is little room available between the lot and the edge of the water. This option would require less construction work and would require less funding. A second option would move the parking lot from its current location to the grassy area between the picnic shelters and the road. This option would separate the picnic area from the road, allowing for kids playing in the picnic area to be further from the road and traffic. In addition, this option would allow for more shoreline stability by restoring natural ground cover/vegetation adjacent to the shoreline instead of the paved parking lot. Although the design of this parking lot would be finalized at a later date, the relocated parking lot would be configured with one-way access from and egress to Harkers Island Road. Under this option, a cul-de-sac would need to be retained in the area of the existing picnic area parking lot near the shoreline to continue to provide an opportunity for visitors to view the lighthouse from their car. The canoe and kayak launch site and living seawall would remain in place at the water's edge regardless of the site of the picnic area parking lot, and reconfiguration of this lot is of a lower priority than other aspects of this project.

A number of additional sidewalks/trails would be added throughout the site. In most places, especially in close proximity to the shoreline, these sidewalks/trails would be constructed using pervious materials. The park would add a formal pedestrian sidewalk, with trail lighting, along the northern side of the new one-way exit drive to allow visitors to walk between the main parking lot and the Core Sound Museum. The park would thin the vegetated grove located to the west of the main parking lot and the area just north of the exit road/sidewalk to the Core Sound Museum, targeting the bayberry, pines, and wax myrtle species and working to preserve the live oaks and cedars. The thinning would create a visual connection for visitors between the main visitor parking lot and the Core Sound Museum. Additional sidewalks would also be added between the main parking lot and the picnic area, in addition to sidewalks in front of the new restrooms, new picnic shelter, and new ferry ticketing office and porch. In addition, the park would add a new loop trail along Harkers Island Road and running up Cape Point Drive, facilitating improved connections to the trails at the Core Sound Museum. The park would also work with the North Carolina State Department of Transportation to add crosswalks on Cape Point Drive and Harkers Island Road to allow for pedestrians to safely cross in order to access the various park facilities. This new sidewalk network would intersect a new spur trail that would lead visitors to the nature trails in the northern portion of the project area.

MITIGATION MEASURES

To minimize environmental impacts related to the action alternative, the National Park Service would implement mitigation measures whenever feasible. Although the exact mitigation measures to be implemented would depend upon the final design and approval of plans by relevant agencies, the following is a list of actions that could take place:

- Action would be conducted so as to avoid degrading water quality to the maximum extent practicable. Measures would be employed to prevent or control spills of fuels, lubricants, or other contaminants from entering the waterways. Actions would be consistent with state water quality standards and Clean Water Act Section 401 certification requirements.
- If any ground contamination is found during reconfiguration, the park would develop a plan for remediation.

- Appropriate erosion and siltation controls would be maintained during construction, and all exposed soil or fill material would be permanently stabilized at the earliest practicable date. To this end, erosion control devices such as silt fences would minimize impacts associated with construction.
- Stockpile materials would only be placed in designated locations to avoid sensitive areas and natural features.
- Where plantings or seeding are required, native plant material would be obtained and used in all feasible locations in accordance with NPS policies and guidance. Management techniques would be implemented to foster rapid development of target native plant communities and to eliminate invasion by exotic or other undesirable species.
- Construction equipment would be restricted to the road corridor, parking lots, and other identified previously disturbed areas to avoid impacts on natural resources.
- Additional archeological survey would be completed within the study area prior to implementation of the proposed action in any areas not previously tested for archeological resources. Depending on the results of these archeological investigations, further design modifications would be made to avoid archeological resources wherever possible.
- The National Park Service, its concessioner, and its contractors would follow guidelines for avoiding impacts to the West Indian manatee and sea turtles as described in appendix D.

ALTERNATIVE ELEMENTS CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

During preliminary consideration of elements to be included in the proposed improvements to the park's passenger ferry departure site, a number of elements were considered that were ultimately not included in the action alternative presented above. Those items and their reason for dismissal are described below.

ALTERNATE PARKING SCENARIOS

The National Park Service considered several alternate parking scenarios as part of the action alternative. The National Park Service considered adding visitor parking in an area adjacent to the Core Sound Museum as well as in the wooded area adjacent to the existing parking lot. The National Park Service also considered instituting parking south and east of the boat ramp; however, this would result in conflicts between pedestrians walking from that parking lot and vehicles loading/unloading boats at the boat ramp. This particular area is also currently used for temporary parking of boat trailers. These new parking areas could have been used to supplement the parking currently proposed; however, after consideration of these alternate parking scenarios, the National Park Service determined that they currently have adequate parking available within the current three parking areas to meet the project needs.

ALTERNATE DOCK CONFIGURATIONS

The National Park Service considered a variety of dock configurations for the boat basin as part of the action alternative. The National Park Service considered adding three docks along the southern side of the boat basin to provide moorage for NPS boats that would be displaced by the new ferry docks. However, because submerged aquatic vegetation is located on the southeastern corner of the boat basin, the National Park Service

decided to reduce the number of docks in this area. Alternative B currently proposes a dock configuration where NPS operations and loading activities would take place on this southern side of the basin and ferry operations would be located along the western edge of the boat basin, which would allow visitors to remain closer to the visitor center building when accessing the ferries. The park can separate the NPS operations and visitors under the action alternative as it is currently designed. Alternate dock configurations were dismissed either because they did not provide enough room to meet the project objectives or because the arrangement would result in unnecessary conflicts in use, which also increases safety concerns.

SEPARATE TICKET KIOSK

The park also considered the installation of a standalone ferry ticket kiosk near the boat basin. This ticket kiosk would take the place of the ticketing office and porch proposed under the action alternative above, but the kiosk would provide a bare minimum accommodation for both visitors and for the concessioner. It would not provide any additional office space for the concessioner, would not provide additional shelter from the elements for visitors, and would represent an additional standalone structure in the 100-year floodplain. This option was dismissed from further consideration because it did not fully meet the needs of the project.

SUMMARY OF THE ALTERNATIVES

Table 1 provides a summary of the alternatives presented above.

TABLE 1. SUMMARY OF ALTERNATIVES

	Alternative A: No-action	Alternative B: Proposed Improvements (NPS Preferred)
Harkers Island Visitor Center		
Orientation	Orientation would take place in the existing visitor center building.	Orientation would take place within the existing visitor center building and outside at the new ferry ticketing office and porch and near the passenger staging/waiting shelter.
Ticketing	Ticketing operations would be carried out within the existing visitor center building.	Ticketing operations would be carried out in a new ferry ticketing porch attached to the existing visitor center building.
Passenger Staging/Waiting	Visitors would wait to purchase ferry tickets and wait for the ferry inside the existing visitor center or outside (unsheltered).	Visitors would wait to purchase ferry tickets outside at the new ferry ticketing office and porch and would wait for the ferry outside, with the ferry ticketing porch and new shade/rain shelter available for protection during bad weather.
Restrooms	Visitors would use the existing restrooms located in the visitor center, which provide capacity for five men and five women.	Visitors would use the existing restrooms located in the visitor center, in addition to the new restroom facility, which would be built to the west of the new ferry ticketing office and porch. The new restrooms would include rinse off showers and changing areas.

TABLE 1. SUMMARY OF ALTERNATIVES (CON'T)

	Alternative A: No-action	Alternative B: Proposed Improvements
Boat Basin		
Boat Basin	The boat basin would remain in its existing configuration. The boat basin provides dock space for up to 12 slips (depending upon the size of the vessels), which includes the piers associated with the boat ramp. The ferry vessels would load visitors at the boat ramp and would not moor overnight at the boat basin.	The boat basin would be reconfigured. The two finger piers on the western side of the basin would be removed and replaced by a floating dock system, and two finger piers would be added to the southern side of the boat basin. Ferry vessels would be able to moor overnight at the boat basin.
Parking and Circulation		
Main Parking Lot	The main visitor center parking lot would remain the same, providing a total capacity of 66 unstriped parking spaces. Three spaces would remain reserved for disabled permit holders. Due to the lack of striping, actual capacity may be less. Circulation would remain one way in and one way out, with both entrance and exit on Harkers Island Road.	The main visitor center parking lot would be reconfigured, striped, and expanded for a total capacity of 91 parking spaces. The lot would provide seven dedicated recreational vehicle parking spaces, several short-term parking spaces, and three disabled permit holder parking spaces. A bus and vehicle drop-off lane would be added. One way access would be from Harkers Island Road into the main parking lot and one-way egress out of the main parking lot onto Harkers Island Road. An additional egress route would exit onto Cape Point Drive.
Picnic Area Parking Lot	The parking lot between the picnic area and the water would remain unstriped. Although the lot capacity is about 40 vehicles, it would likely not serve that capacity due to the lack of striping. Water would continue to pond in the parking lot after heavy rains due to a lack of drainage.	The parking lot would be reconfigured or relocated to provide space for 40 vehicles. Option 1: Stripe the current lot and make drainage improvements. Option 2: Relocate the parking lot to the grassy area between the picnic shelters and Harkers Island Road.
Pedestrian Accommodations	The double-track pedestrian trail providing access between the main parking lot and the Core Sound Museum parking lot and the Willow Pond Nature Trail would remain. A number of concrete walkways connecting the visitor center to the boat basin and providing visitors the opportunity to walk along the seawall would remain, however the walkways would continue to stop short of connection to the network of nature trails on the northern side of the project area.	Additional separate pedestrian walkways would be added throughout the site, along with formal crosswalks. A lighted walkway would be provided between the main parking lot and the Core Sound Museum and Willow Pond Nature Trail. Additional sidewalks/paths would also be added between the main parking lot and the picnic area, in addition to sidewalks in front of the new restrooms, new picnic shelter, and new ferry ticketing office and porch. This new sidewalk network would intersect a new spur trail that would lead visitors to the nature trails in the northern portion of the project area.

MATRIX OF OBJECTIVES

Table 2 provides a summary of how each alternative meets the project objectives.

TABLE 2. MATRIX OF OBJECTIVES

Objective	Alternative A: No-action	Alternative B: Proposed Improvements (NPS Preferred)
Provide dedicated areas for ferry passenger ticketing and staging/waiting area	Some space would be set aside within the existing visitor center for ticketing and staging/waiting; however, this space may be filled to capacity at times. It may have to be shared with other functions within the visitor center at some times.	Providing a separate ticketing office and shaded porch would provide a completely dedicated area for ferry passenger ticketing and staging/waiting. Other sheltered staging/waiting areas would allow additional options for dedicated staging/waiting for ferry passengers.
Provide additional public restroom facilities	Restroom facilities would remain limited to the existing restrooms within the visitor center. These restrooms would be adequate but may be crowded during peak season.	An additional 600-square-foot restroom facility would be provided near the parking lot.
Provide increased dock space, with sufficient mooring locations to serve both NPS operations and the ferry fleet	Sufficient mooring would be available for both NPS operations and the ferry fleet; however, no overnight mooring would be available for the ferry fleet. Dock space would not be increased.	Dock space would be increased and would provide sufficient space for the park to offer overnight mooring for the ferry fleet.
Provide improved circulation through reconfiguration of roadways and walkways at the site	Circulation would remain in its current configuration.	Circulation would be improved by installing new sidewalks, new crosswalks, and a new one-way exit road to the Core Sound Museum.
Provide dock facilities that meet federal accessibility standards	Dock facilities would remain largely as they are with only minor upgrades to meet federal accessibility standards.	Modified dock facilities would meet federal accessibility standards.
Provide a safe environment for staff and visitors	Existing safety accommodations would remain. Some current safety concerns would persist, such as the lack of crosswalks where visitors cross Harkers Island Road and Cape Point Drive.	Existing safety concerns would be addressed through installation of crosswalks and arrangement of services to minimize conflicts between ferry passengers and NPS operations.
Provide a high-quality visitor experience in which visitors to the site are able to intuitively find their way and are aware of the opportunities available to them	Under the current management scenario, visitors may require guidance from park staff to be fully aware of all the opportunities available to them.	Improvements such as installation of additional sidewalks and establishment of a visual connection between the main visitor center parking lot and the Core Sound Museum would allow visitors to more intuitively find their way between the opportunities available to them.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Table 3 provides a summary of the environmental consequences related to each alternative. A more detailed explanation of the impacts is presented in “Chapter 4: Environmental Consequences.”

TABLE 3. SUMMARY OF ENVIRONMENTAL CONSEQUENCES

	Alternative A: No-action	Alternative B: Proposed Improvements (NPS Preferred)
Water Quality	Existing conditions do not cause noticeable impacts on water quality. Overall Impact: Long-term negligible Cumulative Impact: Contributes an imperceptible increment to a long-term negligible to minor adverse cumulative impact	Removal and installation of docks within the boat basin would result in a temporary increase in suspended solids in the water column. Overall Impact: Short-term minor adverse and long-term negligible Cumulative Impact: Contributes an imperceptible increment to a long-term negligible to minor adverse cumulative impact
Essential Fish Habitat	There may be contamination of water quality due to continued operation and maintenance of NPS and ferry boats. Overall Impact: Long-term negligible adverse Cumulative Impact: Contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact	Same as alternative A with a temporary increase in suspended solids in the water column leading to decreased availability of light for submerged aquatic vegetation during removal and installation of docks within the boat basin. Overall Impact: Short-term minor adverse and long-term negligible adverse Cumulative Impact: Contributes an imperceptible adverse increment to a long-term negligible adverse cumulative impact
Shellfish Waters	No change in shellfish waters. Overall Impact: Long-term negligible Cumulative Impact: No cumulative impacts	The installation of the new docks would result in the last dock being approximately 50 feet closer to the mouth of the boat basin. The waters available for shellfish harvest in Core Sound would be reduced by an additional 50 feet at the mouth of the boat basin. Overall Impact: Long-term minor adverse Cumulative Impact: No cumulative impacts

TABLE 3. SUMMARY OF ENVIRONMENTAL CONSEQUENCES (CON'T)

	Alternative A: No-action	Alternative B: Proposed Improvements (NPS Preferred)
Floodplains	<p>Existing facilities (the visitor center, the docks, the picnic area, and the parking lots) would remain in the floodplain and would minimally impact the floodplain's ability to absorb and store floodwaters.</p> <p>Overall Impact: Long-term minor adverse</p> <p>Cumulative Impact: No cumulative impacts</p>	<p>Same as alternative A but with additional facilities within the proposed area of improvements, including a 10- by 13-foot ticketing booth and porch and a new 600-square-foot restroom facility.</p> <p>Overall Impact: Long-term minor adverse</p> <p>Cumulative Impact: No cumulative impacts</p>
Vegetation	<p>Vegetation would continue to be trampled along the social trails traversing the site. The National Park Service would continue to remove vegetation along the 200-foot long trail between the main visitor center parking lot and the Core Sound Museum.</p> <p>Overall Impact: Long-term minor adverse</p> <p>Cumulative Impact: Contributes a noticeable adverse increment to the long-term minor adverse cumulative impact</p>	<p>Approximately 5,200 square feet of lawn would be displaced by improved facilities. The disturbance of vegetation during installation of the septic tank and field would be temporary. Creation of the one-way loop road leaving the parking lot would require some clearing along the existing 200-foot pedestrian route. Vegetation within the 0.92 acre wooded area south of this path would be thinned, selectively removing undesired species and retaining desired species.</p> <p>Overall Impact: Long-term minor adverse</p> <p>Cumulative Impact: Contributes a noticeable adverse increment to the long-term minor adverse cumulative impact</p>

TABLE 3. SUMMARY OF ENVIRONMENTAL CONSEQUENCES (CON'T)

	Alternative A: No-action	Alternative B: Proposed Improvements (NPS Preferred)
Visitor Use and Experience	<p>All aspects of visitor orientation, interpretation, and ferry ticketing would be accommodated by the existing facilities.</p> <p>The ferry fleet could be moored during the day at the existing docks on the south side of the boat basin. Only necessary improvements would be made to comply with Architectural Barriers Accessibility Act Standards.</p> <p>Both parking lots would remain unstriped with no designated short-term parking.</p> <p>Pedestrian walkways would remain limited to the existing sidewalks connecting the main parking lot and the docks to the visitor center and the double-track path to the Core Sound Museum. There would not be a crosswalk associated with this trail, and visitors may not understand that there is a pedestrian connection available because of the thick vegetation blocking the line of sight between the two destinations.</p> <p>Overall Impact: Long-term moderate adverse</p> <p>Cumulative Impact: Contributes a noticeable adverse increment to a long-term minor adverse cumulative impact</p>	<p>The existing facilities would be supplemented by the addition of a ticketing office and porch and restrooms to better accommodate visitor orientation, interpretation, and ferry ticketing.</p> <p>The ferry fleet could be moored overnight at the new floating dock in the northeastern corner of the boat basin. Reconstructed docks would offer improved compliance with Architectural Barriers Accessibility Act Standards.</p> <p>Both parking lots would be striped to ensure that their full capacity can be reached. Short-term parking spaces would be designated near the visitor center.</p> <p>Pedestrian walkways would be added throughout the site, offering formal pedestrian connections from the visitor center to the parking lot and to the trails north of the visitor center. Crosswalks would be installed to improve safety. Thinning of the vegetation between the main visitor center parking lot and the Core Sound Museum would provide a line between destinations, making this a more intuitive connection.</p> <p>Overall Impact: Long-term beneficial</p> <p>Cumulative Impact: Contributes a noticeable beneficial increment to a long-term beneficial cumulative impact</p>

TABLE 3. SUMMARY OF ENVIRONMENTAL CONSEQUENCES (CON'T)

	Alternative A: No-action	Alternative B: Proposed Improvements (NPS Preferred)
Operations and Infrastructure	<p>All NPS and ferry concessioner operations would take place within existing facilities. Some NPS offices on the first floor of the visitor center may need to be relocated to the second floor.</p> <p>NPS operations at the boat basin may conflict with visitor use due to the ferry boats docking at the southern docks. The ferry concessioner would need to find an alternate location for overnight mooring.</p> <p>The existing parking lots would remain in their current configurations. The main parking lot provides 66 spaces total, including 9 recreational vehicle/bus spaces and three accessible spaces. The picnic parking lot provides 40 spaces.</p> <p>Overall Impact: Long-term minor adverse</p> <p>Cumulative Impact: Contributes a noticeable adverse increment to a long-term minor adverse cumulative impact</p>	<p>A new ticketing office and porch as well as new staging/waiting shelters would be provided for the ferry concessioner operations. A new restroom facility would be provided separately from the existing visitor center to further disperse visitor use. No relocation of existing NPS offices would be necessary.</p> <p>NPS operations at the boat basin would be physically separated from ferry passenger traffic, because the ferry fleet would use the new floating docks in the northeast corner of the boat basin. The ferry concessioner would be able to use these same docks for overnight mooring.</p> <p>The existing parking lots would remain in their current configurations. The main parking lot would be reconfigured and lined to provide 84 spaces total, including 7 recreational vehicle/bus spaces and three accessible spaces. The picnic parking lot would continue to provide 40 spaces but the spaces would be lined and the design would be revised to address drainage issues.</p> <p>Overall Impact: Long-term beneficial and long-term minor adverse</p> <p>Cumulative Impact: Contributes a noticeable beneficial increment to a long-term beneficial cumulative impact</p>
Socioeconomic Resources	<p>There would be no change in revenue at the Core Sound Museum.</p> <p>Overall Impact: Long-term negligible</p> <p>Cumulative Impact: Contributes an imperceptible increment to the long-term beneficial cumulative impact</p>	<p>There may be an increase in visits to and increased revenues for the Core Sound Museum as a result of improved connectivity between the NPS visitor center and the Core Sound Museum.</p> <p>Overall Impact: Short-term beneficial and long-term negligible</p> <p>Cumulative Impact: Contributes an imperceptible increment to the long-term beneficial cumulative impact</p>

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is defined by the Council on Environmental Quality as “the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act [Section 101 (b)].” Alternative A would not cause any active change in the environment at the site, but by not providing improvements, alternative A would allow continued trampling of vegetation along social trails and would not provide an intuitive connection to the Core Sound Museum. Alternative B provides improvements that would not noticeably detract from the environmental resources at the site, which is already a heavily developed gateway for the park’s more pristine barrier islands. The improvements provided under alternative B would provide some protection of natural resources through establishing specific pedestrian connections along new sidewalks. Improved connections would, in turn, encourage a wide range of beneficial uses of the environment: picnicking with expansive views of the sound and the lighthouse, hiking through several different coastal environments, and learning about local culture at the Core Sound Museum. For these reasons, alternative B was identified as the environmentally preferable alternative that least damages the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources.

NPS PREFERRED ALTERNATIVE

Based on the planning efforts leading up to and included in this environmental assessment, the National Park Service has identified alternative B as the NPS Preferred Alternative. Alternative B best meets the project objectives to provide visitor’s with an overall gateway experience at the park, dedicated areas for ferry passenger ticketing and staging, additional restroom facilities, increased dock space that meets federal accessibility standards, improved circulation, and a safe and high-quality visitor experience. In addition, alternative B was identified as the environmentally preferable alternative that least damages the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources.

3

AFFECTED ENVIRONMENT

The “Affected Environment” chapter describes the project area environment; relevant physical and biological processes within the project area; and the existing conditions for those elements of the natural, cultural, and social environment that could be affected by the implementation of the actions considered in this environmental assessment. The impact topics addressed in this environmental assessment include water quality, essential fish habitat, shellfish waters, floodplains, vegetation, visitor use and experience, operations and infrastructure, and socioeconomic resources. Impacts for these impact topics are analyzed in “Chapter 4: Environmental Consequences.”

WATER QUALITY

Core and Back Sounds are part of the Albemarle-Pamlico estuary system, which is the second largest estuary in the United States, draining a watershed of approximately 30,000 square miles. This estuary encompasses over 9,000 miles of freshwater rivers and streams and over 1.5 million acres of brackish, estuarine waters. There are five major river basins (Chowan, Roanoke, Pasquotank, Tar-Pamlico, and Neuse) that flow into the Albemarle-Pamlico system.

The eastern shore of Harkers Island forms the western shore of Back Sound, and the southern end of Harkers Island emerges into the western waters of Core Sound. These sounds are estuarine systems between the barrier islands of Cape Lookout National Seashore and the mainland of North Carolina. An estuary is a partly enclosed coastal body of water with one or more rivers or streams flowing into it, and with a free connection to the open sea. Core Sound is classified by the North Carolina Department of Environment and Natural Resources, Division of Water Quality as High Quality Waters, a classification intended to protect waters with quality higher than state water quality standards.

Estuaries form a transition zone between river environments and ocean environments and are subject to both marine influences, such as tides, waves, and the influx of saline water; and riverine influences, such as flows of fresh water and sediment. During low salinity periods, waters in Back Sound adjacent to the eastern half of Shackleford Banks and waters in Core Sound adjacent to South Core Banks have an average salinity of more than 25 parts per trillion, but waters behind the western half of Shackleford Banks and waters in Core Sound adjacent to North Core Banks have an average salinity of 15 to 25 parts per trillion. Annual ocean

water temperatures off of the Outer Banks range from approximately 50° to 80°F (NOAA n.d.). The inflow of both seawater and freshwater provide high levels of nutrients in both the water column and sediment, making estuaries among the most productive natural habitats in the world. No specific information is available on the water quality at the existing NPS boat basin at Harkers Island.

Groundwater in Cape Lookout National Seashore occurs in an unconfined sand aquifer, an upper confined aquifer, and a lower confined aquifer. The upper confined aquifer, which occurs between depths of about 90 to 150 feet, is known to contain freshwater only in the New Drum Inlet area and at Harkers Island. The potential yield of this aquifer is unknown, but probably does not exceed 10 to 15 gallons per minute. The lower confined aquifer, which occurs between depths of 150 and 550 feet, contains freshwater southeast of New Drum Inlet. Potential yield is estimated to be as much as 500 gallons per minute per well. The estimated freshwater yield from all aquifers depends on the position of the saltwater interface at any site (NPS 1982).

ESSENTIAL FISH HABITAT

In 1981, viable submerged aquatic vegetation in Core and Bogue Sounds (including Back Sound) covered almost 20,000 acres. Specifically, a large amount of submerged aquatic vegetation has been identified in the eastern half of Back Sound by the North Carolina Division of Marine Fisheries. According to the North Carolina Division of Marine Fisheries's 2010 North Carolina Coastal Habitat Protection Plan, the primary factor controlling distribution of submerged aquatic vegetation is the penetration of light through the water column (Deaton et al 2010). Availability of light to submerged aquatic vegetation can be adversely impacted by turbidity caused by suspended particulate matter such as sediment.

Areas of extensive submerged aquatic vegetation have been recognized as essential fish habitat by the South Atlantic Fishery Management Council. The South Atlantic Fishery Management Council manages fishery resources within the exclusive economic zone limit off the coast of North Carolina. The council, established by the Magnuson-Stevens Fishery Conservation and Management Act, is responsible for identifying essential fish habitat within this zone. Essential fish habitat is defined as those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity (16 USC 1802[10]).

During an informal site visit, a representative of the North Carolina Department of Environment and Natural Resources approximated the location of three isolated patches of submerged aquatic vegetation within the southeastern corner of the boat basin. From west to east, they measure approximately 42, 23, and 110 square feet, respectively, for a total of approximately 175 square feet of submerged aquatic vegetation.

The South Atlantic Fishery Management Council maintains an essential fish habitat map viewer for several species under their jurisdiction. This viewer was reviewed for essential fish habitat (and habitat areas of particular concern) in the vicinity of the project area. According to these maps, the boat basin may be considered essential fish habitat for shrimp and the snapper grouper complex (SAFMC 2012). The polygons delineating essential fish habitat are meant to be used at a broad scale and do not necessarily indicate that such fine features such as the boat basin provide quality habitat for these species.

Back and Core Sounds are designated as a coastal inlet habitat type within the essential fish habitat-habitat areas of particular concern for shrimp. The major factor controlling shrimp growth and production is the availability of nursery habitat. Estuarine tidal creeks and salt marshes that serve as nursery grounds

are perhaps the most important habitats. Juveniles are known to congregate along estuarine shoreline habitats in North Carolina. Inshore seagrass habitat beds are also critical for shrimp. Historic loss of seagrass beds in North Carolina has reduced preferred habitat areas available to larval, juvenile, and adult shrimp. Such losses are due in part to dredge and fill operations, to increased turbidity resulting from discharges of waste materials and runoff, and from elevated levels of suspended solids (SAFMC 1993).

Subaquatic vegetation was identified within Back and Core Sounds as part of the snapper grouper complex essential fish habitat. Large numbers of juvenile snappers and some groupers are found in grass and algae beds in estuarine areas. Grass beds form the most important inshore nursery grounds for juveniles in this complex (SAFMC 1983).

SHELLFISH WATERS

Shellfish are another commercially and ecologically valuable type of wildlife found within the study area. The North Carolina Division of Marine Fisheries Shellfish Sanitation Section classifies coastal waters by their suitability for shellfish harvesting for human consumption in accordance with the National Shellfish Sanitation Program. Those coastal waters found to be suitable for shellfish harvesting for human consumption are identified as Shellfish Growing Areas. The Shellfish Section performs water sampling throughout the year to determine the extent of contamination or cleanliness of Shellfish Growing Areas and submits recommendations to the North Carolina Division of Marine Fisheries to close or open waters for shellfish harvesting. The North Carolina Division of Marine Fisheries disseminates a proclamation with the Shellfish Section's recommendation. The Shellfish Growing Areas contain waters that are permanently closed (prohibited), open (approved), or subject to being opened or closed (conditionally approved - open or conditionally approved - closed).

The NPS boat basin is included within area E-7 (Map 27) of the Shellfish Section's mapping of shellfish sanitation maps. The prohibited area associated with the NPS boat basin is as follows:

All those waters within 200 feet of the last dockage space in the Park Service Boat Basin at Shell Point beginning at a point 34° 41.1051' N -76° 31.5441' W on the northern shore of the basin entrance; running southeasterly to a point 34° 41.1004' N -76° 31.5353' W in the sound; running southwesterly to a point 34° 41.0759' N -76° 31.5542' W in the sound; running northwesterly to a point 34° 41.0803' N -76° 31.5623' W on the shore south of the basin entrance. (Shellfish Section 2012)

Currently, the most southeastern dock provides the last dock space from which the shellfish closure described above is measured. The NPS is discussing the current designation with the Division of Marine Fisheries Shellfish Sanitation Section because historically the boat basin had several additional mooring sites.

FLOODPLAINS

The project area is within in the 500- and 100-year floodplains. The area of proposed improvements is located entirely within the 100-year floodplain, a special flood hazard area. Special flood hazard areas are subject to inundation by the 1% annual chance of flood. The 1% annual chance of flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. Structures

within the floodplain include the visitor center, the docks within the boat basin, the picnic shelters, and the parking lots. Some of these items, such as the visitor center, can impede the flow of floodwaters during a flood event and reduce the capacity of the floodplain to convey water.

Chances of flooding assume the present sea level. Assuming that sea level rise continues to be an issue, flood risk could increase along all coastal areas such as the project area. The North Carolina Coastal Resources Commission's Science Panel on Coastal Hazards recommends that a rise of 1 meter (39 inches) be adopted as the amount of anticipated rise by the year 2100 for planning purposes. This assumes that the linear relationship between temperature and sea level that was noted in the 20th century remains valid for the 21st century (NCCRC 2010). This linear relationship would result in approximately 16 inches of sea level rise during the 40 year anticipated life of the improvements.

VEGETATION

Cape Lookout National Seashore supports a variety of vegetation ranging from salt marsh grasses to shrubs and trees (NPS 1982). There are a few isolated patches of submerged aquatic vegetation within the boat basin, as described above under the impact topic of "Essential Fish Habitat." Upland vegetation in the area of potential improvements includes mostly maintained lawn with isolated shrubs and trees. There is a dense patch of maritime scrub of 0.92 acre in size located west of the main parking lot that consists of live oak (*Quercus virginiana*), eastern red cedar (*Juniperus virginiana*), wax myrtle (*Myrica cerifera*), and loblolly pine (*Pinus taeda*) species. There are also numerous vine species in the vegetated patch, including Japanese honeysuckle (*Lonicera japonica*), common greenbrier (*Smilax rotundifolia*), poison ivy (*Toxicodendron radicans*), and grapevine (*Vitis spp.*). Currently, the vegetation within this wooded area is not actively managed by the park, although the double-track trail (approximately 8 feet wide) connecting the visitor center parking lot and the Core Sound Museum parking lot is kept clear of vegetation. The maintenance of this trail causes minor fragmentation of this patch from the adjacent patch of similar maritime scrub.

VISITOR USE AND EXPERIENCE

Cape Lookout National Seashore has received over 500,000 visitors each year in 2010 and 2011 (NPS 2012b). In the month of October 2012, the Harkers Island Visitor Center alone received 1,690 visitors (NPS 2012b). Those visitors who choose to visit the park visitor center typically arrive by car and park in the main parking lot located in front of the Harkers Island Visitor Center. There are approximately 66 available spaces in the main parking lot, with three of these spaces reserved for disabled permit holders and nine of these spaces reserved for recreational vehicle parking. Visitors arriving by tour buses would not be provided with a formalized drop off/pick up area. Tour operators coordinate with NPS staff in advance of tour arrivals to coordinate services accordingly.

Visitors enter the parking lot from Harkers Island Road and exit back onto Harkers Island Road. Infrequently, visitors arrive at the visitor center via personal watercraft. These visitors must adhere to the rules and regulations established by the North Carolina Wildlife Resource Commission while at the national seashore and in surrounding waters (NPS 2007).

Once inside the visitor center, visitors can watch an orientation video in the theater, explore the bookstore, or acquire park information through interpretive exhibits or orientation at the information desk. Restroom

facilities, which provide capacity for five women and five men, are also located in the visitor center. Space is provided within the existing visitor center for ferry ticketing operations, as well as for ferry passenger staging/waiting. The existing visitor center also provides space for ferry passengers to receive orientation and to wait for the ferry inside. Ferry passengers may also wait outside (unsheltered). Ferry passengers can access the ferry on the southern side of the boat basin using existing sidewalks, although they would need to be aware of any NPS operations taking place on the northeastern side of the boat basin.

Visitors also have an opportunity to hike one of the nature trails available within the project area, use the picnic area across from the main parking lot, or drive to the nearby Core Sound Museum for information on the local area and its heritage. There is a double-track, unlit, pedestrian trail that provides access between the main parking lot and the Core Sound Museum and the Willow Pond Nature Trail. A wayfinding sign indicates the connection between the main visitor center parking lot and these two destinations. The double-track trail runs approximately 200 feet in length through dense maritime scrub vegetation. Once on the other side of the double-track trail, there is no crosswalk across Cape Point Road. There are also other trails located on the northern side of the project area available for visitor use, although the pedestrian walkways throughout the proposed area of improvements stop short of creating a complete connection to these trails.

The picnic area located across from the main visitor center parking lot provides picnic tables and picnic shelters. There are no crosswalks or sidewalks for pedestrians to use when crossing Harkers Island Road to access the picnic area from the main parking lot and the visitor center. Visitors can use one of the four 15-by-15-foot picnic shelters, the larger 45-by-25-foot picnic shelter, or the three charcoal grills available for use. Visitors can also park in the parking lot located between the picnic area and the water, which is unstriped.

Visitors can also use the canoe and kayak launch site located at the picnic area parking lot. Those visitors arriving with their kayaks and canoes would continue to park during the day and overnight at the picnic area parking lot, as well as in the main visitor center parking lot. Some visitors also use the picnic area parking lot as a driveway for lighthouse viewing. Visitors can view the Cape Lookout Lighthouse from the comfort of their vehicle parked in the picnic area parking lot. Interested visitors may also fish at the Harkers Island Visitor Center area, following established regulations.

Special use permit applications are reviewed by park staff, and only those activities that would not disrupt visitor use and experience at the park are permitted. For instance, during the decoy festival, the National Park Service allows the Core Sound Museum to use the visitor center parking lot as overflow; however, this festival occurs in December, when park visitation is low.

OPERATIONS AND INFRASTRUCTURE

The Harkers Island Visitor Center provides amenities for visitors, such as an information desk, a bookstore, a theater for presentations, interpretive exhibits, and public restrooms. This facility provides office space for NPS staff as well as for the NPS ferry concessioner. The NPS ferry concessioner would provide passenger ticketing, staging/waiting, and orientation within the existing visitor center. Services provided to visitors and ferry passengers are described in more detail under the visitor use and experience section above. The existing restrooms would be used by visitors and ferry passengers. A number of concrete walkways connect the visitor center to the boat basin, although the walkways stop short of a true connection to the network of nature trails located on the northern side of the project area.

The boat basin located south of the Harkers Island Visitor Center provides dock space for up to 12 slips (depending upon the size of the vessels), which includes the piers associated with the boat ramp. Slips provide secure tie-ups on both sides of the vessel. Additional mooring can take place along the seawall. The National Park Service docks all of their boats inside the boat basin. The ferry concessioner would not be able to moor their vessels within the boat basin overnight. The ferry concessioner would load and unload their vessel at the docks located on the boat ramp on the southern side of the boat basin. Compliance with Architectural Barriers Accessibility Act Standards at the boat basin is limited, and the ferry concessioner would be required to meet Architectural Barriers Accessibility Act Standards requirements between the vessel and the docks.

The Harkers Island Visitor Center area includes two NPS parking lots. The main parking lot in front of the visitor center has a total capacity of approximately 66 spaces, unstriped, with three of these spaces reserved for disabled permit holders and nine of these spaces reserved for recreational vehicle parking. Vehicular circulation in the main parking lot is one way in from Harkers Island Road and one way out to Harkers Island Road. The main parking lot typically provides adequate parking spaces to meet visitor demand, but in instances during a special event, for example, overflow parking is directed to the Core Sound Museum parking lot. The second parking lot is located south of the main visitor parking lot, between the picnic area and water. This lot is also unstriped, and water often ponds on the lot after heavy rain due to a lack of drainage.

A double-track, unlit, pedestrian trail provides pedestrian access between the main visitor center parking lot and the Core Sound Museum parking lot and the Willow Pond Nature Trail. The trail runs approximately 200 feet in length through a dense area of maritime scrub. A wayfinding sign indicates the connection between the main visitor center parking lot and these two destinations.

The National Park Service provides a picnic area for visitors. Amenities include four picnic shelters (15 by 15 feet each), one larger picnic shelter (45 by 25 feet), and three charcoal grills. No crosswalks or separate sidewalks connect the picnic area to the main visitor center parking lot. The National Park Service also offers a canoe and kayak launch site off of the picnic area parking lot.

SOCIOECONOMIC RESOURCES

Cape Lookout National Seashore is located in Carteret County, North Carolina. Cities located in the area of the Seashore include Beaufort and Morehead City, which are both located within 24 miles from the Harkers Island Visitor Center. Northern Carteret County is a very rural area, whereas the southern part of Carteret County is more populated and includes popular beach towns such as Atlantic Beach and Emerald Isle (NPS 2004). Educational services, health care, and social assistance is the largest sector of the county's economy, followed by retail trade; construction; and arts, entertainment, recreation, accommodation, and food services (Census Bureau 2012).

Tourism is an important part of the local economy, and the region has strong cultural ties to water. The park is a partner with the Core Sound Museum to provide education and preservation of the cultural and natural resources of the region. The Core Sound Museum received approximately 25,000 visitors in 2011 (Core Sound Museum, Starks [pers. comm.], 2012). The museum charges a five dollar admission for visitors due to recent budget challenges, but offers free admission to museum members, students, and children (Core Sound Museum 2010).

4

ENVIRONMENTAL CONSEQUENCES

This chapter describes the environmental consequences associated with the alternatives presented in “Chapter 2: Alternatives.” It is organized by impact topic, which distills the issues and concerns into distinct subjects for discussion analysis. The National Environmental Policy Act requires consideration of context, intensity, and duration of adverse and beneficial impacts (direct, indirect, and cumulative) and measures to mitigate for impacts.

METHODOLOGY FOR ASSESSING IMPACTS

The Council on Environmental Quality regulations that implement the National Environmental Policy Act require assessment of impacts to the human environment, which includes natural, cultural, and social resources. As required by the National Environmental Policy Act, potential impacts are described in terms of type (beneficial or adverse), context (site-specific, local, or regional), duration, and level of intensity (negligible, minor, moderate, or major). Both indirect and direct impacts also are described; however, they may not be identified specifically as direct or indirect. These terms are defined below. Overall, these impact analyses and conclusions were based on the review of existing literature and studies, information provided by on-site experts and other government agencies, professional judgments, and park staff insight.

TYPE

- Beneficial:** A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
- Adverse:** A change that moves the resource away from a desired condition or detracts from its appearance or condition.
- Direct:** An impact that is caused by an action and occurs at the same time and place.
- Indirect:** An impact that is caused by an action but is later in time or farther removed in distance, but still reasonably foreseeable.

CONTEXT

Context is the setting within which an impact occurs and can be site specific, local, parkwide, or regionwide.

- Site specific:** The impact would occur within the proposed area of improvements.
Local: The impact would occur within the general vicinity of the project area.
Parkwide: The impact would affect a greater portion outside the project area yet within the park.
Regional: The impact would affect localities, cities, or towns surrounding the park.

DURATION

Impacts can be either short-term or long-term. Impact duration for each resource may differ and is presented for each resource topic, where applicable.

- Short-term:** Impacts that are temporary in nature, occur only during construction, or last less than one year.
Long-term: Impacts that last beyond the construction period, and the resources may need more than one year post construction to resume their preconstruction condition.

LEVEL OF INTENSITY

Intensity definitions are derived from relevant standards based on law, policy, regulations, NPS *Management Policies 2006*, scientific literature and research, or best professional judgment. Intensity definitions may vary by impact topic; therefore, they are provided separately for each impact topic analyzed in this document. Intensity definitions are provided throughout the analysis for negligible, minor, moderate, and major adverse impacts. The Council on Environmental Quality regulations advise (40 CFR 1500.2), and NPS *Management Policies 2006* require, that managers minimize and avoid adverse impacts on park resources. Standard NPS National Environmental Policy Act practice, as reflected in the Director's Order 12 Handbook and elsewhere, thus focuses on mainly such adverse effects. Beneficial effects are discussed and analyzed, wherever present, but generally only in a qualitative manner.

CUMULATIVE IMPACTS

The Council on Environmental Quality regulations that implement the National Environmental Policy Act require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as impacts which result when the impact of the proposed action is added to the impacts of other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions (40 CFR 1508.7).

In defining the contribution of each alternative to cumulative impacts, the following terminology is used:

- Imperceptible:** The incremental effect contributed by the alternative to the overall cumulative impact is such a small increment that it is impossible or extremely difficult to discern.

- Noticeable:** The incremental effect contributed by the alternative, while evident and observable, is still relatively small in proportion to the overall cumulative impact.
- Appreciable:** The incremental effect contributed by the alternative constitutes a large portion of the overall cumulative impact.

CUMULATIVE ACTIONS

To determine the potential cumulative impacts, existing and anticipated future projects at the ferry departure sites, Shackleford Banks, the South Core banks, and in the surrounding area were identified. These included lands administered by the National Park Service, the state of North Carolina, Carteret County, and the included towns. Potential projects identified as cumulative actions included any planning or development activity currently being implemented or expected to be implemented in the reasonably near future. The projects identified as contributing to cumulative impacts on the resources addressed by this environmental assessment include ongoing recreational use within the project area, ongoing fueling and maintenance of the NPS and ferry fleets, the commercial services plan, maintenance dredging of the boat basin, and other agency use of the boat basin. These actions are described below.

Ongoing Recreational Use Within the Project Area

The project area currently provides a number of recreational opportunities that have attracted and will continue to attract recreational visitors to this area of the park. Recreation opportunities include picnicking, fishing, kayaking/canoeing, and hiking. Ongoing recreational use within the project area has the potential to impact vegetation, visitor use and experience, operations and infrastructure, and socioeconomic resources.

Ongoing Fueling and Maintenance of the NPS and the Ferry Fleets

Fueling and infrequent onsite maintenance of boats within the boat basin would continue to impose a risk of oil and/or fuel spills. Should a spill occur, park staff or their concessioner would follow established protocols for cleanup as described in the park's Spill Prevention, Control, and Countermeasure Plan (NPS 2012c). Ongoing fueling and maintenance of NPS and ferry fleet has the potential to impact water quality.

Commercial Services Plan

The park's commercial services plan (NPS 2007) provides guidance for NPS managers to authorize and implement the actions necessary to conduct commercial visitor services at the park. It describes the existing commercial visitor services at the park and makes recommendations on how to improve the management and operation of commercial services while sustaining a rustic and mostly unstructured visitor experience. In part, it directs the National Park Service to provide passenger ferry service from the Harkers Island Visitor Center boat basin to Shackleford Banks and the Cape Lookout Lighthouse area on the southern South Core Banks in order for the park to achieve compliance with the Concessions Management Improvement Act of 1998. Implementation of the commercial services plan has the potential to impact visitor use and experience, operations and infrastructure, and socioeconomic resources.

Maintenance Dredging of the Boat Basin

The park recently dredged approximately 1,000 cubic yards of sediment in the boat basin to maintain operational depths within the basin. The park was able to complete this dredging within a week during

November 2012. Maintenance dredging of the boat basin impacted water quality, essential fish habitat, and operations and infrastructure.

Other Agency Use of the Boat Basin

Other agencies and academic institutions occasionally make use of the boat ramp provided at the NPS boat basin. Entities known to use the boat ramp include the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration (including the National Marine Fisheries Service), the North Carolina Department of Environment and Natural Resources, the University of North Carolina, North Carolina State University, and East Carolina University. While boats are in the water, the trucks and trailers used to transport them to and from the park are parked either in the grassy area adjacent to the boat ramp or in one of the available parking lots. Other agency use of the boat basin has the potential to impact operations and infrastructure.

WATER QUALITY

METHODOLOGY

The analysis of impacts on water quality within the project area is based on a review of existing data for the project area. Available data is limited to a qualitative summary from the park's general management plan. No water quality data specific to the boat basin on site is available for use in this analysis; therefore, the impact analysis below is qualitative. The definitions for the level of impact intensity are:

Negligible:	Impacts on water quality would not be detectable or measurable.
Minor:	Impacts on water quality would be slightly detectable and localized (affecting areas within the proposed area of improvements) and would not alter natural water quality conditions within the project area.
Moderate:	Impacts on water quality would be readily apparent and would alter natural water quality conditions within the project area.
Major:	Impacts on water quality would be readily apparent and widespread and would severely alter the natural water quality conditions in the project area.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under alternative A, the boat basin would provide docking for both NPS boats and ferry concession boats. The docks would remain in their current arrangement. The capacity for mooring would remain limited. Overnight mooring for the ferry concessioner would not be available. The water in the boat basin would continue to mix with the adjacent waters of Core Sound, which would be the primary influence of water quality in the boat basin. Groundwater use is not expected to noticeably alter the saltwater interface at the site.

Overall, alternative A would have a long-term negligible impact on water quality because the lack of improvements at the site is unlikely to cause a detectable change in water quality.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on water quality in and around the project area. These actions include maintenance dredging of the boat basin and ongoing fueling and maintenance of the NPS and the ferry fleets. Maintenance dredging may have resulted in a temporary increase in turbidity and suspension of any potential contamination that may have settled in the basin during the week-long project. There are no long-term impacts on water quality anticipated due to this action. Fueling and infrequent onsite maintenance of boats within the boat basin would continue to impose a risk of oil and/or fuel spills. Should a spill occur, park staff or their concessioner would follow established protocols for cleanup as described in the park's Spill Prevention, Control, and Countermeasure Plan (NPS 2012c). These actions would have long-term negligible to minor adverse impact on water quality because normal operations are unlikely to cause a detectable change in water quality; however, in the unlikely event of a spill, use of established protocols should minimize impacts, but there is the potential for slightly detectable and localized impacts that would not alter natural water quality conditions on a wider scale. These impacts, along with alternative A, would have a long-term negligible to minor adverse cumulative impact on water quality. Alternative A would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, alternative A would have a long-term negligible impact on water quality because the lack of improvements at the site is unlikely to cause a detectable change in water quality. Alternative A would contribute an imperceptible increment to a long-term negligible to minor adverse cumulative impact.

ALTERNATIVE B: PROPOSED ALTERNATIVE (NPS PREFERRED)

Impact Analysis

Under alternative B, the boat basin would provide docking for both NPS boats and ferry concession boats. The docks would be reconstructed in the northern corner of the boat basin. Removal of the existing docks and installation of new floating docks would cause a temporary increase in turbidity within the boat basin. Best management practices, such as the use of a silt curtain, would limit the potential spread of particulates within the boat basin during these activities, which would be completed within a couple months.

Once construction is complete, the capacity for mooring within the boat basin would be slightly increased. Overnight mooring for the ferry concessioner would be available. The water in the boat basin would continue to mix with the adjacent waters of Core Sound, which would be the primary influence of water quality in the boat basin.

Groundwater use is not expected to noticeably alter the saltwater interface at the site. Given the limited filtering capacity of the sandy soils and the high water table, design and location of the sewage disposal system would be such that contamination of either the freshwater aquifer or the adjacent sound waters would be avoided.

Overall, alternative B would have a short-term minor adverse impact on water quality because disturbance of sediment during removal and construction of docks within the boat basin. Alternative B would have a long-term negligible impact on water quality because following the completion of improvements, the new facilities are unlikely to cause a detectable change in water quality.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on water quality in and around the study area. These actions include maintenance dredging of the boat basin and ongoing fueling and maintenance of the NPS and the ferry fleets, as described under alternative A. These actions, along with alternative B, would have a long-term negligible to minor adverse cumulative impact on water quality. Alternative B would contribute an imperceptible increment to this cumulative impact.

Conclusion

Overall, alternative B would have a short-term minor adverse impact on water quality because of sediment disturbance during removal and construction of docks within the boat basin. Alternative B would have a long-term negligible impact on water quality because following the completion of improvements, the new facilities are unlikely to cause a detectable change in water quality. Alternative B would contribute an imperceptible increment to a long-term negligible to minor adverse cumulative impact.

ESSENTIAL FISH HABITAT

METHODOLOGY

Available information on essential fish habitat was compiled and analyzed in relation to the management actions. Location of submerged aquatic vegetation within the area of proposed improvements was delineated in coordination with a representative from the North Carolina Department of Environment and Natural Resources. This mapping was compared with the proposed improvements to evaluate the potential impacts of the action alternative. The definitions for the level of impact intensity are:

- Negligible:** There would be no observable or measurable impacts on the physical, chemical, or biological characteristics of the waters or substrate. There would be no observable or measureable loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components.
- Minor:** Changes in physical, chemical, or biological characteristics of the waters or substrate would be detectable. There may be some loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, but species would remain stable and viable. Occasional responses to disturbance by some individuals could be expected, but without interference to factors affecting population levels. Sufficient habitat would remain functional to maintain viability of all species. Impacts would be outside critical reproduction periods for sensitive native species. Mitigation measures, if needed to offset adverse impacts, would be simple and likely to be successful.
- Moderate:** Changes in physical, chemical, or biological characteristics of the waters or substrate would be detectable. Loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components would occur, but species would remain stable and viable. Frequent responses to disturbance by some individuals could be expected, with some negative impacts to factors affecting population levels. Sufficient habitat would remain functional to maintain the viability of all native species. Some impacts may

occur during critical periods of reproduction or in key habitat. Mitigation measures, if needed to offset adverse impacts, would be extensive and likely successful.

Major: Changes in physical, chemical, or biological characteristics of the waters or substrate would be detectable, would be expected to be outside the natural range of variability, and would be extensive. Benthic organisms, prey species and their habitat, and other ecosystem components may experience large declines. Frequent responses to disturbance by some individuals would be expected, with negative impacts to factors resulting in a decrease in population levels. Loss of habitat might affect the viability of at least some native species. Extensive mitigation measures would be needed to offset any adverse impacts, and may not be successful.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under alternative A, boats would continue to use the existing docks within the boat basin for mooring. The corner containing submerged aquatic vegetation is not used for navigation, nor is it used for mooring of vessels. Alternative A would have a long-term negligible adverse impact on essential fish habitat because boat operations are unlikely to cause a detectible change in the chemical and physical characteristics of the waters. No observable or measureable loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components would be expected.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on essential fish habitat in and around the project area. These actions include maintenance dredging of the boat basin. Maintenance dredging may have resulted in a temporary increase in turbidity during the week-long project; however, because dredging avoided the areas where submerged aquatic vegetation was identified, there are no long-term impacts on essential fish habitat anticipated due to this action. These actions, along with alternative A, would have a long-term negligible adverse cumulative impact on essential fish habitat. Alternative A would contribute an imperceptible increment to this cumulative impact.

Conclusion

Overall, Alternative A would have a long-term negligible adverse impact on essential fish habitat because boat operations are unlikely to cause a detectible change in the chemical and physical characteristics of the waters. No observable or measureable loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components would be expected. Alternative A would contribute an imperceptible increment to a long-term negligible adverse cumulative impact.

ALTERNATIVE B: PROPOSED ALTERNATIVE (NPS PREFERRED)

Impact Analysis

Under alternative B, the boat basin would provide docking for both NPS boats and ferry concession boats. The docks would be reconstructed in the northern corner of the boat basin. Two new docks would be installed on the southern edge of the boat basin. Removal of the existing docks and installation of new floating docks would cause a temporary increase in turbidity within the boat basin. Higher concentrations of particulates could limit the light available to submerged aquatic vegetation for photosynthesis. Best management practices, such as the use of a silt curtain, would limit the potential spread of particulates within the boat basin during these activities, which are anticipated to be completed within a couple months.

A temporary increase in suspended solids during construction has the potential to decrease habitat quality for shrimp and fish in the snapper grouper complex that may use the 175 square feet of submerged aquatic vegetation in the boat basin. Once construction is complete, this area would again be avoided during navigation within the boat basin.

Overall, alternative B would have short-term minor adverse impacts on essential fish habitat because temporary increases in turbidity during construction would be a detectible change in the chemical and physical characteristics of the waters. There may be some loss of, or injury to, individual organisms, but species would remain stable and viable. Occasional responses to disturbance by some individuals could be expected, but without interference to factors affecting population levels. Alternative B would have long-term negligible adverse impacts on essential fish habitat because boat operations are unlikely to cause a detectible change in the chemical and physical characteristics of the waters. No observable or measureable loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components would be expected.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on essential fish habitat in and around the project area. These actions include maintenance dredging of the boat basin, as described under alternative A. These actions, along with alternative B, would have a long-term negligible adverse cumulative impact on essential fish habitat. Alternative B would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, alternative B would have short-term minor adverse impacts on essential fish habitat because temporary increases in turbidity during construction would be a detectible change in the chemical and physical characteristics of the waters. There may be some loss of, or injury to, individual organisms, but species would remain stable and viable. Occasional responses to disturbance by some individuals could be expected, but without interference to factors affecting population levels. Sufficient habitat would remain functional to maintain viability of all species. Alternative B would have long-term negligible adverse impacts on essential fish habitat because boat operations are unlikely to cause a detectible change in the chemical and physical characteristics of the waters. No observable or measureable loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components would be expected. Alternative B would contribute an imperceptible adverse increment to a long-term negligible adverse cumulative impact.

SHELLFISH WATERS

METHODOLOGY

The National Shellfish Sanitation Program provides guidance for designating areas in which shellfish harvest can be safely conducted as well as designating areas in which shellfish harvest is prohibited. Maps of the existing shellfish harvest areas were compared with the improvements proposed within the project area to evaluate impacts on designated shellfish waters. The definitions for the level of impact intensity are:

- Negligible:** Impacts on shellfish waters would not be detectable. There would be no change in designated shellfish waters.
- Minor:** Impacts on shellfish waters would be slightly detectable and would only affect a small proportion of shellfish waters within or adjacent the project area. A change in designated shellfish waters would be required.
- Moderate:** Impacts on shellfish waters would result in readily apparent effects on populations, natural processes, or habitat within or adjacent to the project area. A change in designated shellfish waters would be required.
- Major:** Impacts on shellfish waters would result in readily apparent and substantial effects on populations, natural processes, or habitat within the project area. Loss of habitat or consistent disruptions may affect the viability of the species within or adjacent to the project area. A change in designated shellfish waters would be required.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under alternative A, boats would continue to use the existing docks within the boat basin for mooring. Closure of shellfish harvest would continue to be prohibited within 200 feet of the existing southeastern dock within the boat basin. The primary boat operators using the boat basin (i.e., the National Park Service and their ferry concessioner) do not operate boats with toilets on board. Any short-term day use of the boat basin by public boats is rare, and those individuals of the public who use the boat basin rarely possess boats with toilets on board. In the rare event that a boat with a toilet were to use the boat basin, the NPS would continue to require zero discharge of all sewage. While on the boat, fecal matter and other solid waste should be contained in a U.S. Coast Guard-approved marine sanitation device. Upon return to shore, portable toilets on public boats should be emptied into approved shoreside waste handling facilities, and marine sanitation devices should be discharged into approved pumpout stations. The National Park Service does not provide such facilities at the Harkers Island Area. Overall, alternative A would result in a long-term negligible impact on shellfish waters because there would be no change in designated shellfish waters.

Cumulative Impacts

No other past, present, and reasonably foreseeable future actions are known to have contributed to the cumulative impact on shellfish waters adjacent to the project area. Consequently, there would be no cumulative impacts on shellfish waters.

Conclusion

Overall, Alternative A would have a long-term negligible impact on shellfish waters because there would be no change in designated shellfish waters. There would be no cumulative impacts on shellfish waters.

ALTERNATIVE B: PROPOSED ALTERNATIVE (NPS PREFERRED)

Impact Analysis

Under alternative B, the boat basin would provide docking for both NPS boats and ferry concession boats. The docks would be reconstructed in the northern corner of the boat basin. Two new docks would be installed on the southern edge of the boat basin. Installation of these new docks would result in the last dock being approximately 50 feet closer to the mouth of the boat basin. As such, the waters available for shellfish harvest in Core Sound would be reduced by an additional 50 feet at the mouth of the boat basin. Although there may be a temporary increase in suspended solids during construction, no other impacts on shellfish waters is anticipated as a result of the altered configuration. The same zero discharge of sewage standard practices as described under alternative A would be implemented in the rare instance that a public boat using the boat basin would have a toilet on board. Alternative B would have a long-term minor adverse impact on shellfish waters because although impacts on shellfish waters would be slightly detectable and would only affect a small proportion of shellfish waters within or adjacent the project area.

Cumulative Impacts

No other past, present, and reasonably foreseeable future actions are known to have contributed to the cumulative impact on shellfish waters adjacent to the project area. Consequently, there would be no cumulative impacts on shellfish waters.

Conclusion

Overall, alternative B would have a long-term minor impact on shellfish waters because impacts on shellfish waters would be slightly detectable and would only affect a small proportion of shellfish waters within or adjacent the project area. There would be no cumulative impacts on shellfish waters.

FLOODPLAINS

METHODOLOGY

The impacts of the proposed improvements on floodplains are evaluated in the context of designation of the project area by Federal Emergency Management Agency flood insurance maps, topography of the

project area, and anticipated sea level rise within the 10-year scope of this project. The definitions for the level of impact intensity are:

- Negligible:** Impacts would not be detectable or measurable.
- Minor:** Impacts on the ability of the floodplain to absorb and store floodwaters or storm surge would be minimal and would not result in an increase in potential flood damage within the project area.
- Moderate:** Impacts on the ability of the floodplain to absorb and store floodwaters or storm surge would be readily apparent and would result in increased potential for flood damage within the project area.
- Major:** Impacts on the ability of the floodplain to absorb and store floodwaters or storm surge would be readily apparent and would result in increased potential for severe flood damage within the project area.

ALTERNATIVE A: NO-ACTION

Impact Analysis

The existing development within the project area (i.e., the visitor center, the docks, the picnic area, and the parking lots) would remain. The proposed area of improvements is contained within the 100-year floodplain and the special flood hazard areas. The existing visitor center is within the floodplain and would continue to impede the flow of floodwaters during a flood event and reduce the capacity of the floodplain to convey water. As such, alternative A would result in long-term minor adverse impacts on the floodplain because the impacts on the ability of the floodplain to absorb and store floodwaters or storm surge would be minimal and would not result in an increase in potential flood damage within the project area.

Cumulative Impacts

No other past, present, and reasonably foreseeable future actions are known to have contributed to the cumulative impact on floodplains within the project area. Consequently, there would be no cumulative impacts on floodplains.

Conclusion

Overall, alternative A would result in long-term minor adverse impacts on the floodplain because the impacts on the ability of the floodplain to absorb and store floodwaters or storm surge would be minimal and would not result in an increase in potential flood damage within the project area. There would be no cumulative impacts on floodplains.

ALTERNATIVE B: PROPOSED ALTERNATIVE (NPS PREFERRED)

Impact Analysis

The proposed area of improvements is contained within the 100-year floodplain and the special flood hazard areas. The existing development within the project area would remain and minimal additions would take place. A new 10-by-13-foot ticketing booth and porch would be added to the existing visitor center, which is located

within the floodplain. A new 600-square-foot restroom facility also would be constructed within the floodplain. These structures would impede the flow of floodwaters during a flood event and reduce the capacity of the floodplain to convey water. Because these actions qualify as a class II action as defined by the procedural manual for Director's Order 77-2, a Statement of Findings is included in appendix B. The other structures, such as additional shade shelters, would not alter the flow of flood waters or alter the capacity of the floodplain. Overall, alternative B would result in long-term minor adverse impacts on the floodplain because the impacts on the ability of the floodplain to absorb and store floodwaters or storm surge would be minimal and would not result in an increase in potential flood damage within the project area.

Cumulative Impacts

No other past, present, and reasonably foreseeable future actions are known to have contributed to the cumulative impact on floodplains within the project area. Consequently, there would be no cumulative impacts on floodplains.

Conclusion

Overall, alternative B would result in long-term minor adverse impacts on the floodplain because the impacts on the ability of the floodplain to absorb and store floodwaters or storm surge would be minimal and would not result in an increase in potential flood damage within the project area. There would be no cumulative impacts on floodplains.

VEGETATION

Both aquatic and terrestrial vegetation exists within the proposed area of improvements. Submerged aquatic vegetation is a type of essential fish habitat; therefore, impacts on submerged aquatic vegetation are discussed under the impact topic of "Essential Fish Habitat" above. This impact topic focuses on potential effects of the proposed action on terrestrial vegetation.

The analysis of impacts on vegetation within the project area is based on a review of existing data for the project area. Available data is limited to general information from the park's general management plan and site-specific summary of species provided by natural resource specialists. Mapping of the proposed improvements was combined with aerials and notes specific to the site to formulate the anticipated impacts on vegetation under each alternative. The definitions for the level of impact intensity are:

Negligible:	Impacts on vegetation would not be detectable or measurable.
Minor:	Impacts on vegetation would be slightly detectable and would only affect a small proportion of vegetation within the proposed area of improvements.
Moderate:	Impacts on vegetation would result in readily apparent effects on populations, natural processes, or habitat within or adjacent the proposed area of improvements.
Major:	Impacts on vegetation would result in readily apparent and substantial effects on populations, natural processes, or habitat within the proposed area of improvements. Loss of habitat or consistent disruptions may affect the viability of the species within or adjacent to the proposed area of improvements.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under alternative A, the vegetation in the area of potential improvements would remain the same. Visitors walking between the main parking lot and the picnic area or between the picnic area and the Core Sound Museum would continue to walk along social trails in the grassy areas to avoid sharing the road with cars. This would result in grasses being repeatedly trampled by those visitors. The 0.92 acre of dense maritime scrub located west of the main parking lot would also remain the same, and the park would not maintain this patch of vegetation. The park would continue to maintain the 200-foot long pedestrian double-track trail that runs from the main visitor parking lot to the Core Sound Museum parking lot. The presence of the trail would continue the fragmentation of the 0.92 acre of dense maritime scrub located west of the main parking lot from the larger forested area to the north of the main parking lot and pedestrian trail.

Overall, alternative A would have a long-term minor adverse impact on vegetation in the area of proposed improvements, since the 0.92 acre of dense maritime scrub would remain fragmented from the larger forest area located to the north and vegetation would be trampled along social trails, resulting in an impact that is slightly detectable, but would only affect a small proportion of vegetation within the proposed area of improvements.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on vegetation in and around the area of proposed improvements. These actions include ongoing recreational use within the project area. This use would contribute to vegetation disturbance within the project area from visitors who traverse off the formalized trails. This action, along with alternative A, would have a long-term minor adverse cumulative impact on vegetation. Alternative A would contribute a noticeable adverse increment to this cumulative impact.

Conclusion

Overall, alternative A would have a long-term minor adverse impact on vegetation in the area of proposed improvements, since the 0.92 acre of dense maritime scrub would remain fragmented from the larger forest area located to the north and vegetation would be trampled along social trails, resulting in an impact that is slightly detectable, but would only affect a small proportion of vegetation within the proposed area of improvements. Alternative A would contribute a noticeable adverse increment to the long-term minor adverse cumulative impact on vegetation.

ALTERNATIVE B: PROPOSED ALTERNATIVE (NPS PREFERRED)

Impact Analysis

Under alternative B, the vegetation in the area of potential improvements would be impacted in both the long-term and the short-term by the proposed facility improvements. In the long-term, at least 5,200 square feet of lawn displacement would occur as a result of the following actions:

- Extension of the Harkers Island Visitor Center in order to provide a ticketing office and porch.
- Installation of a separate restroom facility to the west of the proposed porch.

- Installation of a new shade/rain shelter along the western side of the boat basin.
- Relocation of the NPS fuel pump along the southern side of the boat basin.
- Expansion of the main parking lot for an additional row of 20 parking spaces on the western edge of the existing lot.
- Installation of a number of sidewalks throughout the site, in addition to a new loop trail along Harkers Island Road, running up Cape Point Drive.

In the short-term, the installation of an additional septic field and tank system would require displacement of lawn and scrub vegetation, which would be replaced once the field and tank were in place. In addition, if the park chooses to relocate the picnic area parking lot, the grassy area between the picnic area and Harkers Island Road would be cleared and paved to create the new picnic area parking lot. The park would then revegetate the area where the current parking lot sits between the water and the picnic area.

The transformation of the double-track trail providing pedestrian access between the visitor center and the Core Sound Museum into a one-way vehicular exit from the main parking lot would require some permanent clearing of maritime scrub vegetation to allow for adequate space for vehicles to drive through the area; however, this vegetation was already cleared to create the initial trail and has previously been disturbed. The park would add a formal pedestrian sidewalk along the northern side of this new one-way exit drive between the main parking lot and the Core Sound Museum.

In addition, the park would thin the vegetated, dense maritime scrub located to the west of the main visitor center parking lot in order to create a line of sight between the Core Sound Museum parking lot and the main visitor center parking lot. The park would target the wax myrtle and pine species when thinning the grove but would work to preserve the live oaks and cedars.

Visitors walking between the main parking lot and the picnic area or between the picnic area and the Core Sound Museum would continue to walk along social trails in the grassy areas to avoid sharing the road with cars.

Overall, alternative B would have a long-term minor adverse impact on vegetation because clearing of vegetation in order to allow for the proposed facility improvements, in addition to thinning of the dense maritime scrub area, would have the potential for slightly detectable impacts that would only affect a small proportion of vegetation within the proposed area of improvements.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on vegetation in and around the area of proposed improvements. These actions are described above under alternative A. This cumulative action, along with alternative B, would have a long-term minor adverse cumulative impact on vegetation. Alternative B would contribute a noticeable adverse increment to this cumulative impact.

Conclusion

Overall, alternative B would have long-term minor adverse impacts on vegetation because clearing of vegetation for the proposed facilities and thinning of the dense maritime scrub area would have a slightly detectable effect on a small proportion of vegetation within the proposed area of improvements. Alternative B would contribute a noticeable adverse increment to a long-term minor adverse cumulative impact.

VISITOR USE AND EXPERIENCE

METHODOLOGY

Anticipated impacts on visitor use and experience were analyzed using information from past interpretive and administrative planning documents, which provide background on changes to visitor use and experience over time. For this analysis, visitor use and experience includes ease of access and circulation through the site, absence of conflicts between visitor types and between visitors and NPS operations, and overall visitor satisfaction. The definitions for the level of impact intensity are:

- Negligible:** Changes in visitor use and/or experience would not be detectable. The visitor would not be aware of the impacts associated with the alternative.
- Minor:** Changes in visitor use and/or experience would be detectable, although the changes would be slight. The visitor may be aware of the impacts associated with the alternative.
- Moderate:** Changes in visitor use and/or experience would be readily apparent. The visitor would be aware of the impacts associated with the alternative and would likely be able to express an opinion about the changes.
- Major:** Changes in visitor use and/or experience would be readily apparent and would be severely adverse. The visitor would be aware of the impacts associated with the alternative and would likely express a strong opinion about the changes.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under alternative A, ferry passenger ticketing, passenger staging/waiting, and orientation would all take place in the existing Harkers Island Visitor Center. Ferry passengers would either wait inside the visitor center or outside. During bad weather, the visitors looking to ride the ferry would most likely congregate inside the visitor center, which would lead to some congestion inside the building and conflict between those simply waiting and those seeking to take in the exhibits and film. This crowding of visitors could result in interference with general visitor orientation. In addition, all general visitors and ferry passengers would use the current visitor center restrooms, which provide capacity for five women and five men.

The ferry vessels would use the docks associated with the boat ramps on the southern side of the boat basin. Because NPS operations would take place on the western side of the boat basin and ferry operations would take place on the southern side of the boat basin, ferry passengers trying to access the ferry vessel may walk through the area where park operations are taking place, creating potential pedestrian and NPS operations conflicts. In addition, the infrastructure surrounding the boat basin currently presents a tripping hazard where the wooden walkway interfaces with the concrete walkway and is not compliant with Architectural Barriers Accessibility Act Standards. The park would not be able to offer overnight mooring for the ferry concessioner's vessels inside the current boat basin. In the case of bad weather, the concessioner would need to moor their vessel at their own facility and wait for the weather to clear, which could result in a delay in ferry service once conditions are fair and the concessioner can make the trip to the park's boat basin. This may result in long wait times for ferry passengers in the instance of a weather delay, further exacerbating the crowding in the visitor center. Private boaters would continue to be allowed to use the docks if they are

visiting the Harkers Island Visitor Center. If this use causes congestion, the National Park Service would consider elimination or restriction of this access.

The main visitor center parking lot, under alternative A, would remain unstriped, with a potential capacity for 66 total vehicles, including nine recreational vehicle/bus parking spaces and three disabled permit holder reserved spaces. The lack of striping allows visitors to park creatively, and often times, the full capacity of the lot is not realized due to the freedom of visitors to park wherever they so choose. There is currently no designated short-term or long-term parking spaces in the lot, which creates an unorganized parking situation with some visitors parking overnight and taking up spaces that are more suited for short-term visits. Although tour operators would continue to coordinate with the park prior to arrival, there would not be a designated drop off/pick up location provided for buses.

The line of sight between the Core Sound Museum and the main visitor center parking lot would remain obstructed by the dense maritime scrub located to the west of the lot. Many visitors do not realize that a double-track, unlit, pedestrian trail provides access between the main parking lot and the Core Sound Museum parking lot and Willow Pond Nature Trail, so visitors looking to visit the Core Sound Museum would continue to get back into their vehicles and drive to the museum by exiting onto Harkers Island Road and turning right onto Cape Point Drive.

Under alternative A, there would continue to be no crosswalks in place on Cape Point Road for those visitors who choose to walk between the main visitor center parking lot and the Core Sound Museum. In addition, there would be a continued lack of crosswalks between the main visitor center parking lot and the picnic area across Harkers Island Road. Pedestrians would continue to walk along the roads and parking lot, sharing this infrastructure with vehicular traffic. Visitors would continue to use the picnic area shelters and grills when accessing the site. The parking lot at the picnic area would remain unstriped, and water would continue to pond on the parking lot after heavy rain, creating a pedestrian obstruction. The pedestrian walkways throughout the proposed area of improvements would continue to stop short of creating a complete connection to the interpretive trails offered in the northern portion of the project area. Although these trails are available for visitor use, many visitors may not understand how to access that experience.

The canoe and kayak launch site would remain in place at the picnic area parking lot, and day and overnight paddlers would continue to park overnight in the picnic area parking lot or the main visitor center parking lot. Those visitors who choose to park overnight may take up parking spaces for those day visitors who would like to access the picnic area or a view of the lighthouse.

Overall, alternative A would result in long-term moderate adverse impacts on visitor use and experience, because visitor use and experience would be constrained due to the current configuration of park facilities, which would be readily apparent to the visitor. The visitor would be aware of the impacts associated with the alternative and would likely be able to express an opinion about the changes.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on visitor use and experience in and around the area of proposed improvements. These actions include ongoing recreational use within the project area and the commercial services plan. The ongoing recreational use would have a beneficial impact on visitor use and experience of the park because visitors

would continue to have opportunities to come to the Harkers Island Visitor Center to picnic, fish, kayak or canoe, gather interpretive information, walk the trails, or participate in a variety of other recreational activities of the park. The commercial services plan enables the park to authorize and implement the actions necessary to conduct commercial visitor services at the park and offer amenities to park visitors, such as passenger ferry service, restrooms, and orientation. These actions result in a beneficial impact on visitor use and experience. The ongoing recreational use within the project area and the commercial services plan, when combined with the long-term moderate adverse impacts from alternative A, would result in a long-term minor adverse cumulative impact on visitor use and experience. Alternative A would contribute a noticeable adverse increment to this cumulative impact.

Conclusion

Overall, alternative A would result in long-term moderate adverse impacts on visitor use and experience, because visitor use and experience would be constrained due to the current configuration of park facilities, which would be readily apparent to the visitor. The visitor would be aware of the impacts associated with the alternative and would likely be able to express an opinion about the changes. Alternative A would contribute a noticeable adverse increment to a long-term minor adverse cumulative impact.

ALTERNATIVE B: PROPOSED ALTERNATIVE (NPS PREFERRED)

Impact Analysis

Under alternative B, the park would provide additional facilities to accommodate passenger ticketing, staging/waiting, and orientation, resulting in an improved visitor experience. Ferry ticketing by the NPS concessioner would take place at a new ferry ticketing office and porch, allowing for ferry passengers to remain outside and not create a crowded atmosphere within the Harkers Island Visitor Center. Ferry passengers could also wait for the ferries outside under the porch or a separate staging/waiting shelter located adjacent to the boat basin, providing protection from sun and rain. In addition, the park would install a separate restroom facility to the west of the proposed ticketing office and porch, which would disperse visitor use that would otherwise be concentrated on the existing visitor center.

Under alternative B, the docks within the boat basin would be reconfigured to better serve visitors, as well as the park. NPS operations would take place on the southern side of the boat basin and ferry operations would take place on the western side of the basin, allowing for separate NPS operations and ferry passenger operations, ensuring that ferry passengers do not need to walk through ongoing NPS operations to access the ferry and minimizing potential passenger-NPS operations conflicts. Architectural Barriers Accessibility Act Standards compliance would be improved upon with reconfiguration of the docks, resulting in safer facilities for ferry passengers. Private boaters would continue to be allowed to use the docks if they are visiting the Harkers Island Visitor Center. If this use causes congestion, the National Park Service would consider elimination or restriction of this access.

The main parking lot would be reconfigured to provide an additional row of 20 parking spaces for visitors, for a grand total of 91 total spaces, including seven designated recreational vehicle/bus parking spaces and three disabled permit holder spaces, in addition to designated short-term parking spaces, to allow for ease in visitor vehicular operation and flow in the parking lot. The access to and egress from the parking lot would also be reconfigured to allow for improved vehicular flow throughout the lot. A one-way vehicular exit from

the main parking lot onto Cape Point Drive would be created along the alignment of the existing double-track trail that provides pedestrian access/connection between the visitor center and the Core Sound Museum and Willow Pond Nature Trail. This would allow visitors to more efficiently access the Core Sound Museum parking lot in times when the main parking lot is full to capacity. A bus and vehicle drop off lane would also be designed to allow visitors to drop off individuals or equipment closer to the visitor center building and ferries, as well as for large visitor groups to be dropped off separately from parking traffic, again improving visitor vehicular flow through the parking lot.

The park would reconfigure and stripe the picnic area parking lot to improve drainage to minimize ponding of water on the parking lot and obstructions to pedestrians in the lot. If the park decides to move the parking lot from its current location to the grassy area between the picnic shelters and the road, this would allow for revegetation of the current parking lot location. This revegetated area would provide a safer place for recreation, especially for children, due to the increase separation from Harkers Island Road. The picnic area would continue to provide the same visitor amenities as under alternative A regardless of which location is used (i.e., the existing location or the grassy area between Harkers Island Road and the picnic shelters).

The park would add sidewalks throughout the site, including a sidewalk with trail lighting along the northern side of the new one-way exit drive to allow visitors to walk between the main parking lot and the Core Sound Museum. This new sidewalk would better connect visitors with the Core Sound Museum and its Willow Pond Nature trail, promoting a walking-friendly experience for visitors, in addition to strengthening the connection between the Harkers Island Visitor Center and the waterfowl heritage experience of the Core Sound Museum. The park would also thin the dense maritime scrub vegetation located to the west of the main visitor center parking lot, which would create a visual connection between the Core Sound Museum and the main visitor center parking lot. Additional visitor sidewalks would be added between the main parking lot and the picnic area, in addition to sidewalks in front of the new restrooms, new picnic shelter, and new ferry ticketing porch. The park would also add new sidewalks along Harkers Island Road and running up Cape Point Drive, which would facilitate improved connections to the trails at the Core Sound Museum, enhancing visitor trail use opportunities and pedestrian safety. The pedestrian walkways throughout the proposed area of improvements would extend north to create a complete connection to the interpretive trails offered in the northern portion of the project area, enhancing visitor experience by creating a complete network of trails for those visitors seeking a pedestrian-friendly environment.

Overall, alternative B would result in long-term beneficial impacts on visitor use and experience because visitor use and experience would be enhanced with improved park facilities.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on visitor use and experience in and around the area of proposed improvements. These actions include ongoing recreational use within the project area and the commercial services plan, which are described above under alternative A. These actions result in a beneficial impact on the visitor use and experience of the park. These actions, along with alternative B, would have a long-term beneficial cumulative impact on visitor use and experience. Alternative B would contribute a noticeable beneficial increment to this cumulative impact.

Conclusion

Overall, alternative B would have a long-term beneficial impact on visitor use and experience because improvement of park facilities would result in an enhanced visitor use and experience. Alternative B would contribute a noticeable beneficial increment to a long-term beneficial cumulative impact.

OPERATIONS AND INFRASTRUCTURE

METHODOLOGY

Operations and infrastructure, for the purpose of this analysis, refer to the quality and effectiveness of the infrastructure and the ability of the park to maintain the infrastructure used in the operation of the park in order to adequately protect and preserve vital resources and provide for a high quality visitor experience. This includes an analysis of the condition and usefulness of the facilities and developed features used to support the operations of the park and to support operation of the ferry concessioner. The definitions for the level of impact intensity are:

- Negligible:** Operations and infrastructure would not be affected.
- Minor:** The impact would be detectable and would result in a slight change to operations and infrastructure that is barely noticeable to staff and the public.
- Moderate:** The impacts would be readily apparent and would result in a substantial change in operations and infrastructure in a manner noticeable to staff and the public.
- Major:** The impacts would be readily apparent, would result in a substantial change in park operations and infrastructure in a manner noticeable to staff and the public, and would be markedly different from existing operations and infrastructure.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under alternative A, the existing visitor center would provide office and ticketing space for the NPS ferry concessioner to provide passenger ticketing, passenger staging/waiting, while also continuing to host all other NPS functions. The relatively high level of use and associated need for space for visitor services on the first floor of the visitor center would require all NPS offices to be located on the second floor.

The boat basin would continue to provide dock space for up to 12 slips (depending upon the size of the vessels), which includes the piers associated with the boat ramp. Additional mooring could take place along the seawall. With the boat basin remaining in its current configuration, the park would continue to house all of their vessels within the boat basin; however, the National Park Service would not be able to provide overnight mooring for the NPS ferry concessioner. This may result in a delay in ferry operations during times of inclement weather because the ferry operator would need to store the boats at a separate facility until the weather clears. The concessioner would load and unload at the docks located on the boat ramp on the southern side of the boat basin. NPS operations would take place on the western side of the boat basin, and visitors may walk through the area where NPS operations are taking place in order to access the ferry, possibly creating pedestrian-NPS operations conflicts. Compliance with Architectural Barriers Accessibility

Act Standards at the boat basin is currently limited and would remain so. The ferry concessioner would be required to meet Architectural Barriers Accessibility Act Standards between the vessel and the docks.

Other entities such as other agencies and educational institutions would be allowed to continue using the boat ramp as they are currently. Impacts on operations and infrastructure from this continued use is addressed as a cumulative action in the section below.

The National Park Service would continue to provide a parking area, picnic tables, picnic shelters, and two nature trails. The main parking lot would continue to provide capacity for 66 vehicles, although the spaces are not striped. Three spaces would remain reserved for disabled permit holders, nine spaces would remain reserved for recreational vehicle/bus/trailer parking spaces, and circulation would remain one way in and one way out to Harkers Island Road. The picnic area parking lot would remain unstriped, and approximately total capacity in the lot of 40 parking spaces would most likely not be realized because visitors would not park as efficiently as they would in a striped lot. Water would continue to pond in the parking lot after heavy rains due to a lack of drainage. The existing concrete walkways and double-track pedestrian trail connecting the main parking lot and the Core Sound Museum would remain in their current configuration, with no crosswalks across any of the roads within the park.

Overall, alternative A would result in long-term minor adverse impacts on operations and infrastructure, because the current park facilities would result in NPS offices being relocated to the second floor of the visitor center and potential ferry passenger and NPS operations conflicts. Although no change in staff would be required to maintain the facilities, the lack of space in the visitor center and the conflicts between visitors and NPS operations would be detectable but would be of a magnitude that would be detectable but would result in a slight change to operations and infrastructure that is barely noticeable to staff and the public.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on NPS operations and infrastructure in and around the area of proposed improvements. These actions include ongoing recreational use within the project area, the commercial services plan, maintenance dredging of the boat basin, and other agency use of the boat basin. The ongoing recreational use would contribute a long-term negligible adverse impact on operations and infrastructure at the park because visitors would continue to come to the Harkers Island Visitor Center either to picnic, fish, kayak or canoe, gather interpretive information, walk the trails, or participate in a variety of other recreational activities of the park, which may contribute to operations conflicts with parking lots at capacity or crowds within the visitor center. The commercial services plan enables the park to authorize and implement the actions necessary to conduct commercial visitor services at the park and offer amenities to park visitors, such as passenger ferry service, restrooms, and orientation. The implementation of the recommendations made by the commercial services plan improves the efficiency of managing commercial services within the park, and adverse but negligible impact in the long term. The park completed maintenance dredging of the boat basin in November 2012 in order to provide improved ferry and NPS boat access of the boat basin, which resulted in a long-term beneficial impact on operations and infrastructure. Finally, the other federal and state agencies use the boat basin for their operations, which could create crowding issues and conflicts with NPS operations, because additional ferry passenger services would be offered at the boat basin, too. This would result in a long-term negligible adverse impact on operations and infrastructure. These actions, along with

alternative A, would have a long-term minor adverse cumulative impact on operations and infrastructure. Alternative A would contribute a noticeable adverse increment to this cumulative impact.

Conclusion

Overall, alternative A would result in long-term minor adverse impacts on operations and infrastructure, because the current park facilities would result in NPS offices being relocated to the second floor of the visitor center, potential ferry passenger and NPS operations conflicts, and visitor safety conflicts. Although no change in staff would be required to maintain the facilities, the lack of space in the visitor center and the conflicts between visitors and NPS operations would be detectable but would be of a magnitude that would be detectable but would result in a slight change to operations and infrastructure that is barely noticeable to staff and the public. Alternative A would contribute a noticeable adverse increment to a long-term minor adverse cumulative impact.

ALTERNATIVE B: PROPOSED ALTERNATIVE (NPS PREFERRED)

Impact Analysis

Under alternative B, the park would provide additional facilities to accommodate passenger ticketing, staging/waiting, and orientation. Ferry ticketing would take place at a newly constructed ferry ticketing office and porch. This would relieve pressure on the existing facilities such that NPS offices currently located on the first floor could remain. The park would also install separate restroom facilities for the additional ferry passenger traffic, which would decrease pressure on the existing restroom facilities located in the Harkers Island Visitor Center. The park would also ensure that adequate septic amenities are provided for the additional facilities proposed by the National Park Service, which would likely require installation of an additional septic field and tank system.

The docks within the boat basin would be reconfigured to better serve NPS operations and the ferry service. Two finger piers on the northwestern side of the basin, located closest to the visitor center, would be removed and replaced by a floating dock system as part of the reconfiguration. The park would also add two finger piers to the southern side of the boat basin. This reconfiguration would allow for the park to continue housing all of their vessels within the boat basin while also providing space at the boat basin for the ferry concessioner to moor their vessels overnight. Because the NPS operations would take place on the southern side of the boat basin, the ferry passenger operations would be separated from the NPS operations, allowing for increased visitor safety. The NPS fuel pump would also be relocated to the southern side of the boat basin, next to the NPS operations docks to further ensure separation of NPS operations from ferry passengers.

Other entities such as other agencies and educational institutions would be allowed to continue using the boat ramp as they are currently. The park would consider formalizing the parking arrangement with these entities to avoid impacting visitor parking. The impact on operations and infrastructure from this continued use is addressed as a cumulative impact below.

The main parking lot would be reconfigured within the existing area of disturbance with new striping to provide a row of 20 additional parking spaces for visitors. The lot would dedicate seven spaces for recreational vehicle/bus parking spaces, and three disabled permit holder spaces, to facilitate more efficient visitor parking/access, in addition to designated short-term parking spaces. The park would also

make minor drainage improvements to the main parking lot, using best management practices, to ensure that adequate drainage facilities are available to ensure a safe and accessible parking lot. Access to and egress from the parking lot would also be reconfigured. The double-track trail providing pedestrian access/connection between the visitor center and Core Sound Museum and Willow Pond Nature Trail would become a one-way vehicular exit from the main parking lot onto Cape Point Drive. Because the park directs overflow parking to the Core Sound Museum parking lot, the exit drive would allow for efficient vehicular flow during congested periods, minimizing lines in and out of the parking lot. A separate bus and vehicle drop-off lane would also allow for individuals to drop-off equipment or visitors separately from parking traffic, which would ensure safety and efficient flow of traffic.

Alternatively, the park would reconfigure the picnic area parking lot to improve drainage and add striping to maximize parking spaces. The parking lot may be moved from its current location to the grassy area between the picnic shelters and the road. If this is the case, the relocation of the parking lot may facilitate more shoreline stability by placing the grassy area adjacent to the shoreline as opposed to a paved parking lot, possibly requiring less maintenance of the shoreline. Either reconfiguration option would allow for the striped lot to better provide for its capacity of 40 vehicles.

Additional sidewalks would also be added throughout the proposed area of improvement. This includes a lighted pedestrian sidewalk along the new one-way exit drive the Core Sound Museum (to replace the existing double-track trail) and a crosswalk across Cape Point Drive. The park would also decrease vehicle congestion by encouraging visitors to walk between the visitor center and Core Sound Museum by thinning the dense maritime scrub located to the west of the main visitor center parking lot to create a sightline between the two destinations. Sidewalks would be added to connect the picnic area to the interpretive trails offered in the northern portion of the project area and would be maintained by the park. Another crosswalk would be provided across Harkers Island Road.

Completion of these improvements would result in a number of additional structures for NPS staff to maintain; however, the increase is not sufficient to warrant any additional employees. Overall, alternative B would result in both long-term beneficial and long-term minor adverse impacts on operations and infrastructure because the improved park facilities would result in more efficient NPS operations but would also result in an increase in structures to be maintained resulting in a change that is detectable to NPS staff and would result in a slight change to operations and infrastructure that is barely noticeable to staff and the public.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on NPS operations and infrastructure in and around the area of proposed improvements. These actions include ongoing recreational use within the project area, the commercial services plan, maintenance dredging of the boat basin, and other agency use of the boat basin, which are described above in alternative A. These actions, along with alternative B, would have a long-term beneficial cumulative impact on operations and infrastructure. Alternative B would contribute a noticeable beneficial increment to this cumulative impact.

Conclusion

Overall, alternative B would result in both long-term beneficial and long-term minor adverse impacts on operations and infrastructure because the improved park facilities would result in more efficient NPS operations but would also result in an increase in structures to be maintained resulting in a change that is detectable to NPS staff and would result in a slight change to operations and infrastructure that is barely noticeable to staff and the public. Alternative B would contribute a noticeable beneficial increment to a long-term beneficial cumulative impact.

SOCIOECONOMIC RESOURCES

METHODOLOGY

General data to describe the existing socioeconomic conditions on Harkers Island was gathered from the U.S. Census Bureau. The impact analysis below is limited to the impact of improving the existing gateway to Cape Lookout National Seashore on Harkers Island. As discussed in the Commercial Services Plan/Environmental Assessment and “Finding of No Significant Impact” (NPS 2007 and 2008), a long-term ferry concessioner will operate out of the existing Harkers Island boat basin, beginning in 2014. An increase in visitation is assumed to take place as part of this and is not included in the analysis below. As such, this analysis focuses on the improved connectivity between the NPS visitor center and the Core Sound Museum. These highly localized impacts to the socioeconomic conditions are discussed qualitatively, due to the highly restricted scale. The definitions for the level of impact intensity are:

- Negligible:** There would be no impacts on the economic condition.
- Minor:** The impacts on economic conditions would be detectable, although short-term or small when compared to current levels of economic activity.
- Moderate:** The impacts on economic conditions would be readily apparent and likely long-term.
- Major:** The impacts on economic conditions would be readily apparent, long-term, and would cause substantial changes to economic conditions.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under alternative A, the socioeconomic resources of the area of potential improvements would remain the same. Visitors would continue to access the visitor center at Harkers Island and use the ferry service provided by the NPS concessioner. Visitation to the Core Sound Museum would also remain the same, where, due to the interrupted line of sight between the Core Sound Museum and the main visitor parking lot, the park visitors often do not realize the proximity of the museum or its existence and may forego visiting the museum. As such, the museum would not generate additional revenues.

Overall, alternative A would have long-term negligible impacts on the socioeconomic resources within the area of potential improvements because the economic condition of the project area would remain the same.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on the socioeconomic resources of the park. These actions include ongoing recreational use within the project area and the commercial services plan. The ongoing recreational use would contribute a beneficial impact on the socioeconomic resources of the park because visitors continue to come to the Harkers Island Visitor Center to picnic, fish, kayak or canoe, gather interpretive information, walk the trails, or participate in a variety of other recreational activities of the park. This influx of visitors helps the Core Sound Museum to experience visitor traffic in the area and secondarily, visits to their facility that generate revenues. The commercial services plan enables the park to authorize and implement the actions necessary to conduct commercial visitor services at the park, and thus, generate revenue for the national park system. It should be noted that although the commercial services plan is not considered part of the proposed alternatives for this environmental assessment, adverse economic impacts were identified as a result of the plan for unsuccessful ferry concessions contract bidders. Overall, the plan results in a beneficial impact to the socioeconomic resources of the park. These cumulative actions, along with alternative A, would have a long-term beneficial cumulative impact on socioeconomic resources. Alternative A would contribute an imperceptible increment to this cumulative impact.

Conclusion

Overall, alternative A would have a long-term negligible impact on socioeconomic resources because there would be no change in the economic condition of the project area as a result of the alternative. Alternative A would contribute an imperceptible increment to the long-term beneficial cumulative impact on socioeconomic resources.

ALTERNATIVE B: PROPOSED ALTERNATIVE (NPS PREFERRED)

Impact Analysis

Under alternative B, the socioeconomic resources of the area of potential improvements would change slightly because the park would be providing additional facilities to accommodate parking, passenger ticketing, staging/waiting, and orientation.

Reconfiguration of the main parking lot, establishment of the connection road and sidewalk from the main parking lot out to Cape Point Drive, and thinning of the dense maritime scrub vegetation to the west of the main parking lot would allow for establishment of a visual connection to, as well as improved access (both vehicular and pedestrian) to, the Core Sound Museum. These improvements could allow for increased visitor exposure to the Core Sound Museum, which would result in an increase in visits to and increased revenues for the Core Sound Museum. There would also be a temporary increase in construction-related employment due to the work required to establish the proposed improvements.

Overall, alternative B would have a short-term beneficial impact on socioeconomic resources because of a temporary increase in construction work. Alternative B would also have long-term beneficial impacts on the socioeconomic resources of the area of potential improvements because the economic condition within the project area would improve as a result of the facility improvements.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on the socioeconomic resources within the project area. These actions include ongoing recreational use within the project area and the commercial services plan, which are described above under alternative A. These actions, along with alternative B, would have a long-term beneficial cumulative impact on socioeconomic resources. Alternative B would contribute an imperceptible increment to this cumulative impact.

Conclusion

Overall, alternative B would have a short-term beneficial impact on socioeconomic resources because of a temporary increase in construction work. Alternative B would also have a long-term beneficial impact on socioeconomic resources because the economic condition within the project area would improve as a result of the facility improvements. Alternative B would contribute an imperceptible increment to the long-term beneficial cumulative impact on socioeconomic resources.

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5

CONSULTATION AND COORDINATION

Director's Order 12 requires the National Park Service to make "diligent" efforts to involve the interested and affected public in the National Environmental Policy Act process. This process, known as scoping, helps to determine the important issues and eliminate those that are not; allocate assignments among the interdisciplinary team members and/or other participating agencies; identify related projects and associated documents; identify other permits, surveys, consultations, etc. required by other agencies; and create a schedule that allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made. This chapter documents the scoping process for the proposed action, identifies future compliance needs and permits, and includes the list of preparers for the document.

THE SCOPING PROCESS

The scoping process is initiated at the beginning of a National Environmental Policy Act project to identify the range of issues, resources, and alternatives to address in the environmental assessment. Typically, both internal and public scoping is conducted to obtain feedback on these elements. State and federal agencies were also contacted in order to uncover any additional planning issues and to fulfill statutory requirements. The planning process for the proposed action was initiated during the internal, agency, and public scoping in 2007 for the Commercial Services Plan (NPS 2007). Additional study to document the capital investment and operational considerations associated with establishing ferry service at the Harkers Island Visitor Center took place as part of the Passenger Ferry Transportation Feasibility Study (NPS 2010). Public involvement continued with the *Passenger Ferry Departure Site Environmental Assessment/Assessment of Effect*. This process introduced plans to address ferry service and continued discussions with interested agencies and individuals. This process introduced the purpose and need of the project and potential improvements that could better accommodate ferry service at the Harkers Island Visitor Center. Discussions with interested agencies and individuals were initiated at this time.

INTERNAL SCOPING

The internal scoping process for the specific improvements included in the proposed action began in September 2012, when staff from the park and their consultants conducted internal scoping. During an on-site meeting, park staff and their consultants walked the area of proposed improvements to determine areas of specific concern. The team discussed the purpose of and need for the project and planning issues that should be considered during development of this environmental assessment.

PUBLIC SCOPING

The National Park Service sent out a press release on September 13, 2012 initiating the start of the public scoping period and announcing a public scoping meeting on September 20, 2012. The National Park Service hosted a public open house the evening of September 20 at the Core Sound Waterfowl Museum. At this time, the National Park Service solicited public input on the proposed facility improvements and amenities that would improve the Harkers Island Visitor Center for use by a contracted ferry concessioner and ferry passengers. The meeting also provided the public with information on the purpose and need of the project, the planning process that would be followed, and instructions on how to provide feedback. Approximately 21 members of the public attended the open house.

The National Park Service held a public scoping comment period from September 14, 2012 to October 15, 2012 to solicit input on the proposed action during which a total of 11 public comments were received. Comments were received during the public scoping meeting, in the mail, via email, and on the NPS Planning, Environment, and Public Comment website. The majority of the public comments were against the establishment of the ferry service concession contract, which is outside the scope of this project. Specifically, commenters questioned the need for a concession contract, questioned the funding for the service, stated that flexible ferry service would be lost, and requested information on how the ferry concession contract would impact local ferry operators. One commenter requested that universal accessibility be addressed elsewhere in the park. One commenter questioned the ability of the proposed infrastructure to support increased visitation at the NPS property.

AGENCY SCOPING

As part of the scoping effort, the National Park Service has contacted multiple state and federal agencies, including the U.S. Army Corps of Engineers, the North Carolina Division of Coastal Management, the North Carolina State Historic Preservation officer, the U.S. Fish and Wildlife Service, and the North Carolina State Environmental Review Clearinghouse. The U.S. Army Corps of Engineers' Wilmington Regulatory Field Office commented that the proposed project may impact waters or wetlands subject to their regulatory jurisdiction, and a permit authorization, pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act may be required.

The North Carolina Division of Coastal Management commented that the proposed project will require a consistency review by their office. The Division of Coastal Management also suggested that the environmental assessment consider what facility improvements and amenities may be beneficial for enhancing the visitor experience based on the visitor's extended time away from "home." The Division

also brought up their concerns that there is sufficient parking for casual visitors and ferry passengers, that tour buses not overload facilities, that the environmental assessment considers visitor service amenities for those individuals arriving by private boats to the visitor center, and how the proposed action can be integrated with special events. The Division also expressed concern regarding the shellfish closure area, moratorium periods for special status species, and preservation of natural resources.

Lastly, the North Carolina State Historic Preservation Officer commented that they are aware of no known historic resources that would be affected by improvements to accommodate passenger ferry service at the existing Harkers Island Visitor Center. The State Historic Preservation Officer requested information on effects that an increase in the frequency or number of ferry passengers may have on the Cape Lookout Village Historic District, Cape Lookout Light Station, and/or the Cape Lookout Coast Guard Station, which are properties listed in the National Register; however, such an increase is not anticipated as a result of this project.

Agency letters are included in “Appendix A: Relevant Correspondence.” The environmental assessment addresses these concerns, where appropriate; however, some concerns fall outside the scope of this project.

FUTURE COMPLIANCE NEEDS/PERMITS

Implementation of the NPS preferred alternative at Cape Lookout National Seashore would require compliance with laws and regulations. Future compliance is described below.

NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. The NPS Southeast Archeological Center conducted a review of the previously known resources that occur in the project area and conducted archeological testing in the areas proposed for ground disturbance in June 2012. Subsurface cultural features and artifacts were not identified in any of the shovel tests. Additional archeological survey would be completed within the study area prior to implementation of the proposed action in any areas not previously tested for archeological resources. Depending on the results of these archeological investigations, further design modifications would be made to avoid archeological resources wherever possible.

Compliance with section 106 will be conducted separately, but concurrently, with this environmental assessment. The State Historic Preservation Officer was notified of this intent during scoping and responded to the National Park Service on October 8, 2012, describing her concerns (appendix A). The National Park Service provided the State Historic Preservation Officer with an Assessment of Effect letter (including support information, as relevant) on January 17, 2013 for concurrence. This environmental assessment also will be supplied to the North Carolina State Historic Preservation Officer during public review of the document. The National Park Service will continue to coordinate with the State Historic Preservation Officer as necessary to ensure compliance with the National Historic Preservation Act. There are no federally recognized American Indian tribes known to have an interest in the undertakings at the park.

ENDANGERED SPECIES ACT

The Endangered Species Act mandates that all federal agencies consider the potential impacts of their actions on species listed as threatened or endangered in order to protect the species and preserve their habitats. Although a number of special status species are found throughout the park, no federally threatened or endangered species or their critical habitat are known to exist within the area of proposed improvements. The National Park Service has incorporated mitigation measures (referenced in chapter 2 and described more fully in appendix D) to avoid impacts on sea turtles and manatees, although encounters with these animals in the project area, specifically within the Harkers Island boat basin, during construction of docks are highly unlikely. The National Park Service will provide the U.S. Fish and Wildlife Service and National Marine Fisheries Service with a copy of the environmental assessment and will continue to coordinate with them to acquire concurrence regarding the potential to impact federally threatened or endangered species.

MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT

The Magnuson-Stevens Fishery Conservation and Management Act requires that federal agencies consult with the National Marine Fisheries Service to determine potential impacts on essential fish habitat and what measures to avoid, minimize, mitigate, or otherwise offset adverse effects on essential fish habitat. The discussion of essential fish habitat included in this environmental assessment serves as an essential fish habitat assessment. The environmental assessment will be supplied to the National Marine Fisheries Service for review and concurrence with the impacts described in the “Essential Fish Habitat” section.

COASTAL ZONE MANAGEMENT ACT

Development would fall within Carteret County and would therefore be within the “coastal zone” of North Carolina and be subject to a review under the Coastal Zone Management Act. A Federal Coastal Zone Consistency Certification for review by the North Carolina Department of Coastal Management is required and is included in appendix C. The National Park Service would also acquire a Coastal Zone Management Act permit during the design development phase.

NATIONAL SHELLFISH SANITATION PROGRAM

The National Shellfish Sanitation Program is administered by the U.S. Food and Drug Administration. The program is designed to prevent human illness associated with the consumption of molluscan shellfish. The park has been coordinating with the North Carolina Department of Environment and Natural Resources Division of Marine Fisheries Shellfish Sanitation Section, which is responsible for monitoring and classifying coastal waters as to their suitability for shellfish harvesting for human consumption. The prohibited shellfish waters area associated with the NPS boat basin is measured from the last dock space of the most southeastern dock in the boat basin. Due to potential changes in the boundary of the prohibited shellfish waters from the proposed action, the park is currently coordinating with the Shellfish Sanitation Section to ensure that the project complies with the National Shellfish Sanitation Program and that any change to the prohibited area is conducted according to the program guidelines.

RIVERS AND HARBORS APPROPRIATION ACT OF 1899

Section 10 of the Rivers and Harbors Act of 1899 prohibits the unauthorized obstruction or alteration of any navigable water of the United States. Any work within such waters is unlawful unless the work has been recommended by the Chief of Engineers. The National Park Service would submit for and acquire a Section 10 permit for the proposed work during the design development phase, because reconfiguration of the boat basin docks would take place in navigable waters.

CLEAN WATER ACT

Appropriate erosion and siltation controls would be maintained during construction, and all exposed soil or fill material would be permanently stabilized at the earliest practicable date. To this end, erosion control devices such as silt fences would minimize impacts associated with construction. The National Park Service would submit an application for and acquire a Section 404 permit prior to fill of waters of the United States. The National Park Service would acquire a National Pollution Discharge and Elimination System Stormwater Permit prior to any construction work on site.

NORTH CAROLINA SEDIMENTATION POLLUTION CONTROL ACT OF 1973

The National Park Service would develop an erosion and sedimentation control plan for approval by the North Carolina Department of Environment and Natural Resources for any disturbances totaling at least 1 acre.

LIST OF PREPARERS AND CONTRIBUTORS

This document was prepared by Vanasse Hangen Brustlin, Inc., staff at Cape Lookout National Seashore, the NPS Denver Service Center, and the NPS Southeast Regional Office.

PREPARERS

Vanasse Hangen Brustlin, Inc.		
Tricia Wingard	NPS Program Manager	Guidance of the National Environmental Policy Act process; document review; and project management
Tracy Hamm	Project Manager	Document preparation; natural resources review and analysis
Diane Ditzel	Environmental Planner	Document preparation; natural resources review and analysis
R. Tim Davis	Senior Environmental Scientist	Natural resource review
Chris Frye	Coastal Environmental Scientist	Permitting and regulatory review
Margaret Beavers	Environmental Scientist	Graphics and Geographic Information System analysis

CONTRIBUTORS AND REVIEWERS

Cape Lookout National Seashore	
Patrick Kenney	Superintendent
Wouter Ketel	Management Assistant
Michael Rikard	Resource Management Specialist
Mike Baker	Chief of Maintenance
Barry Munyan	Chief of Protection

NPS Denver Service Center	
Patrick Shea	Project Manager/Transportation Technical Specialist
Lee Terzis	Cultural Resource Specialist
Steve Culver	Natural Resource Specialist

Southeast Region Office	
Jami Hammond	Regional Environmental Coordinator

PUBLIC REVIEW

The environmental assessment will be on formal public and agency review for 30 days and has been distributed to a variety of interested individuals, agencies, and organizations. It also is available on the internet at <<http://parkplanning.nps.gov/caloc>>, and hard copies are available at the park's visitor center, Office of the Superintendent, and all locations of the Carteret County Public Library.

REFERENCES

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APPENDIX A: RELEVANT CORRESPONDENCE



North Carolina Department of Administration

Beverly Eaves Perdue, Governor

Moses Carey, Jr., Secretary

November 1, 2012

Mr. Wouter Ketel
U.S. Department of the Interior
National Park Service
Cape Lookout National Seashore
131 Charles Street
Harkers Island, North Carolina 28531

Re: SCH File # 13-E-0000-0102; SCOPING; Proposed project is for the Passenger Ferry Facilities at Harkers Island Visitor Center.

Dear Mr. Ketel:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act.

Attached to this letter are the comments made in the review of this document. The Department of Environment and Natural Resources (DENR) has requested additional information prior to their concurrence with the above referenced document.

Therefore, pursuant to 1 NCAC 25 .0506(c), this office recommends that supplemental documentation be submitted to the Clearinghouse for review and comment.

Sincerely,

A handwritten signature in cursive script that reads "Crystal Best".

Crystal Best
State Environmental Review Clearinghouse

Attachments

cc: Region P

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail state.clearinghouse@doa.nc.gov

Location Address:
116 West Jones Street
Raleigh, North Carolina




North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

MEMORANDUM

TO: Crystal Best
State Clearinghouse

FROM: Lyn Hardison 
Division of Environmental Assistance and Outreach
Permit Assistance & Project Review Coordinator

RE: 13-0102 Scoping
Proposed Project – Passenger Ferry Facilities at Harker's Island Visitors Center
Carteret County

Date: October 30, 2012

The Department of Environment and Natural Resources has reviewed the proposal for the referenced project and our agencies found the information insufficient. The Department is recommending the applicant provide additional information prior to the project moving forward.

If the applicant needs further guidance, please refer to the Department's guidance manual entitled 'Guidance for Preparing SEPA Documents and Addressing Secondary and Cumulative Impacts'. The purpose of the manual is to assist applicants in preparing their environmental documentation, which leads to better decision-making. The guidance manual can be found on the Department's web page <http://portal.ncdenr.org/web/guest/rules-policies-laws-and-regulations> or a copy can be provided at no cost to the applicant.

Thank you for the opportunity to respond.

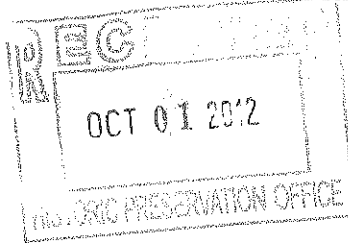
Attachment

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: CARTERET

G04: RECREATION FACILITIES/PARKS

STATE NUMBER: 13-E-0000-0102
DATE RECEIVED: 09/27/2012
AGENCY RESPONSE: 10/24/2012
REVIEW CLOSED: 10/29/2012



MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORDINATOR
DEPT OF CULTURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
MSC 4617 - ARCHIVES BUILDING
RALEIGH NC

ER 12-1752

REVIEW DISTRIBUTION

CC&PS - DIV OF EMERGENCY MANAGEMENT
DENR - COASTAL MGT
DENR LEGISLATIVE AFFAIRS
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
EASTERN CAROLINA COUNCIL

Duc 10/5/12

A- (NC) LER/CPS 10/1/12

PROJECT INFORMATION

APPLICANT: U.S. Department of the Interior
TYPE: National Environmental Policy Act
Scoping

S See Letter
JAK 10/2/12

DESC: Proposed project is for the Passenger Ferry Facilities at Harkers Island Visitor Center.

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: ☐ NO COMMENT ☒ COMMENTS ATTACHED

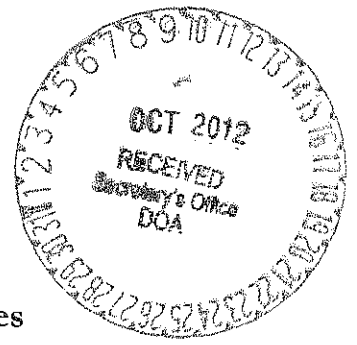
SIGNED BY:

Renee Gledhill-Earley

DATE:

10.9.12





**North Carolina Department of Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Beverly Eaves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

October 8, 2012

Patrick Kenney
Cape Lookout National Seashore
131 Charles Street
Harkers Island, NC 28531



Re: Passenger Ferry Facilities at the Harkers Island Visitor Center, Cape Lookout National Seashore,
Carteret County, ER 12-1752

Dear Superintendent Kenney:

Thank you for your letter of September 24, 2012, concerning the above project.

We have conducted a search of our maps and files and we are aware of no known historic resources that would be affected by improvements to accommodate passenger ferry service at the existing Harkers Island Visitor Center. However, the Environmental Assessment should address any effects that an increase in the frequency or number of ferry passengers may have on the Cape Lookout Village Historic District, Cape Lookout Light Station, and/or the Cape Lookout Coast Guard Station. Each of these three properties is listed in the National Register of Historic Places.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

cc: State Clearinghouse

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

Carlos Moya

COUNTY: CARTERET

G04: RECREATION FACILITIES/PARKS

STATE NUMBER: 13-E-0000-0102

DATE RECEIVED: 09/27/2012

AGENCY RESPONSE: 10/24/2012

REVIEW CLOSED: 10/29/2012

MS CARRIE ATKINSON
CLEARINGHOUSE COORDINATOR
DEPT OF TRANSPORTATION
STATEWIDE PLANNING - MSC #1554
RALEIGH NC

REVIEW DISTRIBUTION

CC&PS - DIV OF EMERGENCY MANAGEMENT
DENR - COASTAL MGT
DENR LEGISLATIVE AFFAIRS
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
EASTERN CAROLINA COUNCIL

PROJECT INFORMATION

APPLICANT: U.S. Department of the Interior
TYPE: National Environmental Policy Act
Scoping

DESC: Proposed project is for the Passenger Ferry Facilities at Harkers Island Visitor Center.

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.



AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: ☒ NO COMMENT ☐ COMMENTS ATTACHED

SIGNED BY: _____

DATE: Oct. 12, 2012



North Carolina Department of Environment and Natural Resources
Division of Coastal Management

Beverly Eaves Perdue
Governor

Braxton C. Davis
Director

Dee Freeman
Secretary

October 26, 2012

Pat Kenney, Superintendent
Cape Look National Seashore
131 Charles Street
Harkers Island, NC 28531

SUBJECT: Harkers Island Passenger Ferry Facilities at the Harkers Island Visitor Center, Cape Lookout National Seashore, Harkers Island, Carteret County, North Carolina (DCM#20120098)

Dear Mr. Kenney:

On September 26, 2012 the North Carolina Division of Coastal management (DCM) received your "Public Scoping Meeting Notice" (Notice). According to the Notice, Cape Look National Seashore (CLNS) will be preparing an Environmental Assessment (EA) for improvements to the Harkers Island Visitor Center to facilitate a ferry service that would depart from that location to South Core Banks and Shackleford Banks. The purpose of the EA scoping process to solicit comments on the environmental and regulatory issues that the proposed EA would be expected to analyze. Below are the comments of the North Carolina Division of Coastal Management (DCM).

- **Consistency Process:** The Notice observes that the proposed action will require consistency review by DCM. For guidance concerning how the consistency review process and the National Environmental Policy Act (NEPA) interact please review 15 CFR 930.37. For purposes of clarity, DCM encourages the approach where the EA is submitted as a supporting document to a consistency determination submission.
- **NEPA Process:** The NEPA process and the consistency review process are closely intertwined. The content of a consistency determination submission is outlined in 15 CFR 930.39. There is no mandate that an EA comply with supplying the information and analysis requirements of 15 CFR 930.39. Nevertheless, we would encourage that the EA conform with information and analysis requirements of 15 CFR 930.39 since this information will be necessary for the consistency determination submission.
- **Time Away From "Home":** A visitor (from the time that visitor leaves their motel room or home) to the time they return to their "home" location will have invested a significant amount of time in the visit. We suggest that the EA consider what facility improvements and amenities may be beneficial for enhancing the visitor experience based on the visitor's extended time away from "home".
- **Parking:** Will there be sufficient parking for both the casual visitor to the visitor center and those using the commercial ferry? Furthermore, those using the commercial ferry would be

parking their cars for a relatively long period of time. For that reason, we suggest that long-term parking be segregated from short-term parking. We would encourage the CLNS to locate the short-term parking close to the visitor center.

- **Tour Buses:** The arrival of a tour bus could temporarily overload facilities. As such, the visitor center may need a (short-term) bus passenger discharge/loading spot. Long-term bus parking away from the visitor center would also be necessary. We would encourage the CLNS to plan for this possible contingency.
- **Visitors Arriving by Boat:** Though the proposed action concerns the establishment of a commercial ferry service, private boating is a significant recreational activity. We would encourage the CLNS to also consider, in its EA, visitor serving amenities for those arriving by their private boats (including kayaks).
- **Special Events:** We would encourage the EA to examine how the proposed action developed in the EA can be integrated with special events. One event being the annual Core Sound Decoy Duck Festival.
- **Shellfish Closure Area:** Will the establishment of a ferry service result in an increase in shellfish closures? Either at the origin or destination points?
- **Moratorium Periods:** Certain activities tend to be restricted during certain time periods to minimize adverse effects on sensitive species, such sea turtles or nesting shorebirds. We would encourage the EA to consider developing commercial ferry operating schedules and routes to be compatible with any moratorium periods.
- **Preserving Natural Resources:** The Commercial Services Plan/Environmental Assessment/Assessment of Effect (November 2007) notes that the National Park Service's Organic Act directs the National Parks to conserve natural resources. This is also reiterated in North Carolina's Coastal Area Management Act, which recognizes that the natural environment must be managed to conserve natural productivity, biological values, economic values, and esthetic values. We encourage CLNS to document in the proposed EA the resource values at risk, how the proposed action would affect those resources, and how the proposed action will be designed to avoid, minimize and mitigate any adverse impacts to the environment.

Thank you for the opportunity to comment on the issues that the proposed environmental assessment would be expected to review when evaluating the environmental effects resulting from the establishment of a passenger ferry gateway at the Harkers Island Visitor Center. The comments above represent comments from the North Carolina Division of Coastal Management. Other North Carolina State agencies, such as the Division of Marine Fisheries, the North Carolina Natural Heritage Program, and the Wildlife Resources Commission may independently comment. Thank you for your consideration of the North Carolina Coastal Management Program.

Sincerely,



Stephen Rynas, AICP
Federal Consistency Coordinator

Cc: Doug Huggett, Division of Coastal Management
Wouter Ketel, National Park Service



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

October 10, 2012

Regulatory Division

Action ID No. SAW-2012-01621

Patrick M. Kenny
Superintendent
National Park Service
Cape Lookout National Seashore
Harkers Island, North Carolina 28531

Dear Mr. Kenny:

Reference your letter dated September 24, 2012 regarding our scoping comments on the proposed improvements to the Harkers Island Visitor Center at the Cape Lookout National Seashore, Harkers Island, Carteret County, North Carolina.

Based on the information provided in the referenced letter, the proposed project may impact waters or wetlands subject to our regulatory jurisdiction. Therefore, Department of the Army (DA) permit authorization, pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbor Act may be required. Specific permit requirements will depend on design of the proposed improvements, extent of dredge or fill work within the waters of the United States, including wetlands, construction methods, and other factors. Please be advised that this does not relieve you of the need to obtain all necessary authorizations, including a valid permit from the North Carolina Division of Coastal Management or North Carolina Division of Water Quality, prior to beginning work.

Should you have any questions please call Mr. Dave Timpy at the Wilmington Field Office at (910) 251-4634.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dale Beter", is located below the "Sincerely," text.

Dale Beter
Chief, Wilmington Regulatory Field Office

Copy Furnished:

Doug Huggett
Division of Coastal Management
North Carolina Department of Environment,
and Natural Resources
400 Commerce Avenue
Morehead City, North Carolina 28557-3421

Joanne Steenhuis
Division of Water Quality
North Carolina Department of Environment,
and Natural Resources
127 Cardinal Drive Ext
Wilmington, North Carolina 28405

APPENDIX B: FLOODPLAINS STATEMENT OF FINDINGS

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STATEMENT OF FINDINGS FOR EXECUTIVE ORDER 11988 (“FLOODPLAIN MANAGEMENT”)

Harkers Island Passenger Ferry Departure Site
Environmental Assessment
Cape Lookout National Seashore
Carteret County, North Carolina

Recommended: _____
Patrick Kenney, Superintendent, Cape Lookout National Seashore Date

Concurred: _____
Chief, Water Resources Division Date

Concurred: _____
Southeast Region Safety Officer Date

Approved: _____
Director, Southeast Region Date

Executive Order 11988, “Floodplain Management,” and NPS DO-77-2: *Floodplain Management*, require an examination of impacts to floodplains and potential risk involved in placing facilities within floodplains. All portions of the study area are within the 100-year floodplain, and the addition of the restroom and ticketing facilities qualify as a Class I action under DO-77-2.

INTRODUCTION

CLASS OF ACTION

Class I actions include location or construction of administrative buildings or other man-made features which by their nature entice individuals to occupy the site within the 100-year floodplain. The proposed ticketing facilities, restroom facility, and shaded waiting area meet these criteria. Storage of hazardous materials such as fuel within a Regulatory Floodplain constitutes a Class II action. Although there is no change in fuel storage associated with this project, the fuel storage tanks are addressed in this statement of findings (SOF) because of their association with the relocated fuel pump and because this storage has not been addressed in a previous SOF. This SOF provides precise reasoning as to why the proposed site was selected and why less flood-prone alternative sites were rejected. The SOF will include an accurate and complete description of the flood hazard assumed by implementation of the proposed action without mitigation in accordance with Section VI-F of DO-77-2 Procedural manual.

PROPOSED ACTION

The NPS proposes to improve existing gateway facilities at the Harkers Island Visitor Center to better serve as a departure site for passenger ferry service. Under alternative B (the NPS Preferred Alternative), the NPS would provide ferry service from the Harkers Island Visitor Center using improved park facilities. Improved facilities are depicted on figures 4 and 5 of the EA. Improvements located within the Regulatory Floodplain include the ticketing improvements, the restroom facility, the shaded waiting areas, and the relocated fuel pump. In this case, all improvements are located within the 100-year floodplain and are described in more detail below.

Under this alternative, the park would provide additional facilities to accommodate passenger ticketing, staging/waiting, and orientation. Ticketing would take place at a ferry ticketing office and porch. This porch and office would be an extension off of the existing visitor center building. The ticket office would measure 10 by 13 feet in size and the porch would measure 10 by 90 feet in size.

The park would install separate restroom facilities to the west of the proposed porch at approximately 600 square feet in size. Visitors could continue to use the restrooms located inside the visitor center, however, the new facilities would allow for some separation between those visitors only using the ferry service and those visitors seeking interpretive and/or orientation information in the visitor center. As part of the installation of the new outdoor restroom facilities, the park would install an additional septic field and tank system behind the proposed additional restrooms, to the north of the main visitor parking lot.

A new shade/rain shelter (350 square feet) would be built along the western side of the basin along the ferry docks to allow for passenger staging/waiting outside in close vicinity to the ferries. The shelter would also

allow for protection from the elements during loading operations at the boat basin. The shade/rain shelter would be designed to aesthetically match the visitor center and would be built on top of a new concrete pad that would connect into the existing sidewalk system in front of the existing visitor center.

The existing fuel pump would be relocated approximately 100 feet from its current location to the southern side of the boat basin. There are no changes proposed for the above-ground storage tanks (ASTs) that supply fuel to this pump; however, as mentioned above, these tanks are included in this SOF.

SITE DESCRIPTION

Cape Lookout National Seashore's Harkers Island area and visitor center is approximately 30 minutes driving distance from the Town of Beaufort, NC. The project area includes the approximately 91 acres on the eastern end of Harkers Island owned by the NPS (figure 2 of the EA). The visitor center and associated facilities provide the only NPS-owned gateway to the park's barrier islands. The project area includes a cluster of structures at the southern end of the NPS property (Shell Point) as well as trails throughout the undeveloped northern portion.

The proposed improvements are focused on the developed area surrounding the Harkers Island Visitor Center, in the southeastern corner of the NPS property. This area includes the following key elements:

- Harkers Island Visitor Center
- Boat basin, docks, and boat ramp
- Main visitor parking lot
- Core Sound Museum parking lot
- Picnic area and parking lot
- Access roads
- Area walkways and trails
- Fuel storage tank

FLOODPLAIN

The 91-acre project area falls within the 100- and 500-year floodplains (Zones AE and X, respectively), as categorized by the Federal Emergency Management Agency's Flood Insurance Rate Maps (FM3720734400J and FM3720734500J). The area of proposed improvements falls entirely within Zone AE (the 100-year floodplain), which indicates location within the special flood hazard area. The FIRMettes for the project area are attached to this SOF. Structures within the floodplain include the visitor center, the docks within the boat basin, the picnic shelters, and the parking lots. Some of these items, such as the visitor center, can impede the flow of floodwaters during a flood event and reduce the capacity of the floodplain to convey water.

Flooding at Harkers Island is generally caused by extreme high tides when large-scale storms such as hurricanes and nor'easters cause water levels of Back and Core Sounds to rise dramatically. Flooding associated with these storms may last a few days, with water level fluctuating with tide and wind direction. Depending on wind directions, the shoreline can be subject to wave action during these flooding events. The developed area where improvements are proposed has undergone extensive

shoreline stabilization, and much of the relatively flat topography is composed of fill material and is stabilized by lawn or coastal scrub vegetation.

JUSTIFICATION FOR USE OF THE FLOODPLAIN

No other practicable alternative to the proposed action exists because of the need to improve accommodations for ferry passengers and operations through improvements to the existing Harkers Island Visitor Center facilities, the only NPS-owned gateway to the park. The site was previously impacted by historic development at the site both prior to and following acquisition of the land by the NPS, and the proposed improvements are consistent with the current land use in the area. Measures would be taken to minimize harm to life, property, and natural resources as mentioned in the “Mitigation” section below.

The protection of people and property is of high priority to Cape Lookout National Seashore. All of the proposed project would occur in a disturbed area. The project would be designed to prevent or reduce flood damage. The park has developed plans to minimize risks to human health and safety and to minimize potential property damage during storm events. This includes the Hurricane Response Plan and the Spill Prevention, Control and Countermeasure Plan. Given these steps towards risk mitigation, the risk to life and property would be minimized. There would be no significant effect on natural or beneficial floodplain values.

INVESTIGATION OF ALTERNATIVE SITES

The purpose of the proposed action is to improve the gateway facilities at the Harkers Island Visitor Center to better serve as a departure site for passenger ferry service. Criteria for selection of the Harkers Island area as the ferry departure gateway includes federal ownership and control of the site, proximity to and ability to co-locate the ferry site with existing park infrastructure. The area of proposed improvements includes and is adjacent to the existing NPS boat basin, where passengers will board the ferry vessels. The site is already developed; therefore, improvements in this developed area would greatly minimize environmental impacts associated with this project. Making improvements outside the floodplain would require readily apparent impacts on natural resources such as maritime scrub and/or wetlands in an area offering trails where visitors can experience different coastal ecotypes away from the heavily used visitor center facilities. It also would separate ferry operations from the current area of visitor services, would cause confusion for many visitors who would expect ferry accommodations to be adjacent to the dock with the existing visitor center, and would likely require introduction of public access to areas currently set aside for NPS operations. No other suitable project sites exist; improvement of the existing site is the only practicable alternative.

SITE-SPECIFIC FLOOD RISK

As mentioned above, the proposed improvements (and the fuel storage tank) are located within the 100-year floodplain, a special flood hazard area. Special flood hazard areas are subject to inundation by the 1% annual chance of flood. The 1% annual chance of flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. Flooding at Harkers Island is

generally caused by extreme high tides when large-scale storms such as tropical storms, hurricanes, and nor'easters cause water levels of Back and Core Sounds to rise dramatically. Flooding associated with these storms may last a few days, with water level fluctuating with tide and wind direction. Depending on wind directions, the shoreline can be subject to wave action during these flooding events, although some wave action is mitigated by the barrier islands, South Core and Shackleford Banks. The developed area where improvements are proposed has undergone extensive shoreline stabilization, and much of the relatively flat topography is composed of fill material and is stabilized by lawn or coastal scrub vegetation.

Current technology offers plenty of advanced warning of potential flood events associated with major storms (i.e., tropical storms and nor'easters). Although the exact track of the storm may be unknown, park managers are provided with ample time to evacuate the site prior to flooding.

MITIGATION

Flood mitigation is offered by incorporating methods for protecting life and minimizing storm damage through appropriate procedures. To help protect life, no inhabitable buildings are located at the site and access to the site is closed when storm systems are approaching. The structures that would be added to the site would be designed in such a way as to withstand flood events while impeding flow as little as possible. Structures and facilities would be designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 CFR Part 60). Mitigation to minimize storm damage would include utilization of sustainable design principles and using best management practices during and after construction.

The fuel tanks serving the fuel pump at the dock are located inside a fence adjacent to the Oil House, east of the visitor center and approximately 550 feet from Core Sound. The tanks are 3,000 and 4,000 gallons, respectively. The 3,000 gallon tank contains diesel fuel, and the 4,000 gallon tank contains gasoline. They are made of fiberglass reinforced plastic (designated HI-1) and are contained side by side within a diked area built of concrete blocks that are grouted together with an underlying concrete slab for secondary containment designed to hold approximately 9,873 gallons of liquid. The tanks are raised 3 feet above the concrete slab (at approximately ground level) and are strapped and secured to the concrete slab. A spill catchment basin is built around the fill port. Both tanks have an audible overfill alarm and an automatic shut-off device. Spill control kits are maintained in the nearby Oil House.

These mitigative measures would be in accordance with the NPS floodplain guidelines and with EO 11988, Floodplain Management. Therefore, the proposed project would not have an adverse impact on the floodplain and its associated value.

COMPLIANCE

According to U.S. Army Corps of Engineers guidelines, the waters within the boat basin are considered waters of the United States. Reconfiguration of the docks within the boat basin may require permit authorization, pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbor Act. Specific permit requirements will depend on design of the proposed improvements, extent of dredge or fill work within the waters of the United States, including wetlands, construction methods, and other factors. Appropriate permits would be acquired during design phases prior to construction.

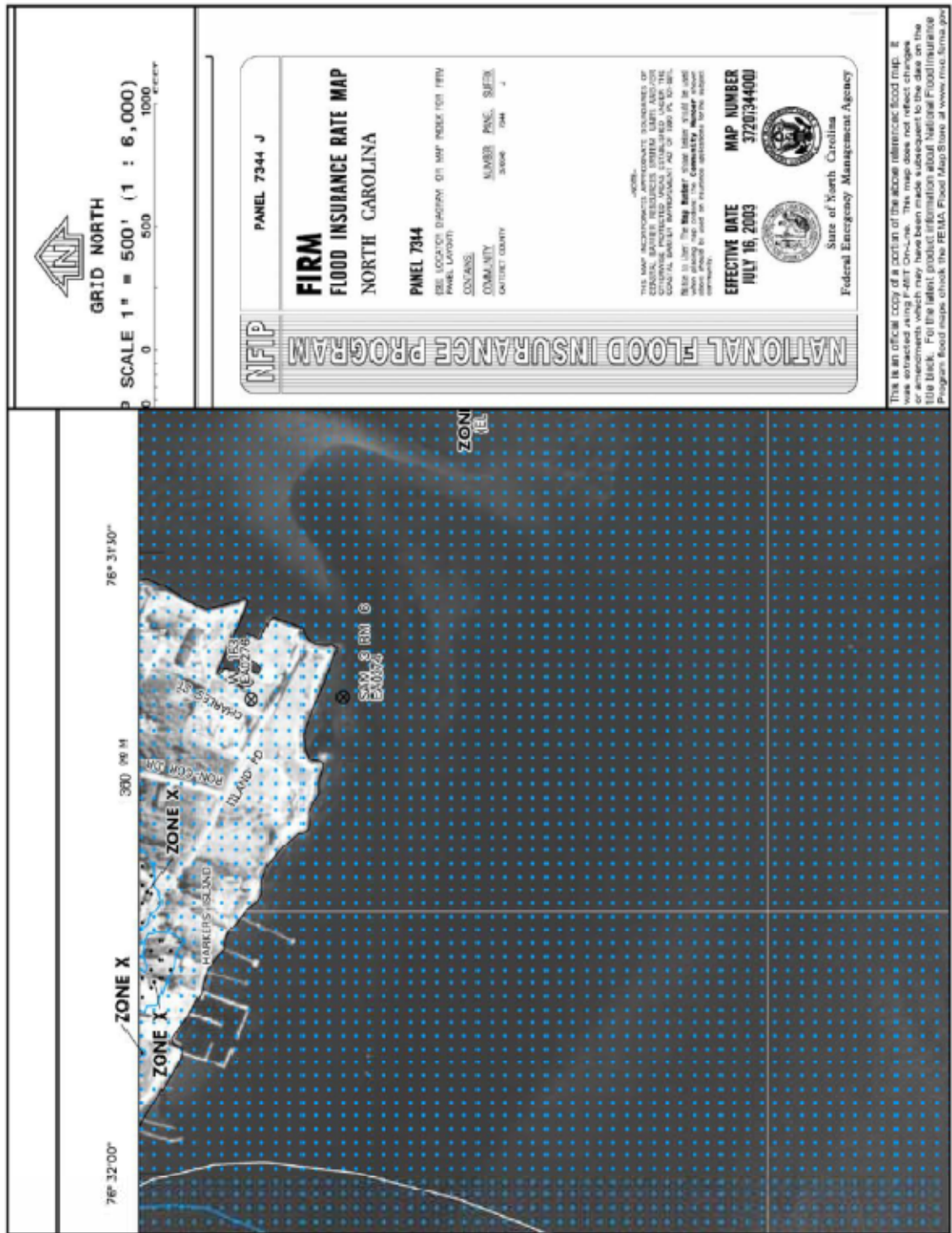
The Coastal Zone Management Act of 1972 requires that a Federal agency provide the State of North Carolina with a Consistency Determination when a Federal agency proposes any activity inside or outside of the coastal zone that will have any reasonably foreseeable effect on any coastal resources or uses within the coastal zone. This Consistency Determination will be provided to the North Carolina Division of Coastal Management with the Environmental Assessment.

The Environmental Assessment, this Statement of Findings for Director's Order 77-2, and the "Finding of No Significant Impact", when signed, would complete the requirements for the NEPA for this project.

SUMMARY

The protection of people and property, including natural resources, is of high priority to NPS. The proposed project would occur in a currently disturbed area, and NPS concludes that no other practicable alternative exists for the proposed project. The project would be designed to prevent or reduce flood damage, and an emergency evacuation plan would also be developed. Given these steps towards risk mitigation, the risk to life and property would be minimized. Furthermore, no significant effect on natural or floodplain resources would occur from the proposed project. There is no risk of permanent adverse effects on the natural and beneficial values of the floodplain.

Mitigation would include utilization of sustainable design principles, appropriate siting, and best management practices during and after construction. NPS finds the proposed project to be consistent with EO 11990 and Director's Order 77-2.





SPECIAL FLOOD HAZARD AREAS (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A19, V, and VE. The Base Flood Elevation is the water-surface elevational 1% annual chance flood.

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ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
1% annual chance floodplain boundary

FIRM FLOOD INSURANCE RATE MAP NORTH CAROLINA	PANEL 7345 (SEE LOCATOR (CAGNAM) ON MAP INDEX FOR FIRM (PANEL LAYOUT))		NAME FILE SECT 010000 1000 1
	COMMUNITY (APPLICANT'S COUNTY)	MAP NUMBER 3720734500	EFFECTIVE DATE JULY 16, 2003
CONVENS (CONTRACTOR'S COUNTY)			

Note: 1. User: The Map Number shown below should be used to identify the map in the Flood Insurance Rate Map (FIRM) data base. The map number should be used on insurance applications for the subject community.

This is an official copy of a portion of the above referenced flood map. It was extracted using FEMA On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.mse.fema.gov.

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APPENDIX C: COASTAL ZONE MANAGEMENT FEDERAL CONSISTENCY DETERMINATION

The Coastal Zone Management Act (CZMA) of 1972 requires that a Federal agency provide the State of North Carolina with a Consistency Determination when a Federal agency proposes any activity inside or outside of the coastal zone that will have any reasonably foreseeable effect on any coastal resources or uses within the coastal zone.

The National Park Service (NPS) is proposing facility improvements and amenities that would prepare the NPS Harkers Island property for use by a contracted ferry concessioner and ferry passengers. The purpose of the proposed action is to improve the gateway facilities at the Harkers Island Visitor Center to better serve as a departure site for passenger ferry service. The project is needed because the current facilities at the Harkers Island area offer limited capacity to accommodate the anticipated increase in visitors at this site, and the current vehicular circulation is inefficient and offers limited connectivity to the Core Sound Waterfowl Museum and Heritage Center. The National Park Service orients visitors to the park's resources at this location and offers a number of ways to experience the park at this site, as well. The proposed project would enhance the gateway experience by providing improvements for visitor comfort and accessibility where visitors can easily access information as well as amenities such as restrooms and adequate parking.

The NPS seeks concurrence with the determination that the proposed project (as described below) is consistent to the maximum extent practicable with the enforceable policies of North Carolina's approved coastal management program.

PROJECT DESCRIPTION

The NPS proposes to improve existing gateway facilities at the Harkers Island Visitor Center to better serve as a departure site for passenger ferry service. Under alternative B (the NPS Preferred Alternative), the NPS would improve the Harkers Island area facilities in order to provide ferry service from the

Harkers Island Visitor Center. Improved facilities are depicted on figures 4 and 5 of the EA and include the following buildings and infrastructure:

- the visitor center building, including a new ticketing office/porch
- the existing boat basin with expanded, specifically designed, accessible ferry docks and a relocated fueling station
- reconfigured parking lots with lines and designated short-term parking
- improved vehicular circulation using existing roads and a new one-way drive leading to the Core Sound Museum, including wayfinding signs
- improved pedestrian circulation, including additional sidewalks and crosswalks connecting site elements, and pedestrian wayfinding signs
- orientation exhibits near the ticket office and passenger staging/waiting shelter

Harkers Island Visitor Center

Under this alternative, the park would provide additional facilities to accommodate passenger ticketing, staging/waiting, and orientation. Ticketing would take place at a ferry ticketing office and porch. This porch and office would be an extension off of the existing visitor center building. The ticket office would measure 10 by 13 feet in size and the porch would measure 10 by 90 feet in size.

The park would install separate restroom facilities to the west of the proposed porch at approximately 600 square feet in size. Visitors could continue to use the restrooms located inside the visitor center, however, the new facilities would allow for some separation between those visitors only using the ferry service and those visitors seeking interpretive and/or orientation information in the visitor center. As part of the installation of the new outdoor restroom facilities, the park would install an additional septic field and tank system behind the proposed additional restrooms, to the north of the main visitor parking lot.

Boat Basin

Under this alternative, the docks within the boat basin would be reconfigured to better serve NPS operations and the ferry service. The two finger piers on the northwestern side of the basin, located closest to the visitor center, would be removed and replaced by a floating dock system as part of the reconfiguration. The park would also add two finger piers to the southern side of the boat basin.

A new shade/rain shelter (350 square feet) would be built along the western side of the basin along the ferry docks to allow for passenger staging/waiting outside in close vicinity to the ferries. The shelter would also allow for protection from the elements during loading operations at the boat basin. The shade/rain shelter would be designed to aesthetically match the visitor center and would be built on top of a new concrete pad that would connect into the existing sidewalk system in front of the existing visitor center. The NPS fuel pump would be relocated to the southern side of the boat basin, next to the docks that would be the focus of NPS operations.

Parking & Circulation

Under this alternative, the main parking lot would be reconfigured with new striping to produce 84 parking spaces, plus seven recreational vehicle (RV)/bus/trailer parking spaces. There would be an expansion in the parking lot of one row of 20 parking spaces on the western edge of the parking lot, adjacent to the grove of

trees in between the parking lot and Cape Point Drive. The addition of these parking spaces would increase the total lot capacity to 91 spaces. The park would also make minor drainage improvements in the main parking lot area, and best management practices would be included in the design.

As part of the parking lot changes, the access to and egress from the parking lot would also be reconfigured. The double-track trail that provides a pedestrian access/connection between the visitor center and the Core Sound Museum and Willow Pond Nature Trail would become a one-way vehicular exit from the main parking lot onto Cape Point Drive. There would be a one-way access drive into the main parking lot from Harkers Island Road and a one-way access drive out of the main parking lot onto Harkers Island Road. A bus and vehicle drop-off lane would be provided to allow for individuals to drop off equipment, and for large visitor groups to be dropped off separately from parking traffic.

The picnic area would remain mostly unchanged. The picnic area would continue to provide the same picnic facilities as described under the no-action alternative, but the parking lot would be subject to improvements. The park is considering options for reconfiguration of the lot. One option would keep the parking lot in its current location, add striping to maximize capacity at approximately 40 vehicle spaces, and improve the drainage to avoid standing water, while preventing stormwater runoff from the lot and entrance road directly into the sound. During rain events, water ponds on the parking lot pavement. The reconfiguration is expected to take place mostly within the existing footprint of the parking lot because there is little room available between the lot and the edge of the water. A second option would move the parking lot from its current location to the grassy area between the picnic shelters and the road. Although the design of this parking lot would be finalized at a later date, the relocated parking lot would be configured with one way access from and egress to Harkers Island Road. Under this option, a cul-de-sac would be retained in the area of the existing picnic area parking lot near the shoreline to continue to provide an opportunity for visitors to view the lighthouse from their car.

A number of additional sidewalks would be added throughout the site. The park would add a formal pedestrian sidewalk, with trail lighting, along the northern side of the new one-way exit drive to allow visitors to walk between the main parking lot and the Core Sound Museum. The park would thin the vegetated grove located to the west of the main parking lot and the area just north of the exit road/sidewalk to the Core Sound Museum, targeting the bayberry, pines, and wax myrtle species and working to preserve the live oaks and cedars. The thinning would create a visual connection for visitors between the main visitor parking lot and the Core Sound Museum.

CONFORMITY WITH NORTH CAROLINA'S COASTAL MANAGEMENT PROGRAM

This application is submitted to ensure conformity with 15 CFR Park 930 which fully maintains the authority and ability of North Carolina to review proposed federal actions that would have a “reasonably foreseeable effect” on any land or water use or natural resource of North Carolina’s coastal zone, as provided for and in the CZMA and NOAA’s regulations, as revised in 2000, “to the maximum extent practicable”. The proposed improvements to the Harkers Island Visitor Center area are consistent to the maximum extent possible with the enforceable policies of North Carolina’s Administrative Code, Title 15A, Chapter 7, Coastal Management.

15A NCAC 07H: State Guidelines for Area of Environmental Concern

North Carolina's Coastal Area Management Act (CAMA) establishes a state management plan that is capable of rational and coordinated management of coastal resources and recognizes that the key to more effective protection and use of the land and water resources of the coast is the development of a coordinated approach to resource management. The two mechanisms to accomplish the objective of coordinated resource management are development of local land use plans (developed in accordance with 15A NCAC 07B) and designation of areas of environmental concern (AECs) for the protection of areas of statewide concern within the coastal area.

Carteret County Land Use Plan

Harkers Island is located within Carteret County, North Carolina, and the Carteret County Land Use Plan Update (2005) details the approved policies for coordinated resource management within the county. Of these policies, the following are applicable to the proposed improvements:

1.0 Public Access

Policy 1.1: Carteret County supports the development of additional estuarine and ocean shoreline access facilities for pedestrian, boating, and fishing access in all areas of the County.

The proposed improvements would not inhibit public trust water access within the project area. Rather, it would improve the ability of the NPS to provide public access to the water by improving parking on site and pedestrian sidewalks, trails, and crosswalks.

Policy 1.2: Carteret County will provide satisfactory access to residents and visitors of all abilities.

Improvements at the site would improve accessibility at the site.

2.0 Land Use Compatibility

Policy 2.4: Carteret County's policies for development in estuarine and public trust waters are as follow:

1. Carteret County will only allow development activities in estuarine and public trust waters that are associated with water-dependent uses, consistent with state and federal standards, and meet all local policies contained in this plan.

Reconfiguration of the docks within the NPS boat basin would be to better accommodate the ferry fleet and the NPS operations fleet. Use of these boats is entirely water dependent.

3. Marinas and other docking facilities must be constructed in accordance with state requirements and must meet local requirements contained in 1.0 Public Access.

Construction of new docks within the boat basin would be constructed in accordance with state requirements and would meet local requirements contained in 1.0 Public Access policies, as discussed above.

Policy 2.5

2. In areas classified as developed and limited transition and not served by public or community sewer and water service, a minimum lot size of 20,000 square feet (2.2

units per acre) shall be required through existing zoning, subdivision, and other regulatory ordinances. In areas classified as developed and limited transition and served by community water service, but having no public or community sewer service, minimum lot size is 15,000 square feet (2.9 units per acre).

Note: Carteret County ordinances consider package treatment plants to be public or community sewer service

The project area is a lot comprising approximately 91 acres.

3.0 Infrastructure Carrying Capacity

Policy 3.4: Carteret County will support the provision of centralized sewer services in areas classified as developed, limited transition, and rural with services when the following conditions are met:

- Sewer service will serve to steer dense development away from environmentally sensitive areas, such as floodplains and fragile coastal ecosystems.
- Service will encourage a more compact development pattern in areas adjoining existing urban areas, thereby conserving farmland and other open spaces.
- Citizens request service.
- Zoning is in place prior to the extension of service.

The project area is a limited transition area. No centralized sewer service is currently available at the site; however, should an extension become available as the design of the project moves forward, the NPS would take advantage of an opportunity to limit development within the floodplain.

4.0 Natural and Man-made Hazard Areas

Policy 4.1: All development within the flood hazard areas and ocean hazard area AECs will be coordinated with the County Department of Planning and Development, North Carolina Division of Coastal Management, Federal Emergency Management Agency (FEMA), and the U.S. Army Corps of Engineers. The County will implement the following measures to mitigate risks:

3. The County allows development and redevelopment within the 100-year floodplain subject to the provisions and requirements of the National Flood Insurance Program, CAMA, the County's Flood Damage Prevention Ordinance, and other local ordinances.

Improvements made within the floodplain would comply with provisions and requirements of the National Flood Insurance Program, CAMA, the County's Flood Damage Prevention Ordinance, and other local ordinances.

4. The future location of public facilities and structures will take into consideration the existence and magnitude of natural hazards. The County will not allow construction of public facilities (utilities) in hazard areas unless no other option is available. When location in hazard areas is unavoidable, all facilities, utilities, and structures will be designed and located to comply with requirements of the National Flood Insurance Program, the Carteret County Flood Damage Prevention Ordinance, and CAMA.

The purpose of the proposed action is to improve the gateway facilities at the Harkers Island Visitor Center to better serve as a departure site for passenger ferry service. The

area of proposed improvements includes and is adjacent to the existing NPS boat basin, where passengers will board the ferry vessels. The site is already developed; therefore, improvements in this developed area would greatly minimize environmental impacts associated with this project. Making improvements outside the floodplain would require readily apparent impacts on natural resources such as maritime scrub and/or wetlands in an area offering trails where visitors can experience different coastal ecotypes away from the heavily used visitor center facilities. It also would separate ferry operations from the current area of visitor services, would cause confusion for many visitors who would expect ferry accommodations to be adjacent to the dock with the existing visitor center, and would likely require introduction of public access to areas currently set aside for NPS operations. No other suitable project sites exist; improvement of the existing site is the only practicable alternative.

5.0 Water Quality Policies

Policy 5.2: Carteret County supports measures to address drainage concerns and protect water quality. Carteret County will pursue the following specific steps through changes to zoning, subdivision, and other land use ordinances:

4. Investigate and consider implementing local erosion and sedimentation controls for site disturbances of less than one acre (state regulations require an approved erosion and sedimentation control plan prior to disturbing areas greater than one acre).

The NPS will require contractors to use local erosion and sedimentation controls for all site disturbance.

Policy 5.10: When sedimentation and erosion control and stormwater management plans are required by State regulations, Carteret County requires the submission of State-approved plans and proper State permits prior to granting final approval of subdivisions.

The NPS would acquire relevant sedimentation and erosion control and stormwater management plans prior to construction of the proposed improvements. Future design stages would determine the level of detail needed for such permits, if applicable.

Policy 5.11: For all waterfront development, parking lots that meet local, state, and federal requirements will be allowed.

Parking lots within the proposed area of improvements would meet local, state, and federal requirements.

15A NCAC 07H .0200 – The Estuarine and Ocean Systems.

Harkers Island is located between the Back and Core Sound estuaries. The shoreline within the area of proposed improvements has been heavily stabilized in recent years (2006) using large rocks. The NPS would continue to allow fishing from the shoreline. No change in shoreline is proposed as part of this action. No coastal wetlands (i.e., salt marshes) would be impacted by the proposed development. There would be minor development (e.g., removal of two docks and installation of two new fixed piers and a floating dock) within estuarine waters. Use of best management practices would minimize temporary impacts associated with construction, but there are no other readily apparent impacts on the estuarine waters associated with this improvement. Submerged aquatic vegetation within the boat basin would continue to be avoided. Docks would be designed to improve public access to the ferry vessels that would

be in operation at this boat basin. No alteration in existing bulkheads is anticipated. Construction/redevelopment of impervious surface along the coastal shoreline would not exceed 30 percent of the project area.

15A 07H .1200 – General Permit for Construction of Piers and Docking Facilities: In Estuarine and Public Trust Waters and Ocean Hazard Areas

Following final design plans and acquisition of funding for construction, the NPS will submit the necessary documentation to the North Carolina Division of Coastal Management. All specific conditions will be met to the extent practicable.

15A NCAC 07M: General Policy Guidelines for the Coastal Area

15A NCAC 07M .300 – Shorefront Access Policies.

Public access to the shoreline would be maintained during construction and would be improved as a result of the proposed modifications to the site.

15A NCAC 07M .0700 – Mitigation Policies.

It is the policy of the State of North Carolina to require that adverse impacts to coastal lands and waters be mitigated or minimized through proper planning, site selection, compliance with standards for development, and creation or restoration of coastal resources. As described in the EA for the project, the NPS would implement mitigation measures whenever feasible to minimize environmental impacts related to the proposed improvements. Although the exact mitigation measures to be implemented would depend upon the final design and approval of plans by relevant agencies, the following is a list of actions that could take place:

- Action would be conducted so as to avoid degrading water quality to the maximum extent practicable. Measures would be employed to prevent or control spills of fuels, lubricants, or other contaminants from entering the waterways. Actions would be consistent with state water quality standards and Clean Water Act Section 401 certification requirements.
- If any ground contamination is found during reconfiguration, the park would develop a plan for remediation.
- Appropriate erosion and siltation controls would be maintained during construction, and all exposed soil or fill material would be permanently stabilized at the earliest practicable date. To this end, erosion control devices such as silt fences would minimize impacts associated with construction.
- Stockpile materials would only be placed in designated locations to avoid sensitive areas and natural features.
- Where plantings or seeding are required, native plant material would be obtained and used in all feasible locations in accordance with NPS policies and guidance. Management techniques would be implemented to foster rapid development of target native plant communities and to eliminate invasion by exotic or other undesirable species.
- Construction equipment would be restricted to the road corridor, parking lots, and other identified previously disturbed areas to avoid impacts on natural resources.
- Additional archeological survey would be completed within the study area prior to implementation of the proposed action in any areas not previously tested for archeological

resources. Depending on the results of these archeological investigations, further design modifications would be made to avoid archeological resources wherever possible.

- The NPS, its concessioner, and its contractors would follow guidelines for avoiding impacts to the West Indian manatee and sea turtles as described in appendix D of the EA.

15A NCAC .0800 – Coastal Water Quality Policies.

The NPS recognizes the natural and economic values of the state’s coastal water quality and will continue to strive to maintain and improve that water quality as a result of the proposed improvements as well as during construction.

NORTH CAROLINA DREDGE AND FILL LAW

The North Carolina Dredge and Fill Law states that, “...before any excavation or filling project is begun in any estuarine waters, tidelands, marshlands, or State-owned lakes, the party or parties desiring to do such work shall first obtain a permit from the Department.” The proposed improvement does not include any fill within the boat basin or other waters adjacent to the project area. Fill would be limited to installation of new piles to support the reconfigured docks in the boat basin.

REQUIRED STATE, FEDERAL, AND LOCAL PERMITS

An EA document has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended; regulations of the Council on Environmental Quality (CEQ) (40 CFR 1508.9); and NPS Director’s Order (DO) 12: Conservation Planning, Environmental Impact Analysis, and Decision-making. An assessment of effect (AoE) will be prepared concurrently with but separately from this EA to comply with section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

This EA also fulfills several other compliance needs. First, the Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires that federal agencies consult with the National Marine Fisheries Service (NMFS) to determine potential impacts on essential fish habitat (EFH) and what measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH. The discussion of EFH included in the EA serves as an EFH Assessment.

Prior to the implementation of the proposed action, the NPS would need to obtain appropriate local, state, and federal approval for some of the proposed activities. A list of permits, approvals, and regulatory requirements associated with the proposed action are as follows:

- National Pollution Discharge and Elimination System (NPDES) Stormwater Permit
- Section 10 of the Rivers and Harbors Appropriations Act and Section 404 of the Clean Water Act
- concurrence from the SHPO per Section 106 of the NHPA
- concurrence from the USFWS and NMFS per Section 7 of the Endangered Species Act (ESA)
- concurrence from NMFS regarding impacts on EFH per the MSA

CONCLUSION

The proposed improvements to the Harkers Island Visitor Center area would have reasonably foreseeable impacts on coastal resources and uses within the project area. A relatively small amount of the project area would be developed or redeveloped with impervious surfaces to maintain and improve public access to the shoreline, while accommodating ferry operations at the NPS boat basin. Two of the existing docks would be removed and replaced with a floating dock to serve these ferries, and two additional docks would be constructed to continue to accommodate NPS boats. In accordance with Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972, as amended, the NPS has determined that the proposed action is consistent to the maximum extent practicable with the enforceable policies of North Carolina's approved coastal management program. This determination is based on the review of the proposed project's conformance with the enforceable policies of the State's coastal program found in Chapter 7 of Title 15A of the North Carolina Administrative Code.

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APPENDIX D: MANATEE AND SEA TURTLE AVOIDANCE

SEA TURTLE MITIGATION MEASURES

1. Captain and crew members will observe for the presence of sea turtles while operating the vessel.
2. If sea turtles are observed greater than 50 yards from vessel, the captain will reduce vessel speed and alter vessel route to maintain a minimum 50-yard distance, if passenger safety permits.
3. If sea turtles are observed within 50 yards from vessel, the captain will reduce vessel speed to 5 knots and alter vessel route to maintain a minimum 50-yard distance, if passenger safety permits.
4. If despite efforts to maintain the distances and speeds described above and a sea turtle approaches the vessel, the captain will put the engine in neutral until the turtle is a minimum of 50 yards away, if passenger safety permits.

If a sea turtle is struck by the ferry, consultation with USFWS and NMFS would immediately be reinitiated. No take of any species is authorized. All injured or dead sea turtle sightings must be reported to the North Carolina sea turtle stranding network at (252) 241-7367. Incidents of take of sea turtles resulting from ferry traffic must also be reported immediately to NMFS, Southeast Regional office via phone at (727) 824-5312 or by e-mailing: takereport.nmfs@noaa.gov.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE Precautionary Measures for Construction Activities in North Carolina Waters

The West Indian manatee (*Trichechus manatus*), also known as the Florida manatee, is a Federally-listed endangered aquatic mammal protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Marine Mammal Protection Act of 1972, as amended (16 U.S.C 1461 *et seq.*). The manatee is also listed as endangered under the North Carolina Endangered Species Act of 1987 (Article 25 of Chapter 113 of the General Statutes). The U.S. Fish and Wildlife Service (Service) is the lead Federal agency responsible for the protection and recovery of the West Indian manatee under the provisions of the Endangered Species Act.

Adult manatees average 10 feet long and weigh about 2,200 pounds, although some individuals have been recorded at lengths greater than 13 feet and weighing as much as 3,500 pounds. Manatees are commonly found in fresh, brackish, or marine water habitats, including shallow coastal bays, lagoons, estuaries, and inland rivers of varying salinity extremes. Manatees spend much of their time underwater or partly submerged, making them difficult to detect even in shallow water. While the manatee's principal stronghold in the United States is Florida, the species is considered a seasonal inhabitant of North Carolina with most occurrences reported from June through October.

To protect manatees in North Carolina, the Service's Raleigh Field Office has prepared precautionary measures for general construction activities in waters used by the species. Implementation of these measure will allow in-water projects which do not require blasting to proceed without adverse impacts to manatees. In addition, inclusion of these guidelines as conservation measures in a Biological Assessment or Biological Evaluation, or as part of the determination of impacts on the manatee in an environmental document prepared pursuant to the National Environmental Policy Act, will expedite the Service's review of the document for the fulfillment of requirements under Section 7 of the Endangered Species Act. These measures include:

1. The project manager and/or contractor will inform all personnel associated with the project that manatees may be present in the project area, and the need to avoid any harm to these endangered mammals. The project manager will ensure that all construction personnel know the general appearance of the species and their habit of moving about completely or partially submerged in shallow water. All construction personnel will be informed that they are responsible for observing water-related activities for the presence of manatees.
2. The project manager and/or the contractor will advise all construction personnel that

there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act and the Endangered Species Act.

3. If a manatee is seen within 100 yards of the active construction and/or dredging operation or vessel movement, all appropriate precautions will be implemented to ensure protection of the manatee. These precautions will include the immediate shutdown of moving equipment if a manatee comes within 50 feet of the operational area of the equipment. Activities will not resume until the manatee has departed the project area on its own volition (i.e., it may not be herded or harassed from the area).

4. Any collision with and/or injury to a manatee will be reported immediately. The report must be made to the U.S. Fish and Wildlife Service (ph. 919.856.4520 ext. 16), the National Marine Fisheries Service (ph. 252.728.8762), and the North Carolina Wildlife Resources Commission (ph. 252.448.1546).

5. A sign will be posted in all vessels associated with the project where it is clearly visible to the vessel operator. The sign should state:

CAUTION: The endangered manatee may occur in these waters during the warmer months, primarily from June through October. Idle speed is required if operating this vessel in shallow water during these months. All equipment must be shut down if a manatee comes within 50 feet of the vessel or operating equipment. A collision with and/or injury to the manatee must be reported immediately to the U.S. Fish and Wildlife Service (919-856-4520 ext. 16), the National Marine Fisheries Service (252.728.8762), and the North Carolina Wildlife Resources Commission (252.448.1546).

6. The contractor will maintain a log detailing sightings, collisions, and/or injuries to manatees during project activities. Upon completion of the action, the project manager will prepare a report which summarizes all information on manatees encountered and submit the report to the Service's Raleigh Field Office.

7. All vessels associated with the construction project will operate at "no wake/idle" speeds at all times while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

8. If siltation barriers must be placed in shallow water, these barriers will be: (a) made of material in which manatees cannot become entangled; (b) secured in a manner that they cannot break free and entangle manatees; and, (c) regularly monitored to ensure that manatees have not become entangled. Barriers will be placed in a manner to allow manatees entry to or exit from essential habitat.

Prepared by (rev. 06/2003):
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Figure 1. The whole body of the West Indian manatee may be visible in clear water; but in the dark and muddy waters of coastal North Carolina, one normally sees only a small part of the head when the manatee raises its nose to breathe.

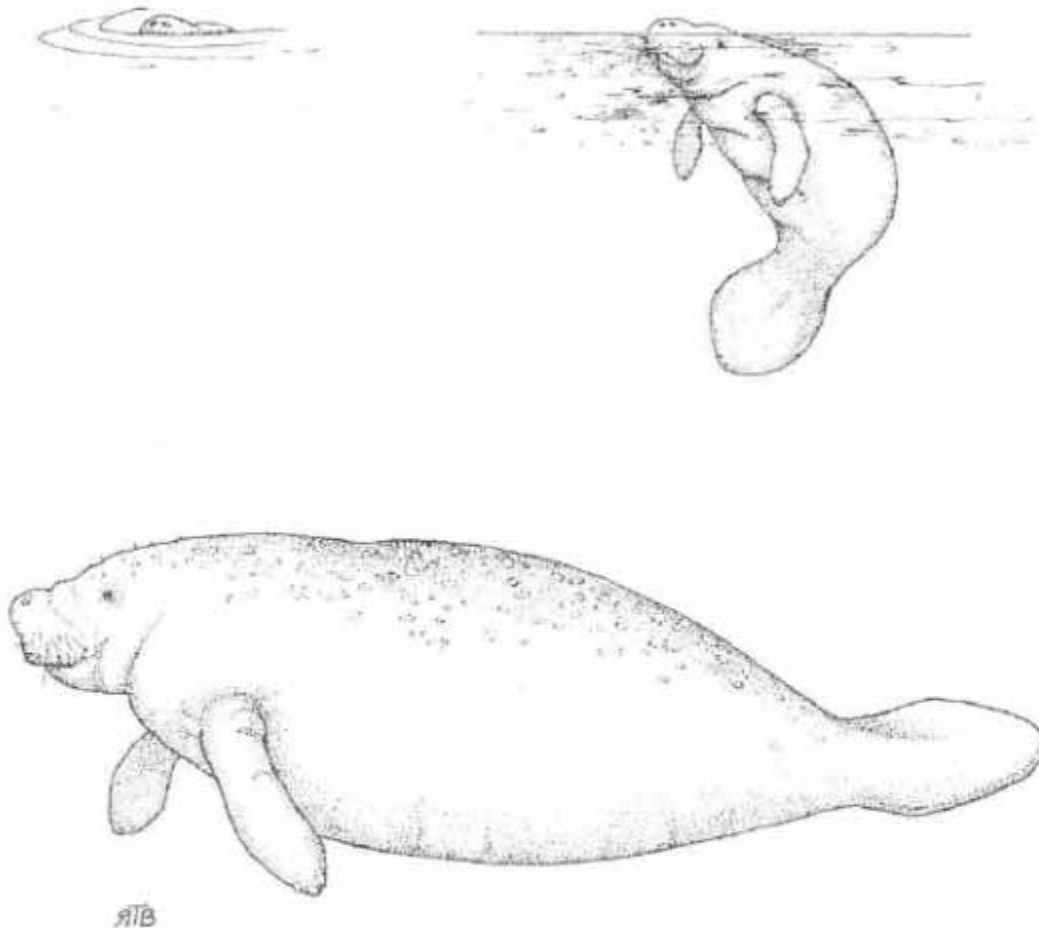


Illustration used with the permission of the North Carolina State Museum of Natural Sciences.
Source: Clark, M. K. 1987. Endangered, Threatened, and Rare Fauna of North Carolina: Part I. A re-evaluation of the mammals. Occasional Papers of the North Carolina Biological Survey 1987-3. North Carolina State Museum of Natural Sciences. Raleigh, NC. pp. 52.



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 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.

