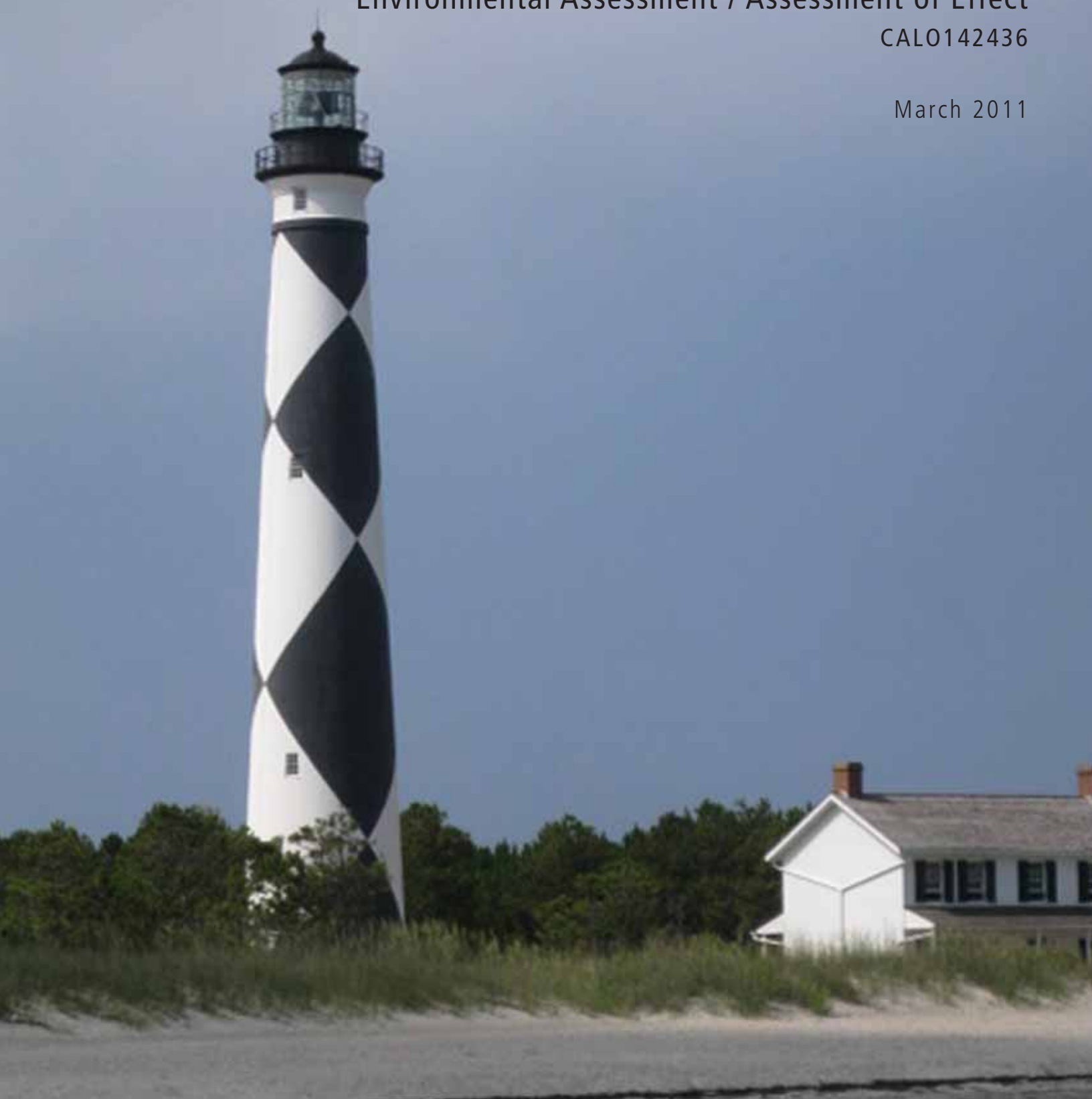




Passenger Ferry Departure Site Cape Lookout National Seashore Environmental Assessment / Assessment of Effect

CALO142436

March 2011



**U.S. Department of the Interior
National Park Service**

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

**Passenger Ferry Departure Site
Environmental Assessment/Assessment of Effect**

March 2010

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 to support a variety of recreational activities. In the southern portion of the park, ferry service to Shackleford Banks and the Cape Lookout Lighthouse is provided by six to eight individually permitted small-boat ferry operators. There is no assurance that these individual operators will continue to provide services in the long term. These operators do not provide a single, easily recognized gateway experience to introduce visitors to the park and its resources. These operators do not comply with the National Park Service Concession Management Improvement Act of 1998 (CMIA). The National Park Service (NPS) proposes to come into compliance with the CMIA 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. Actions needed to achieve this goal include the development of landside locations for ferry arrivals and departures, identification of appropriate ferry routes, and the enhancement of the park's existing messaging and identification.

This document examines three alternatives: a No-Action Alternative (Alternative A), the Front Street site in Beaufort (Alternative B), and the 10th Street site in Morehead City (Alternative C). The NPS has identified Alternative B as the NPS Preferred Alternative because establishment of the ferry service at this site is expected to result in slightly less impacts to the environment. Both action alternatives meet the purpose, needs, and objectives for this project. If a successful agreement is not developed for implementation of Alternative B, Alternative C would be an acceptable substitute.

Implementation of the NPS Preferred Alternative would result in short-term, minor, adverse impacts on soils and topography and visitor use and experience; short-term, moderate, adverse impacts on coastal resources; long-term, negligible, adverse impacts on soils and topography and coastal resources; long-term, negligible to minor adverse impacts on wildlife and wildlife habitat and operations and infrastructure; long-term, minor, adverse impacts on special status species; and long-term, beneficial impacts on special status species, socioeconomic resources and gateway communities, visitor use and experience, and operations and infrastructure.

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Note to Reviewers and Respondents:

If you wish to comment on this Environmental Assessment/Assessment of Effect, you may mail comments by March 31, 2010 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.

Superintendent
Cape Lookout National Seashore Headquarters
131 Charles St.
Harkers Island, NC 28531

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ACRONYMS AND ABBREVIATIONS

ABAAS – Architectural Barriers Accessibility Act Standards
ADA – Americans with Disabilities Act
BO – Biological Opinion
CAMA – Coastal Area Management Act
CEQ – Council on Environmental Quality
CFR – Code of Federal Regulations
CMIA – Concessions Management Improvement Act
CSP – Commercial Services Plan
CUA – Conditional Use Authorization
CZMA – Coastal Zone Management Act
DO – Director’s Order
EA/AoE – Environmental Assessment/Assessment of Effect
EFH – Essential Fish Habitat
EO – Executive Order
EPA – Environmental Protection Agency
ESA – Endangered Species Act
GMP/DCP – General Management Plan/Development Concept Plan
HAPC –habitat areas of particular concern
MOA – Memorandum of Agreement
MOU – Memorandum of Understanding
NCDCM – North Carolina Division of Coastal Management
NCDMF – North Carolina Division of Marine Fisheries
NEPA – National Environmental Policy Act
NHPA – National Historic Preservation Act
NMFS – National Marine Fisheries Service
NPDES – National Pollution Discharge and Elimination System
NPS – National Park Service
the park – Cape Lookout National Seashore
SAFMC – South Atlantic Fishery Management Council
SAV – submerged aquatic vegetation
SHPO – State Historic Preservation Officer
SGA – Shellfish Growing Areas
SOF – Statement of Findings
SS+RWQS – Shellfish Sanitation and Recreational Water Quality Section
US 70 – U.S. Highway 70
USCG – U.S. Coast Guard
USFWS – U.S. Fish and Wildlife Service

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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, unique natural resources, prime fishing locations, and miles of beaches to support a variety of recreational activities. The only access to these resources is by 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). Each location and operator provides visitors with a unique experience; however, they do not comply with the Concessions Management Improvement Act (CMIA) of 1998, and they do not provide a unified experience that introduces visitors to the park and its resources. The National Park Service (NPS) proposes comply with the CMIA by establishing and managing a passenger ferry system that would provide access to this area of the park while providing a consistent message and interpretation of the park and its resources. Actions needed to achieve this goal include the development of landside locations for ferry arrivals and departures, identification of appropriate ferry routes, and the enhancement of the park’s existing messaging and identification.

This Environmental Assessment/Assessment of Effect (EA/AoE) evaluates three alternatives: a no-action alternative and two action alternatives. The EA/AoE 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 (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. This EA/AoE also complies with section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

PURPOSE AND NEED FOR ACTION

The purpose of the proposed action is to comply with the NPS CMIA of 1998 by providing a long-term public ferry system that would operate from a clearly identified location in either

Morehead City or Beaufort, in Carteret County, North Carolina. This service could only be provided via a concession contract and would create an official gateway into the park, better orient visitors to park resources and facilities, improve access to the park by meeting accessibility standards at each dock, and facilitate other improvements. This preferably would be accomplished by partnering with other public/governmental entities for use of departure sites as an alternative to federal acquisition.

Existing ferry service is provided by private operators that are not obligated to provide service. Because these operators are currently permitted (in conflict with the NPS CMIA of 1998) through one-year by Conditional Use Authorizations (CUAs), the NPS has no control over the level of service including the fare, the type of facilities, the type of vessel, or the level of accessibility. (CUAs are meant to authorize suitable commercial services to NPS visitors under certain limited circumstances for a term of no more than two years.) With CUAs there is no assurance that the service will be provided and that visitors will have access or a consistent level of service in either the short or long term. Guidance provided by the CMIA and the park's 2007 Commercial Service Plan (CSP) is to provide such a necessary service via a long-term concession contract. Since the term of each contract is typically 10 years, concession contracts are rebid every 10 years. In order to comply with the CMIA of 1998 and to ensure long-term consistent ferry service to the park, the NPS seeks to issue a single concessions contract.

Another issue faced by the NPS and the future concessioner in establishing a long-term departure site is the increasing scarcity of publicly owned waterfront land. The NPS plans to establish a single departure site out of either Beaufort or Morehead City for use by the future concessioner; however, the NPS does not currently own any waterfront access in this area. In order to establish a mutually beneficial site for use by the future ferry concessioner, the NPS seeks to partner with another public entity for establishment of an entirely public site.

Currently, ferry access to the park is provided by multiple authorized private business owners from private lands within the local communities. The nature of this service provides park visitors with inconsistent levels of service, facilities (i.e., restrooms, shaded queuing area, etc), parking (including ability to accommodate buses), and level of accessibility—as defined by the Americans with Disability Act (ADA)—between operators. Most operators do not provide access to the park in a way that complies with the ADA and Architectural Barriers Act Accessibility Standards (ABAAS). Another aspect of existing ferry operations that not only complicates accessibility issues but also makes some visitors uncomfortable is the use of small Carolina Skiff-type boats. These boats generally offer a less comfortable ride and offer little protection against splashing under certain conditions. Getting wet during the winter months is unacceptable to most visitors. There is a need to establish a universally accessible site offering: year round, regularly scheduled service; a complete set of facilities, including restrooms and a shaded queuing area; plentiful parking which can accommodate buses; and a diverse fleet of ferry vehicles.



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Figure 1
Project Location Map

The current ferry operators are private entities that offer service to the park as part of their business and therefore do not identify themselves solely with the park. The ferry operators do not provide any consistent introduction to the park, its significance, or important safety and resource protection information. There are no park-specific wayfinding signs, and the ferry boats (or other associated structures) do not include any NPS insignias. This lack of an easily recognizable gateway feature can lead to confusion for park visitors. Therefore, as part of the long-term ferry service, there is a need to develop a departure site that is readily recognizable as providing public access to a unit of the national park system, as well as meeting the NPS's orientation and interpretive needs.

Objectives for the proposed action include:

- Establishing a ferry service in a manner in compliance with the NPS CMIA of 1998, which directs the NPS to use concession contracts whenever possible for necessary visitor services, such as ferry access.
- Implementing recommendations of the 2007 CSP to provide passenger ferry service from Beaufort/Morehead City to South Core and Shackleford Banks.
- Ensuring long-term public access to the park by establishing an NPS mainland departure facility, in partnership with another public entity that can provide a site, from which a NPS authorized ferry service would operate.
- Establishing a single, easily-recognized National Park ferry gateway site for visitors embarking from the Beaufort/Morehead City area to the park.
Provide a departure site and ferry fleet that meets Federal Accessibility Standards.
- Providing visitors with facilities and ferry fleet that meet Federal Accessibility Standards.
- Providing visitors with consistent interpretive, safety, and regulatory information at the mainland departure site to help visitors make meaningful connections with the park resources, and to help visitors have a safe and enjoyable visit to the park.

PROJECT AREA DESCRIPTION

The project area includes the current and proposed ferry departure sites, the current and proposed ferry routes, and the arrival sites at the park. The current departure sites can vary annually depending upon which ferry operators have applied for and been granted a CUA. Current ferry operations currently include three operators in the downtown area of Front Street in Beaufort and one in the downtown area of Morehead City. The route taken by current ferry operators is not laid out by the NPS and thus varies not only from operator to operator but can vary from trip to trip.

The proposed departure site alternatives include one site in Beaufort and one in Morehead City (Figure 2). The Front Street site in Beaufort includes the Post Office building at the corner of Front Street and Pollock Street, the dock off of Grayden Paul Town Park, and landside areas in the vicinity of the park and post office.



Grayden Paul Town Park and associated dock from Front Street.



The Beaufort Post Office as seen across Front Street from Grayden Paul Park.



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Figure 2
Project Area

The site under consideration in Morehead City is referred to as the 10th Street site. The 10th Street site is located at the western limits of the Morehead City downtown waterfront at the intersection of Shepard Street and South 10th Street. The Train Station building at the corner of US Highway 70 (US 70) and 10th Street may also be included in the 10th Street site as a temporary visitor contact station.



View of 10th Street site towards Shepard Street from the fishing pier (the easternmost dock at the site).



The existing docks at the 10th Street Site (including eastern fishing pier and docks on either side of the boat launch).

The arrival sites currently being used would continue to be used under any of the action alternatives. These sites are the dock associated with the Cape Lookout Lighthouse area on the southern end of the South Core Banks and the dock and beaches on the northwestern end of Shackleford Banks.

Ferry routes from the respective departure sites to the respective arrival sites have the potential to vary depending upon weather conditions; however, the routes generally expected to be used are depicted on Figure 2.

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 NPS to continue to provide samples of major natural systems in conjunction with broad themes of American history. The history of the United States in this area is presented by the NPS through the Cape Lookout Village and Portsmouth Village. These historic districts 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. These coastal islands have also served as a base of operation from which to protect ships navigating along the coast, through the construction of lighthouses and Coast Guard and Life-Saving Stations. Lighthouses have been established 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 U.S. Coast Guard (USCG) has been responsible for maintaining and administering the lighthouse. Today, the NPS maintains the structure, while the USCG maintains the operation of the light (NPS 2005).

The islands contained within the park are among the most dynamic barrier islands along the Atlantic Coastal Plain. This dynamic environment includes the ever changing profile of the islands and the unique wildlife species that inhabit the islands. The park also provides unmatched 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 utilized 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 passenger ferry departure site study. These include the *Cape Lookout National Seashore General Management Plan/Development Concept Plan* (GMP/DCP) (NPS 1982), the *Cape*

Lookout National Seashore Amendment to the General Management Plan/Environmental Assessment (NPS 2001), and the *Commercial Services Plan* (CSP) (NPS 2007).

The ***Cape Lookout National Seashore General Management Plan/Development Concept Plan*** (NPS 1982) laid out the initial planning and management policy for the park. The plans in the GMP/DCP included providing ferry service to the South Core Banks and Shackleford Banks from a marina at the “gateway port.” Since the publication of the GMP/DCP, the NPS has identified more appropriate ferry service locations. This document seeks to assess these potential locations.

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 Keeper’s Quarters area. The recommendation for using long-term concessions contracts was further examined in the CSP and analyzed in this document.

The ***Commercial Services Plan Environmental Assessment/Assessment of Effect*** (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. It directs the NPS 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 and Morehead City to Shackleford Banks and the Cape Lookout Lighthouse area. This EA/AoE identifies the options for service from either Morehead City or Beaufort and analyzes the potential impacts of this service.

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

SCOPING

The scoping process is initiated at the beginning of a NEPA project to identify the range of issues, resources, and alternatives to address in the EA/AoE. 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 (including, as appropriate, the state historic preservation officer [SHPO] and local communities) 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 CSP in 2007. This process introduced plans to address ferry service and initiated discussions with interested agencies and individuals.

The scoping process for the proposed action began in August 2009, when staff from the park and resource professionals from the NPS conducted internal scoping. The NPS followed this meeting with two public open houses on August 27, 2009. At this time, the NPS solicited public input on proposed locations for the proposed ferry concessioners. The meeting also provided the public with information on the purpose and need of the project and the planning process that would be followed. Following the public open houses, NPS staff met with several stakeholders from the local towns with specific knowledge and interest in the proposed action. As part of this scoping effort, several agencies were contacted, including the North Carolina SHPO, the North Carolina State Environmental Review Clearinghouse, and the U.S. Fish and Wildlife Service (USFWS). Following the public scoping sessions, the NPS held a 30-day public comment period to solicit input on the proposed action. 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 a ferry system that would operate long-term from a clearly identified location within the local community. The following were identified as most important to the planning process: protecting the park’s natural resources, enhancing the visitor recognition of the national park, and maintaining appropriate access to a national park. 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.

Protecting the park’s natural resources. The park is home to a variety of federally-listed turtle species and is the southernmost nesting point for the federally-listed piping plover. Many of the park’s unique and important natural resources are located on the islands to which the proposed action would provide improved access. While the NPS seeks to educate its visitors about these resources by providing access to them, this access must respect the natural processes that occur on the islands. Therefore, any proposals made in this plan should seek to maintain or enhance the protection of the park’s natural resources by providing visitors with information about the park, including safety advisories, park rules, protected species, and resources stewardship.

Enhancing visitor recognition and experience of the national park. Although the park consists of more than 29,000 acres of land and water, many visitors are unaware if and when they are in a national park. This is due to the location of many of the ferry launch sites within local communities and the lack of regular NPS identification or interpretation during their trip. The lack of NPS recognition and interpretation prevents visitors from understanding the nature of their location and what other opportunities might be available to them. Therefore, any proposals made in this plan should seek to enhance visitor recognition that they are entering/visiting a unit of the national park system.

Establishing long-term shoreline access via public partnership. Intense local and state-wide public and governmental concerns over the rapid loss of waterfront access to development has led to state legislation, Waterfront Access Committees, and potential state funding for land acquisition. The current statewide focus on access issues provide opportunities for partnership with private, local and state government for co-location of multi-use public facilities that would provide substantial cost savings over individual agency development. In order to ensure long-term public access to the shoreline for ferry operations, the NPS would like to partner with another public entity (e.g., a local town government) to establish a long-term public gateway that would both improve NPS visitor experience and provide economic benefits to the local communities.

REGULATORY ISSUES AND MANAGEMENT CONCERNS

Based on discussions with NPS staff and planning team members, implementation of the Passenger Ferry Departure Site Study EA/AoE should not require any changes to existing legislation or management policies. Prior to the implementation of the proposed action, the landowner 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 for an action in the coastal zone
- Coastal Area Management Act (CAMA) Permit
- National Pollution Discharge and Elimination System (NPDES) Stormwater Permit
- local erosion and sediment control permit

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 EA/AoE. They were identified based on the issues raised during scoping; site conditions; federal laws, regulations, Executive Orders, NPS *Management Policies 2006* (NPS 2006a), and DOs; and staff knowledge of the park’s resources.

Impact topics identified and analyzed in this EA/AoE are listed below along with a brief rationale for the selection of each impact topic. They include soils and topography; wildlife and wildlife habitat; special status species; wetlands; coastal resources; socioeconomic resources and adjacent lands; visitor use and experience; and operations and infrastructure. Each impact topic is further discussed in detail in “Chapter 3: Affected Environment” of this document.

Soils and Topography. NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. NPS *Management Policies 2006* (NPS 2006a) and other NPS and park policies provide general direction for the protection of soils. Within the study area, soils include upland soils and those along the floor of the bay. Topography in the terrestrial portion of

the study is relatively flat. However, along the shoreline and in the subaqueous portions of the study area, topography or bathymetry vary while gradually dropping away from the terrestrial elevations. The proposed action includes development on both of these areas. This development could include grading that would alter the existing topography. Therefore, the impact topic of soils and topography is considered.

Coastal Resources. *NPS Management Policies 2006* (NPS 2006a) states that the NPS 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 study area is located along the Core, Back, and Bogue Sounds. Coastal resources include wind, waves, and the shoreline environment that is created as these conditions mix with the aquatic environment. Because the proposed action would develop new infrastructure within them and have the potential to release pollutants into the water, the impact topic of coastal resources is addressed.

Wetlands. Executive Order 11990, “Protection of Wetlands” and NPS DO-77-1: *Wetland Protection* (NPS 2008) require an examination of impacts on wetlands. Wetland habitat exists along the respective shorelines of Beaufort and Morehead City where natural conditions persist, and the proposed action has the potential to impact these wetlands. Therefore, the impact topic of wetlands is addressed.

According to NPS DO-77-1: *Wetland Protection*, a Statement of Findings (SOF) 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 an SOF include 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, an SOF for wetlands is not included in this document.

Essential Fish Habitat. NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. 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 essential fish habitat (EFH). Proposed construction activities and circulation patterns could result in temporary and permanent impacts to resources associated with designated EFH along the ferry routes. During informal consultation with NMFS, the NPS was advised to use the EA to serve as an EFH Assessment. Therefore, the impact topic of essential fish habitat is addressed.

Special Status Species. In a letter dated November 26, 2010, the USFWS identified 16 species that may be found in or around the study area. These include the Loggerhead sea turtle (*Caretta caretta*), Green sea turtle (*Chelonia mydas*), Leatherback sea turtle (*Dermochelys coriacea*), Kemp's ridley sea turtle (*Lepidochelys kempii*), Hawksbill sea turtle (*Eretmochelys imbricata*), Piping plover (*Charadrius melodus*), American oystercatcher (*Haematopus palliatus*), Wilson's plover (*Charadrius wilsonia*), Red knot (*Calidris canutus rufo*), Gull-billed tern (*Geochelidon nilotica*), Common tern (*Sterna hirundo*), Least tern (*Sternula antillarum*), Roseate tern (*Sterna*

dougallii dougallii), Black skimmer (*Rynchops niger*), West Indian manatee (*Trichechus manatus*), and Seabeach amaranth (*Amaranthus pumilis*). Based on its location relative to these species, the proposed action has the potential to impact special status species. Therefore, the impact topic of special status species is addressed.

Historic Structures and Districts. The Beaufort Historic District contains a number of historic buildings and individual structures within its boundaries. A historic structure is defined by the NPS 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, 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* (NPS 1990) provides a comprehensive discussion of these characteristics. Currently complete funding sources (federal/non-federal/private) have not been fully determined for some of the actions that may be taken within the historic district. In order to facilitate compliance with Section 106 of the NHPA, an analysis of potential activities impacting the Beaufort Historic District is included in this document. Activities proposed in Morehead City would not take place within any historic district or impact any resource listed or eligible for listing in the National Register of Historic Places, as a result, impacts to historic resources are not analyzed for actions within Morehead City.

Socioeconomic Resources and Gateway Communities. NPS *Management Policies 2006* (NPS 2006a) requires the NPS 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 communities associated with current and proposed ferry departure sites. Therefore, the impact topic of socioeconomic resources and gateway communities 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 2006a). The NPS 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 at the ferry departure and arrival sites. Therefore, the impact topic of operations and infrastructure 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 geology 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). There are no prime farmland soils within the study area. Therefore, the impact topic of prime farmland was considered but dismissed from further analysis.

Vegetation. NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. The NPS *Management Policies 2006* (NPS 2006a), and other NPS and park policies provide general direction for the protection of vegetation. Although some vegetation may be disturbed or removed during implementation of the proposed action, this vegetation would generally be lawn areas and would not represent any species of natural or cultural significance. These potential impacts to vegetation would be negligible; therefore, the impact topic of vegetation was considered but dismissed from further analysis.

Floodplains. 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 although actions are proposed within the floodplain, these actions do not have the potential to noticeably alter the natural values of the floodplain nor increase the exposure of humans to flood risk. Therefore, the impact topic of floodplains was considered but dismissed from further analysis. According to NPS Procedural Manual 77-2, certain park functions which are water dependent and require little physical development and do not involve overnight occupation are excepted from requiring an SOF for floodplains.

Wilderness. The Wilderness Act (Public Law 88-577) defines wilderness as "an area where the earth and its community of life are untrammeled 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." The management of wilderness areas within the national park system is guided by NPS *Management Policies 2006*, which is supplemented by DO-41. Shackleford Banks is a proposed wilderness area. The proposed action would continue to provide access to the island, and boats would continue to dock and land at the island outside of the proposed wilderness similar to current practices; however, the ways in which people recreate on the islands are considered to be a conforming use and the number of visitors are not expected to noticeably affect the potential designation of this area as wilderness. 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 communities. The NPS *Management Policies 2006* (NPS 2006a), NPS DO-

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 may be more sensitive to disturbance these species are covered under the impact topic of Essential Fish Habitat. Therefore, the impact topic of wildlife and wildlife habitat was considered but dismissed from further analysis.

Archeological Resources. Because the proposed departure sites are located on previously disturbed sites, archeological resources are not anticipated. No archeological resources have been identified within the study area. Therefore, the impact topic of archeological resources is dismissed. 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 NPS's *Cultural Resource Management Guideline* (DO-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.

The proposed ferry service would authorize continued service to the Cape Lookout Lighthouse, which is part of the Cape Lookout Village cultural landscape. The proposed action would continue to provide access to the island, and boats would continue to use the existing dock; however, the ways in which visitors recreate on the islands is not anticipated to change or to impact the cultural landscape. Therefore, the impact topic of cultural landscapes was considered but dismissed from further analysis.

Ethnographic Resources. 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 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 and Sacred Sites 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 (NPS 2002b). Neither the study area nor the proposed action include any museum collections. 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 1982). There would be a slight temporary increase in vehicle emissions related to the proposed action. These increases would be limited to the construction period and could be quickly dissipated by the windy conditions that are common in this area. Therefore, the impact topic of air quality was considered but dismissed from further analysis.

Soundscapes. The park provides a quiet escape from the hustle and bustle of metropolitan life. The NPS strives to maintain or reduce existing noise impacts within the park, so the park can continue to serve as a refuge from the surrounding urban environment. The proposed action would not change the soundscape at the park. Nor would the proposed action cause any noticeable increase in noise at the already urbanized departure sites. Therefore, the impact topic of soundscapes was considered but dismissed from further analysis.

Lightscares. In accordance with NPS *Management Policies 2006* (NPS 2006a), the NPS strives to preserve natural ambient landscapes and other values that exist in the absence of man-made light. There would be no change in lightscares related to the proposed action. Therefore, the impact topic of lightscares was considered but dismissed from further analysis.

Energy Requirements and Conservation Potential. The CEQ guidelines for implementing NEPA 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.

Alternatives that did not provide sustainable and energy efficient means to provide consolidated ferry service from Beaufort/Morehead City to Shackleford Banks and Cape Lookout Lighthouse were considered but dismissed from this project and are described in greater detail in “Chapter 2:

Alternatives.” The park would encourage suppliers and contractors to follow sustainable practices and address sustainable park and non-park practices. Alternatives considered in “Chapter 2: Alternatives” also considered the energy requirements changes that the consolidation of ferry service would place on NPS staff, visitors, and neighbors’ vehicles. None of these alternatives would 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.

Socially or Economically Disadvantaged Populations. 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 (EPA), 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 various alternatives for the passenger ferry departure sites for service to Shackleford Banks and the Cape Lookout Lighthouse at Cape Lookout National Seashore. The alternatives for the proposed action were designed to improve site access, visitor use and experience, and park operations. The EA/AoE examines three alternatives: a No-Action Alternative (Alternative A), the Front Street site (Alternative B), and the 10th Street site (Alternative C). Additional possible sites 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 tier off the preferred alternative described in the 2007 CSP, which directs the NPS to provide passenger ferry service from Beaufort or Harkers Island to Shackleford Banks and the Cape Lookout Lighthouse area on the southern South Core Banks and also to provide service from Morehead City to Shackleford Banks.

During initial planning stages for the Cape Lookout National Seashore Passenger Ferry Transportation Feasibility Study, a total of eight departure sites were identified as potential departure sites for this service. After internal discussions, NPS decided to provide ferry service to the lighthouse with authorized service to Shackleford Banks from its existing docks at the Shell Point Visitor Center on the eastern end of Harkers Island, as originally called for in the GMP (NPS 1982) and confirmed in the CSP (NPS 2007). It was considered the natural choice because this property is under federal ownership, is the primary administrative site for the park, and houses an existing boat basin. Ferry service has formerly been run out of this facility; therefore, reactivation of this service is expected to lack any noticeable impacts to the environment. It will meet the requirements of NEPA through a categorical exclusion and will only be addressed in this document as a cumulative action.

The NPS considered the remaining seven departure sites in Beaufort and Morehead City for an additional ferry service departure location with required service to Shackleford Banks and authorized service to Cape Lookout Lighthouse. The original eight sites considered for this departure site were presented at a public scoping meetings held at the Duke University Marine Laboratory on Pivers Island on August 26, 2009 and at stakeholder meetings held in the towns on August 27, 2009. A 30 day public comment period followed these meetings.

Following the public meetings, an additional site was introduced for consideration, bringing the total of departure sites to be considered in the feasibility study rose to eight. These eight sites are depicted in Figures 3 (Beaufort) and 4 (Morehead City). The feasibility study then moved forward to determine how best to implement the recommendations of the CSP. It provides the technical background and guidance for determining the financial feasibility of a potential concessioner agreement for consolidated ferry service from the proposed locations and developed the potential program layouts at each site (NPS 2010a).

Additional meetings were held with stakeholders in Beaufort and Morehead City on December 14 and 15, 2009 to further narrow the range of options to be considered. Following these meetings, the planning team reassembled to evaluate what the team considered to be the strongest sites in a Value Analysis meeting held February 17-19, 2010. The Value Analysis process is defined by NPS DO-90 as “an organized team effort directed at analyzing the functions of facilities, processes, systems, equipment, services, and supplies for the purpose of achieving essential functions at the lowest life-cycle cost consistent with required performance, reliability, quality, safety, and achievement of NPS mission priorities.” The two action alternatives described below were considered to be the most advantageous sites and are therefore carried forth for analysis in this EA/AoE.

This EA/AoE evaluates the potential for environmental impacts associated with the alternatives described below, including identification of the NPS preferred alternative; however, implementation of the NPS preferred alternative will be dependent upon the final Memorandum of Understanding (MOU) or similar agreement with the selected town upon completion of this EA/AoE.

ALTERNATIVE A: NO-ACTION

Under Alternative A, the NPS would continue to issue CUAs to multiple passenger ferry operators out of Beaufort and Morehead City on an annual basis, which would not meet the requirements of the NPS CMIA of 1998. The level and location of ferry service to Shackleford Banks and the lighthouse from this area would be unpredictable from year to year. The level of accessibility and amenities (such as restrooms or covered queuing areas) would vary between operators. Most operators would continue to use small skiffs (pictured to the right) which are generally not accessible and offer little in the way of comfort, storage, and shelter from the elements. Visitors would receive limited information related to the park associated with this service; this information would be provided at the discretion of the ferry operator. Visitors may not be aware that they are visiting a national park or about safety, of park resources, or rules and regulations.



Skiff typically used by existing ferry operators.



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Figure 3
Beaufort Departure Sites Considered



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Figure 4
Morehead City Departure Sites Considered

The location of the arrival sites will also be variable, depending on the preferences of the ferry operators, although most operators land at the dock or the surrounding beaches on the northeast shore of Shackleford Banks. Some operators also provide service to the Cape Lookout Lighthouse dock or nearby beaches. The NPS would continue to provide orientation and public restroom facilities the arrival sites at the Lighthouse and the Jetty Dock on Shackleford Banks within the park.

The facilities at and use of the existing Front Street and 10th Street sites would both remain unaffected by this project. The existing conditions are pictured on Figure 5.

ELEMENTS COMMON TO ALL ACTION ALTERNATIVES

Under all action alternatives, the NPS would comply with the NPS CMIA of 1998 and would grant a single, long-term, concession contract to a ferry operator for use of one departure site in either Beaufort or Morehead City with the purpose of providing ferry service to the park with a small fleet of passenger ferry boats. This fleet could consist of combination of small passenger skiffs, as is used by most existing ferry operators, and possibly two or more, larger shallow-draft boats (accommodating approximately 40-50 passengers each). Service to Shackleford Banks would be a requirement of the concession contract; service to the lighthouse would be authorized but not required.

During the feasibility study for this service, the NPS modeled three different ferry forecasts for ferry ridership to determine the number of passengers that should be accommodated per trip during each season (winter, spring, summer, and fall). The consolidated ferry service is not expected to itself increase ridership; however, some increase is expected due to general population and tourism increases, especially as recent economic conditions become more favorable. The NPS based the feasibility of the ferry operations on the low- to mid-range forecasts. The mid-range forecast generally uses a 1.5 percent annual growth rate for ferry activity (NPS 2010a).

Once the contracted ferry is in operation, continued access to the park by tour services, such as those currently operating under Commercial Use Authorizations (CUAs), would be evaluated and considered, based on the park Commercial Services Plan (CSP 2009), NPS Policy and the CMIA of 1998; in addition, a proposed tour service could only be authorized if the service did not interfere or compete with either the required or authorized services provided by the ferry operating under a new NPS concession contract. The CMIA of 1998 requires that the new contract be economically viable, and that viability insures, in part, the most reasonable fees for the visiting public. The terms under which a CUA tour or guide service may be permitted into the future, would be determined by the park, and would be reviewed annually. These tours services are currently ongoing under CUAs and are not analyzed in this document.

The consolidated ferry service would provide access to two main arrival sites in the park: the northwest dock and nearby beaches on Shackleford Banks and the dock at the Cape Lookout Lighthouse. Service to Shackleford Banks would be required, while service to the Cape Lookout Lighthouse would be authorized. In other words, if the concessioner considered service to the

lighthouse to be economically feasible, such service would be allowed but not required. The existing docks at both arrival sites are in good condition and do not require any immediate upgrades to continue to serve as ferry arrival sites. Future improvements may increase accessibility.

Both action alternatives include those program elements identified as essential to establishing a gateway ferry departure site in the Beaufort/Morehead City area. Under both action alternatives, the NPS would develop a MOU or similar agreement with the local government in order to provide a long-term commitment by both parties to the development, operation, and maintenance of the site and facilities. These include:

- Passenger vehicle parking and recreational vehicle (RV)/bus parking
- An orientation area
- Loading/unloading area
- Ticketing area
- Passenger queuing area
- Shade/rain shelter
- Public restrooms
- Wayfinding signs from US 70
- Pedestrian connections to adjacent areas
- Ferry docks
- Accessibility (as defined by the Americans with Disabilities Act [ADA] and Architectural Barriers Accessibility Act Standards [ABAAS])

Some of these elements would need to be constructed at the site, some can be provided by existing structures, and some elements can be combined (e.g. a single structure could provide both public restrooms and ticketing). The concessioner-run ferry service is expected to begin no earlier than spring of 2013. Some of the program elements above may be provided in temporary structures to prevent delays in start-up of the new service. Permanent structures would be available and in use at the site by the spring of 2016. The alternative descriptions below describe the way in which these elements would be incorporated at each site.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Under this alternative, wayfinding signage would be posted on U.S. 70 (Cedar Street) to guide visitors along Pollock Street to the Post Office building on Front Street. A total of up to 85 parking spots would be dedicated to ferry service customers. Seventy (70) parking spaces would be designated for ferry customer use along Front Street from Queen Street west to Live Oak Street. An additional 15 parking spaces would be designated for ferry passenger use along Pollack Street, next to the Post Office building. Any peak season overflow parking could be found along other streets within two tenths of a mile from the proposed docks. Large vehicles such as buses and RVs would be accommodated in parallel parking spots along the street or at another location such as the Maritime Museum Gallant's Channel site. A drop-off area would be provided either along Front Street in front of the Post Office (on the waterfront side of the street) or in the small parking lot that goes around the Post Office building.



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Figure 5
Alternative A: No-action

The Post Office building would be reconfigured by the town to house government offices and would include space for NPS/ferry concessioner use (up to approximately 1,200 square feet). Within this space, the concessioner could provide an orientation/interpretation area and ticketing area. Once this renovation was completed, pedestrian traffic would utilize improved crossings and sidewalks from the Post Office building, across Front Street, to the ferry docks. A temporary ticketing area (approximately 60 square feet) and orientation area (approximately 80 square feet) may be provided at an expanded deck area at the docks while the Post Office renovations are completed.

In addition to the ticketing and orientation provided by the Post Office space or temporary facilities, a covered pavilion (approximately 400 to 600 square feet) at the dock would provide a passenger queuing area and shelter from the sun and rain. The exact location of these elements would depend upon further coordination between the NPS and Beaufort officials. Potential locations and other program elements are shown on Figure 6 and in the perspective below.

It should be noted that this site is located within Beaufort Historic District, which features small town characteristics, including an undisturbed scale and plan. Front Street offers most of the town's commercial services (shopping, dining, and boat charters). The route leading to Front Street from US 70 travels through the characteristic neighborhood of houses with gables and porches. Because the site would dependent upon use of the Post Office building and the existing town park, the site would retain much of this historic, small-town atmosphere.



Perspective of proposed elements of the Post Office site.

The NPS expects to use the town dock across from the Post Office building and extending from Grayden Paul Town Park for ferry operations under this alternative. The main dock is approximately 10 feet wide and 90 feet long. Dock improvements may include the addition of an adjacent floating dock, and upgrades to the electrical and light systems would be necessary for safe and accessible ferry boat operations to begin at this location.

The ferry route from this departure site would pass by Carrot Island, along the east side of Radio Island through the Bulkhead Channel, and past Fort Macon State Park. The ferry would then cross the Beaufort Inlet into the Back Sound to the existing boat dock and beaches on the north side of Shackleford Banks. As mentioned in the previous section, the concessioner also would have the option to provide additional service east through the Back Sound to the Cape Lookout Lighthouse.

ALTERNATIVE C: 10TH STREET

Under this alternative, the prohibition on left turns from US 70 (Arendell Street) onto 10th Street would be lifted by the town in order to facilitate access to the site, and wayfinding signs would be posted to direct visitors from Route 70 to the 10th Street site.

The existing paved parking area at the end of South 10th Street would be expanded to a “U” shape configuration onto the gravel parking lot on the adjacent western parcel. This expanded parking lot would be striped to create one-way angled parking. This would provide approximately 65 parking spaces. Adequate additional spaces, including spaces for RVs could be found as on the adjacent town streets. A loading and unloading area is proposed at the north side of Shepard Street along with an improved pedestrian crossing. A pedestrian walkway would provide a direct access to the ferry dock from the street.

An orientation area (approximately 500 square feet) and a ticketing/restroom/concessions building (approximately 600 square feet) would be constructed near Shepard Street and would provide a clear gateway for visitors to the park. A sheltered queuing area (approximately 440 square feet) would also be constructed adjacent to the docks. The location of these elements would depend upon further coordination between the NPS and Morehead City officials. Potential locations and other program elements are shown on Figure 7 and in the perspective below.

If the 10th Street site is selected by NPS as the preferred departure site, Morehead City would apply for grants to develop the site. Since this process could delay construction of program elements such as the ticketing booth, orientation area, and restrooms, the town has offered the NPS interim use of the Train Station building at the corner of US 70 (Arendell Street) and 10th Street, two blocks north of the 10th Street site, to facilitate start-up of the ferry service. This building is associated with a town park and provides approximately 25 spaces of parking and several restroom facilities. Ticketing, orientation, and restroom facilities could be provided at the Train Station for approximately two to three years while the amenities at the waterfront site are completed.



1	Temporary Gateway Orientation Area (1 or 2 years)
2	Temporary Ferry Ticketing Area (60 sf) (1 or 2 years)
3	Shade / Rain Shelter & Passenger Queuing Area (400-600 SF)
4	Dedicated Passenger Vehicle On-Street Parking
5	Proposed Overflow Parking (Off-Hours Only Upon Beaufort Negotiation with Property Owner)
6	Loading / Unloading Area
7	Pedestrian Connections
8	Wayfinding / Signage
9	Ferry Docks (1,000 SF)
10	Alternative Loading/Unloading or Parking
11	Proposed Permanent Visitor Contact Station with Exhibits, Ticket Sales and Restrooms
12	Existing Park
13	New Park Expansion

Size and location of program elements are tentative pending continued coordination between NPS and Beaufort officials.

North



0 30 60 120 feet

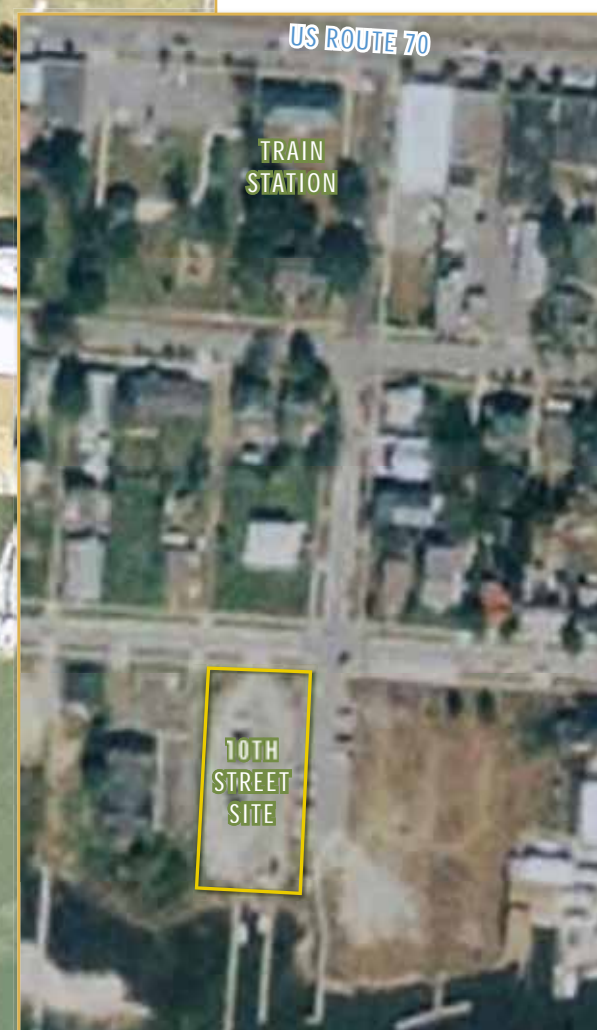


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Figure 6
Alternative B: Front Street Departure Site



1	Pedestrian Access
2	Wayfinding / Signage
3	Loading / Unloading
4	Parking Area
5	Orientation Area / Gateway (500 SF)
6	Ticketing, Restrooms & Concession Building (600 SF)
7	Shelter / Queuing Area (440 SF)
8	Ferry Docks (1,000 SF)
9	Existing Fishing Pier to Remain
10	Large Vehicle Parking – On-Street
11	Water Quality Pond
12	Passenger Vehicle On-Street Parking

Size and location of program elements are tentative pending continued coordination between NPS and Morehead City officials.

North



0 30 60 120 feet

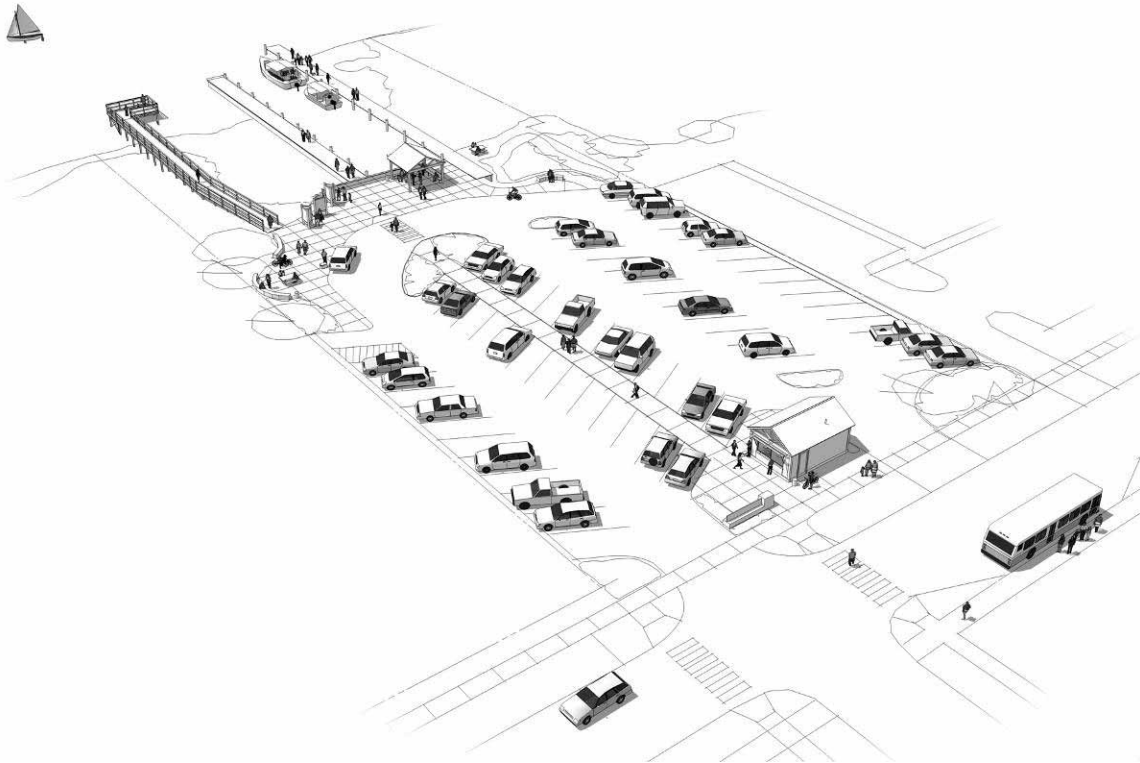


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Figure 7
Alternative C: 10th Street Departure Site



Perspective of proposed elements of the 10th Street site.

In order to make the site operational for ferry service, several marine infrastructure improvements would have to be made to the site. The existing boat ramp, unused for several years, would be permanently taken out of service and the associated docks would be reconstructed. The western dock would be 100 feet long, the eastern one would be 70 feet long, and both would be 8 feet wide. The docks would be equipped with electric power pedestals, dock lighting, and water. Some dredging would be required for deep draft vessels, and maintenance dredging would have to be performed as required to maintain the existing channel approach to the dock and the maneuvering area in the vicinity of the dock. The boat launch may be replaced by a facility on nearby Radio Island. The existing fishing dock (the easternmost dock on the site) would remain in operation.

Morehead City's waterfront tends to focus on sport (party boat) fishing, with the pivotal event being the annual the Big Rock Blue Marlin Tournament. The eastern end of Morehead City is more heavily developed than Beaufort, with a high-rise condominium complex and a commercial port dominating the landscape. The 10th Street site, however, is located on the western side of the town. The size of the site and its currently undeveloped nature would allow the NPS to create a highly recognizable gateway site, distinct from its surroundings.

The ferry route from this departure site would travel around the western tip of Sugarloaf Island into Bogue Sound and travel through the Morehead City Channel between Fort Macon State Park and

Radio Island. If shoaling at the western tip of Sugarloaf became an issue, an alternative route would travel around the eastern end of Sugarloaf Island into Bogue Sound and on to Radio Island. From there, the ferry route would be approximately the same as for the route from Beaufort; it would cross the Beaufort Inlet and go on to the Back Sound to the existing boat dock and beaches on Shackleford Banks. As mentioned previously, the concessioner also would have the option to provide additional service east through the Back Sound to the Cape Lookout Lighthouse.

ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

As mentioned above, the feasibility study conducted prior to this EA/AoE evaluated the feasibility of eight total sites (see Figures 3 and 4). By analyzing the opportunities and constraints associated with each site, the range of alternatives to be considered in this document was narrowed to the two action alternatives described above. The sites dismissed were the Gallants Channel site, the Jib site, the 6th Street Day Docks site, the Big Rock site, the Railroad site, and the Jaycee Park site.

GALLANTS CHANNEL SITE

The Gallants Channel site in Beaufort is large and includes an existing gravel parking lot and recently constructed concrete dock system along the waterfront. As such, this site presented some promising opportunities for development as the consolidated departure site for the ferry to the park; however, definitive constraints were identified during further investigation that ultimately caused this site not to be retained for further analysis. The constraints at this site include existing wetlands, requirements for significant utility extensions, strict development requirements per CAMA, future conflicting uses at the site between museum visitors and park visitors, future transportation impacts affecting vehicular accessibility to the site, and ultimately and incompatible partnership arrangement.

The site is planned for extensive development for the Maritime Museum. There was concern that if the ferry departure site was also developed here, such a development would not be compatible with museum visitation. For instance, museum visitors may be seeking a quiet interpretive experience as beach-bound ferry passengers travel through the site, laden with coolers, umbrellas, and other beach gear. The two uses may be somewhat conflicting.

Also, this site has a few issues associated with transportation. Ferries departing from this site would travel under the existing US 70 drawbridge, which would be a longer ferry route. A longer ferry route would impose constraints upon future scheduling and operations. Additionally, future transportation development would realign a US 70 bypass route and may expand the nearby airport. The US 70 alignment would complicate access to the site and would require planning efforts to ensure that the new intersection addressed this issue in the best way possible. The airport development may increase both vehicular and airplane traffic in the vicinity of the site. These actions would decrease the desirability of this site as a NPS gateway location.

After discussions with the North Carolina Maritime Museum representatives, the museum respectfully requested that this site be removed from consideration and agreed to provide remote parking and support in the development of a ferry operation at the Front Street site in Beaufort.

JAYCEE PARK SITE

The Jaycee Park site in Morehead City offers a number of amenities already in place (or planned for the near future) such as benches and restrooms; however, these amenities are already heavily utilized, especially by the transient boaters for whom the Jaycee Park docks are dedicated. The park also hosts town events such as concert series and other celebrations. This introduces a high level of visitor conflicts at the site, and there is also no long-term availability of dedicated parking associated with this site. This site also would be faced with funding challenges. The original dock improvements were constructed with funding which limited the use of the docks to only transient boaters. As such, it would not provide a quality gateway site and was removed from further consideration.

JIB SITE

The Jib site in Morehead City is already planned for redevelopment by the town. Although located in a central area of the Morehead City waterfront, there would be limited land available for exclusive NPS use. Additionally, the ferry service could not be started immediately because of the redevelopment plans. The location also provides very limited dedicated parking. The NPS considered this site to involve too many risks and costs and agreed with the town that the Jib site is better suited for the town's vision for redevelopment, not dedicated NPS ferry service.

6TH STREET DAY DOCKS SITE

The 6th Street Day Docks site in Morehead City also offered extremely limited dedicated area for land- and waterside development. Like the Jib site, its central location also offers an excess of activity and competing interests surrounding the site. Town representatives agreed that of all the sites possible in Morehead City, this site was not the preferred site for a consolidated NPS ferry service.

BIG ROCK SITE

The Big Rock site in Morehead City has many of the same constraints as the 6th Street Day Docks, although the Big Rock site offers slightly more dock space. The limited landside area, the busy area, and planned nearby redevelopment limit the potential of this site and removed it from further consideration.

RAILROAD SITE

The Railroad site in Morehead City offered a relatively large undeveloped space; however, a number of disadvantages resulted in the dismissal of this site, as well. The industrialized setting of the site caused a couple concerns. Potential contamination of the site could hinder

development because of the potential expenses associated with cleanup. The location of the site, on the north side of US Route 70, also results in a counterintuitive route to the site (visitors would need to turn away from the sound side to reach the site) and would require that pedestrians cross a busy intersection to connect to Morehead City's commercial downtown area. Finally, initial discussions with North Carolina Railroad Commission indicated a limited potential for a working partnership to be established in the near future. The commission expressed interest in leasing the site but was not interested in assisting the NPS in developing the site. For these reasons, the site was removed from further consideration.

SUMMARY OF THE ALTERNATIVES

Table 1 provides a summary of the alternatives presented above. Table 2 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 1: Summary of Alternatives			
Alternative Element	Alternative A : No-action	Alternative B: Front Street (NPS Preferred)	Alternative C : 10th Street
NPS Management and Operations	The NPS would continue to issue CUAs to ferry operators on an annual basis. This would not be in compliance with the CMIA of 1998.	To comply with the CMIA of 1998, the NPS would consolidate ferry service from the Beaufort/Morehead City area to a single location in Beaufort by issuing a single long-term concession contract.	To comply with the CMIA of 1998, the NPS would consolidate ferry service from the Beaufort/Morehead City Area to a single location in Morehead City by issuing a single long-term concession contract.
Parking Accommodations	Parking accommodations are determined by private tour operators. Many spaces for ferry passengers are provided in existing on-street public parking in both towns.	Parking would be accommodated in existing parking areas by dedicating 85 spaces (70 along Front Street and 15 along Pollock Street) for NPS ferry passengers. Parking spaces for additional overflow could be found in public parking within 0.2 mile of the docks.	The existing gravel parking lots on the site would be improved to provide approximately 65 spaces. Parking spaces for additional overflow could be found in public parking within 0.2 miles of the docks.
Landside Improvements	The landside facilities would remain inconsistent from one ferry operator to another. Changes are not likely to occur at either the Front Street or 10th Street sites.	Orientation, ticketing, and restrooms would be provided in the Post Office building. A temporary orientation area (80 square feet) and temporary ticketing area (60 square feet) would be constructed until the Post Office facilities were available. A passenger shelter and queuing area shelter (400 to 600 square feet) would be provided in the same area.	Orientation, ticketing, and restrooms may be temporarily provided in the Train Station building two blocks north of the site along 10th Street. A permanent orientation area (500 square feet) would be provided near Shepard Street. The ticketing, restrooms, and concession building (600 square feet) and the passenger shelter and queuing area (440 square feet) would be provided adjacent to the dock.

Table 1 (continued): Summary of Alternatives			
Alternative Element	Alternative A : No-action	Alternative B: Front Street (NPS Preferred)	Alternative C : 10th Street
Dock	<p>Ferry operators would update the infrastructure associated with their docks as necessary.</p> <p>Changes are not likely to occur at either the Front Street or 10th Street sites.</p>	<p>The existing town dock (10 feet wide and 90 feet long) would be upgraded as necessary. A floating dock may be added to accommodate the NPS ferry fleet.</p>	<p>The docks at the boat ramp would be reconstructed. The western dock would be 100 feet long, the eastern one would be 70 feet long, and both would be 8 feet wide.</p> <p>Some initial and then maintenance dredging may be required to accommodate deep draft vessels and to maintain the existing channel approach to the dock and the maneuvering area in the vicinity of the dock.</p>
Ferry Route	<p>Route would be dependent upon location of ferry operators.</p>	<p>Ferry would pass by Carrot Island, along the east side of Radio Island through the Bulkhead Channel, and past Fort Macon State Park. The ferry would then cross the Beaufort Inlet into the Back Sound to the existing boat dock and beaches on the north side of Shackleford Banks.</p> <p>Concessioner also would have the option to provide additional service east through the Back Sound to the Cape Lookout Lighthouse.</p>	<p>The ferry route from this departure site would travel around the western tip of Sugarloaf Island into Bogue Sound and travel through the Morehead City Channel between Fort Macon State Park and Radio Island. If shoaling at the western tip of Sugarloaf became an issue, an alternative route would travel around the eastern end of Sugarloaf Island into Bogue Sound and on to Radio Island. From Radio Island, the ferry route would be the same as under Alternative B.</p> <p>As under Alternative B, the concessioner also would have the option to provide additional service east through the Back Sound to the Cape Lookout Lighthouse.</p>

Table 1 (continued): Summary of Alternatives			
Alternative Element	Alternative A : No-action	Alternative B: Front Street (NPS Preferred)	Alternative C : 10th Street
Meets the Purpose and Need	No. The continued use of CUAs to authorize ferry service would not be compliant with the NPS CMIA of 1998. Ferry service and associated facilities would continue to be unpredictable from year to year and would not provide consistent orientation and interpretation for visitors to the park.	Yes. Issuing a long-term concession contract would comply with the NPS CMIA of 1998. The proposed facilities would establish a long-term, year-round ferry service from a single public gateway location with improved, accessible visitor facilities.	Yes. Issuing a long-term concession contract would comply with the NPS CMIA of 1998. The proposed facilities would establish a long-term, year-round ferry service from a single public gateway location with improved, accessible visitor facilities.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Table 2 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 2: Summary of Environmental Consequences

For a complete description of impacts, see “Chapter 4: Environmental Consequences”

Resource	Alternative A: No-action	Alternative B: Front Street (NPS Preferred)	Alternative C: 10th Street
Soils and Topography	<p>Ferry service would continue to be provided by a variety of operators. Any alternations to their facilities would be made at their discretion.</p> <p>Overall Impact: Indirect, long-term, negligible, adverse</p> <p>Cumulative Impact: contributes an imperceptible adverse increment to a long-term, negligible, adverse cumulative impact</p>	<p>Up to approximately 160 square feet of soil may be disturbed during construction of visitor service infrastructure.</p> <p>There may be a slight increase in impervious surface (up to 160 square feet) and a slight increase in focused foot traffic at the site.</p> <p>Overall Impact: short-term, minor, adverse and long-term, negligible, adverse</p> <p>Cumulative Impact: contributes an imperceptible adverse increment to a long-term, negligible, adverse cumulative impact</p>	<p>Up to approximately 21,000 square feet would be hardened for parking. This surface would preferably be a pervious surface but would depend upon future design. A total of 1,540 square feet of impervious surface associated with visitor service structures would be added to the site.</p> <p>A total of 22,540 square feet of soils would be disturbed during construction of the parking lot and visitor services structures.</p> <p>Overall Impact: short-term, minor, adverse and long-term, minor, adverse</p> <p>Cumulative Impact: contributes a noticeable adverse increment to a long-term, minor, adverse cumulative impact</p>

Table 2 (continued): Summary of Environmental Consequences

For a complete description of impacts, see "Chapter 4: Environmental Consequences"

Resource	Alternative A: No-action	Alternative B: Front Street (NPS Preferred)	Alternative C: 10th Street
Coastal Resources	<p>Ferry service would continue to be provided by a variety of operators. Any alternations to their facilities would be made at their discretion.</p> <p>Overall Impact: long-term, negligible, adverse</p> <p>Cumulative Impact: contributes an imperceptible adverse increment to a long-term, minor, adverse cumulative impact</p>	<p>A floating dock may be installed adjacent to the existing dock, resulting in a one-time temporary disturbance to benthic substrata and a localized increase in dissolved solids.</p> <p>Ferry operation may continue to disturb benthic sediment along ferry routes, and expose those routes to the potential for accidental oil or fuel spills. This impact would be less than under Alternative A because of refined ferry routes and a potential reduction in boat traffic (due to consolidated service).</p> <p>Overall Impact: short-term, minor, adverse and long-term, negligible, adverse</p> <p>Cumulative Impact: contributes an imperceptible adverse increment to a long-term, minor, adverse cumulative impact</p>	<p>The docks on either side of the existing boat ramps would be reconstructed to accommodate the consolidated ferry service. Maintenance dredging would be needed. Both the initial site reconstruction and the maintenance dredging would result in temporary disturbance to benthic substrata and a localized increase in dissolved solids. Dredging would be repeated once a year or as necessary to maintain ferry operations.</p> <p>As under Alternative B, ferry operation may continue to disturb benthic sediment along ferry routes, and expose those routes to the potential for accidental oil or fuel spills but to a lesser extent than Alternative A.</p> <p>Overall Impact: short-term, moderate, adverse and long-term, negligible, adverse</p> <p>Cumulative Impact: contributes an imperceptible adverse increment to a long-term, minor, adverse cumulative impact</p>

Table 2 (continued): Summary of Environmental Consequences

For a complete description of impacts, see "Chapter 4: Environmental Consequences"

Resource	Alternative A: No-action	Alternative B: Front Street (NPS Preferred)	Alternative C: 10th Street
Wetlands	<p>Any impacts would be related to actions undertaken by ferry operators at their own discretion.</p> <p>Overall Impact: indirect, long-term, negligible, adverse</p> <p>Cumulative Impact: contributes an imperceptible adverse increment to a long-term, negligible, adverse cumulative impact</p>	<p>Submerged lands would be affected during pile placement; however, these lands are regularly disturbed by existing boat traffic and channel maintenance and support little to no vegetation.</p> <p>Overall Impact: Long-term, negligible, adverse</p> <p>Cumulative Impact: contributes an imperceptible adverse increment to a long-term, negligible, adverse cumulative impact</p>	<p>There could be some temporary disturbance during construction and long-term shading of existing tidal wetlands adjacent to the docks. The total area impact under either situation is not expected to exceed 1,700 square feet (0.04 acres).</p> <p>Overall Impact: Short-term, minor, adverse impacts and long-term, negligible, adverse</p> <p>Cumulative Impact: contributes an imperceptible increment to a long-term, negligible, adverse cumulative impact</p>
Essential Fish Habitat	<p>Disturbance of benthic sediment and submerged aquatic vegetation (SAV) and increases in noise may impact EFH or shellfish beds. Level of impact may vary by operator.</p> <p>Overall Impact: long-term, negligible to minor, adverse impact</p> <p>Cumulative Impact: contributes an imperceptible adverse increment to a long-term, minor to moderate, adverse cumulative impact</p>	<p>Impacts would be caused by the same actions described under Alternative A. Consolidation of ferry operations and coordination with NPS on ferry routes would reduce intensity of these impacts.</p> <p>Overall Impact: long-term, negligible to minor, adverse impact</p> <p>Cumulative Impact: contributes an imperceptible beneficial increment to a long-term, minor to moderate, adverse cumulative impact</p>	<p>Same as Alternative B with ferry service departing from Morehead City instead of Beaufort.</p> <p>Overall Impact: long-term, negligible to minor, adverse impact</p> <p>Cumulative Impact: contributes an imperceptible beneficial increment to a long-term, minor to moderate, adverse cumulative impact</p>

Table 2 (continued): Summary of Environmental Consequences

For a complete description of impacts, see "Chapter 4: Environmental Consequences"

Resource	Alternative A: No-action	Alternative B: Front Street (NPS Preferred)	Alternative C: 10th Street
Special Status Species	<p>There is a slight risk of direct injury of sea turtles by ferry boats. Indirectly, by offering little to no orientation to park resources, existing ferry operations may not prevent disturbance of nesting animals or trampling of sea amaranth.</p> <p>Overall Impact: long-term, negligible</p> <p>Cumulative Impact: contributes an imperceptible increment to a long-term, moderate, adverse and long-term beneficial cumulative impacts</p>	<p>The slight risk of direct injury as described under Alternative A persists; however, increased visitor (and ferry operator) education about the park's special status species would decrease potential disturbances that could occur under Alternative A.</p> <p>Overall Impact: long-term, negligible and long-term, beneficial</p> <p>Cumulative Impact: contributes an imperceptible increment to a long-term, moderate, adverse and long-term beneficial cumulative impacts</p>	<p>Same as Alternative B.</p> <p>Overall Impact: long-term, negligible and long-term, beneficial</p> <p>Cumulative Impact: contributes an imperceptible increment to a long-term, moderate, adverse and long-term beneficial cumulative impacts</p>
Historic Structures and Districts	<p>There are no historic structures or districts located within the area of potential effect; as a result, there are no impacts to those resources.</p> <p>Overall Impact: none</p> <p>Cumulative Impact: none</p>	<p>Actions would take place within the Beaufort Historic District and within the historic Post Office. Adaptive use of the historic Post Office would be carried out in accord with the Secretary's Standards. Most ferry parking would be accommodated on-site. Peak season overflow parking is not expected to exceed existing ferry customer use of on-street parking.</p> <p>Overall Impact: negligible</p> <p>Cumulative Impact: contributes an imperceptible impact to a long-term negligible cumulative impact</p>	<p>Most ferry parking would be accommodated on-site. No overflow parking is expected to enter the Morehead City Historic District (0.2 miles from the site).</p> <p>Overall Impact: none</p> <p>Cumulative Impact: none</p>

Table 2 (continued): Summary of Environmental Consequences

For a complete description of impacts, see "Chapter 4: Environmental Consequences"

Resource	Alternative A: No-action	Alternative B: Front Street (NPS Preferred)	Alternative C: 10th Street
Socioeconomic Resources and Gateway Communities	<p>There would be no net impacts to economic output, labor income/employment, or state/local taxes in Beaufort, Morehead City, and Carteret County.</p> <p>Overall Impact: long-term, beneficial</p> <p>Cumulative Impact: contributes an imperceptible beneficial increment to a long-term, beneficial cumulative impact</p>	<p>Ferry service to the park would be provided by a single concessioner operating out of the Front Street site in Beaufort. This would result in increases in economic output, labor income/employment, and state/local tax revenues in Beaufort and decreases in these metrics in Morehead City.</p> <p>There would be a temporary increase in spending, economic output, and labor income/employment in Beaufort associated with construction of the new ferry concession facilities</p> <p>Overall Impact: local long-term, beneficial in Beaufort; local long-term, negligible, adverse in Morehead City; and regional long-term, beneficial in Carteret County</p> <p>Cumulative Impact: contributes an imperceptible to noticeable beneficial increment to a long-term, beneficial impact</p>	<p>Ferry service to the park would be provided by a single concessioner operating out of the 10th Street site in Morehead City. This would result in increases in economic output, labor income/employment, and state/local tax revenues in Morehead City and decreases in these metrics in Beaufort.</p> <p>There would be a temporary increase in spending, economic output, and labor income/employment in Morehead City associated with construction of the new ferry concession facilities</p> <p>Overall Impact: local long-term, beneficial in Morehead City; local long-term, negligible to minor, adverse in Beaufort; and regional long-term, beneficial in Carteret County</p> <p>Cumulative Impact: contributes an imperceptible to noticeable beneficial increment to a long-term, beneficial impact</p>

Table 2 (continued): Summary of Environmental Consequences

For a complete description of impacts, see "Chapter 4: Environmental Consequences"

Resource	Alternative A: No-action	Alternative B: Front Street (NPS Preferred)	Alternative C: 10th Street
Visitor Use and Experience	<p>Visitors would not be presented with a clear gateway to the park. Authorized ferry operators could change from year to year. Orientation to and interpretation of park resources related to ferry service would be limited and inconsistent between operators.</p> <p>Overall Impact: long-term, moderate, adverse</p> <p>Cumulative Impact: contribute a noticeable adverse increment to a long-term, beneficial cumulative impact</p>	<p>Consolidated ferry service to Shackleford Banks (and possibly Cape Lookout Lighthouse) would provide a long-term (10-year) gateway to the park at the Front Street site in Beaufort. This consolidated ferry service would provide facilities for orientation/interpretation, restrooms, ticketing, and passenger queuing.</p> <p>Temporary impacts would be related to the establishment of the long-term facilities and adjustment of regular visitors to the new ferry service.</p> <p>Overall Impact: short-term, minor, adverse and long-term, beneficial</p> <p>Cumulative Impact: contributes an appreciable beneficial increment to a long-term, beneficial cumulative impact</p>	<p>Same as Alternative B except consolidated ferry service would be provided at the 10th Street site in Morehead City. Arrangement of improved facilities would be different but would ultimately offer the same services.</p> <p>Adjustment to consolidation of ferry service at Morehead City may impose a little more inconvenience than Alternative B since most ferry service to the park is currently provided out of Beaufort.</p> <p>Overall Impact: short-term, minor, adverse and long-term, beneficial</p> <p>Cumulative Impact: contributes an appreciable beneficial increment to a long-term, beneficial cumulative impact</p>

Table 2 (continued): Summary of Environmental Consequences

For a complete description of impacts, see "Chapter 4: Environmental Consequences"

Resource	Alternative A: No-action	Alternative B: Front Street (NPS Preferred)	Alternative C: 10th Street
Operations and Infrastructure	<p>The operation of the ferry service and the infrastructure related to the departure sites would remain under primary control of the private operators, who would continue to be authorized by CUAs issued annually. Non-compliance with the CMIA of 1998 would continue.</p> <p>Overall Impact: long-term, negligible, adverse</p> <p>Cumulative Impact: contributes both an imperceptible adverse and an imperceptible beneficial increment to a long-term, beneficial cumulative impact</p>	<p>To comply with the CMIA of 1998, ferry service would be consolidated to a single concessioner operating out of Front Street site in Beaufort under a 10 year contract with the NPS.</p> <p>The NPS would coordinate with Beaufort officials to establish a departure site with improved gateway facilities. The facilities would include space for orientation/interpretation/ticketing and restrooms in the Post Office Building. A temporary area for this would be provided at an expanded deck area if Post Office renovations are not complete in time. A covered pavilion would provide a sheltered queuing area.</p> <p>The existing dock off Grayden Paul Town Park is approximately 90 feet long and 10 feet wide and would require only minor upgrades to the docks, piles, and electrical and light systems.</p> <p>Overall Impact: long-term, beneficial and long-term, negligible to minor, adverse</p> <p>Cumulative Impact: contributes both a noticeable beneficial increment and a noticeable adverse increment to a long-term, beneficial cumulative impact</p>	<p>To comply with the CMIA of 1998, ferry service would be consolidated to a single concessioner operating out of the 10th Street site in Morehead City under a 10 year contract with the NPS.</p> <p>The NPS would coordinate with Morehead City officials to establish a departure site with improved gateway facilities. The facilities would include space for orientation/interpretation/ticketing and restrooms. These services could be provided in the Train Station building temporarily. A covered pavilion would provide a sheltered queuing area.</p> <p>The existing docks on either side of the boat launch would be rehabilitated to be 100 and 70 feet long, respectively. Maintenance dredging would likely be required to maintain operational water depths at this site.</p> <p>Overall Impact: long-term, beneficial and long-term, negligible to minor, adverse</p> <p>Cumulative Impact: contributes both a noticeable beneficial increment and a noticeable adverse increment to a long-term, beneficial cumulative impact</p>

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The Environmentally Preferred Alternative is defined by the CEQ as “the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act [Section 101 (b)].” Section 101 (b) goes on to define the Environmentally Preferred Alternative through the application of six criteria listed below. Generally, these criteria define the Environmentally Preferred Alternative as the alternative that causes the least damage to the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources. Each criterion is presented below, followed by a discussion of how well the proposed alternatives meet each one.

1. ***Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.*** The goal of the NPS at all units is to serve as trustees of the environment for future generations. Under the no-action alternative, the NPS would not establish a consolidated ferry departure site in the Beaufort/Morehead City area and therefore would not ensure long-term public shoreline access via a public partnership. Alternatives B and C would enhance the park’s ability to meet this criterion by establishing a long-term consolidated ferry departure site in partnership with either Beaufort or Morehead City officials. By doing this, the park would ensure long-term public access to the shoreline. Additionally, the park would be able to provide improved interpretive guidance under which visitors could be better stewards of the environment during their visit to the park via an improved departure site and concession contract specifications.
2. ***Ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.*** Under the no-action alternative, the park would strive to provide safe, healthful, productive, and aesthetically pleasing surroundings for its visitors once they reach the park. The park would authorize but not otherwise control the passenger ferry services providing access to southern portions of the park or the associated departure sites. Alternatives B and C would take steps to improve the safety and accessibility of the ferry service. Both action alternatives would provide a consolidated departure site, designed to maximize the safe, healthful, productive, and aesthetically and culturally pleasing surroundings. Alternative B offers a site within a designated historic district; however, Alternative C offers a site where most visitors would be able to park and have immediate access to the ferry without crossing any roads. The provision of a new ferry fleet would further increase the safety and accessibility of the service. While there may be minor differences between the aesthetic and cultural surroundings at the departure sites, both sites would meet this criterion.
3. ***Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.*** Although the authorized ferry services provided under the no-action alternative offer a wide range of landing options, the NPS does not control the level of environmental degradation, risk of health or safety, or other undesirable and unintended consequences. Under both action alternatives, the park would exert more control over the degradation, risk of health or safety, or other undesirable and unintended consequences which are potentially

- associated with the ferry service via a single concession contract and would do so with the goal of minimization of these risks and potential degradation. Given the existing risks and potential for degradation, the park would authorize the ferry concessioner with the flexibility to offer service to the Cape Lookout Lighthouse and use of both the dock and the adjacent beach on Shackleford Banks for landing.
4. ***Preserve important historical, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.*** Similar to the previous criterion, individuals are provided with a diverse variety of choices as to which ferry provider to use to reach the park. Under current management (Alternative A), the NPS only authorizes access to the park and has no control over the ways in which these operators preserve important historic, cultural, and natural aspects of our natural heritage. Under both action alternatives, the park would provide a single departure site and a choice of landing options under the newly established ferry concession but would limit landings to only Shackleford Banks and the Cape Lookout Lighthouse. This service would be provided by a single concessioner. This concession contract would give the NPS control over ferry operations would therefore provide additional preservation of important historical, cultural, and natural aspects of our national heritage.
 5. ***Achieve a balance between population and resource use that will permit high standards of living and wide sharing of life's amenities.*** The park has been experiencing a slow and steady increase in visitation that likely is linked to population increase. This increase is expected to continue and would be accommodated under all alternatives. Active guidance for resource using within the park would continue to be limited to in-park education under the no-action alternative. Resource use would be better informed and guided by consistent introduction to park resources and regulations at the improved departure site under both action alternatives. Alternative B would meet this criterion slightly better than Alternative C by adaptively reusing an existing structure (the Post Office building). This would minimize new development directly related to the proposed action.
 6. ***Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.*** There would be no change in the quality of renewable resources nor the recycling of depletable resources related to the proposed action.

Each alternative meets the applicable criteria above to some degree. The action alternatives generally provide for additional protection of and enjoyment of natural and cultural resources over the no-action alternative. In fact, the degree to which the action alternatives meet these criteria is roughly the same. Only two cases are identified where one action alternative meets a stated criterion better than the other. Under criteria two and five, Alternative B (the Front Street site) is identified as having advantages over Alternative C (the 10th Street site). Alternative B would provide park visitors with a gateway within an existing historic district, which would provide visitors with an incidental exposure to a cultural setting. Additionally, by locating visitor facilities within the existing Post Office building, Alternative B would have reduced impacts existing resources related to development of these facilities. By contrast, Alternative C would

require that these same facilities be newly constructed at the 10th Street site. For these reasons, Alternative B: Front Street was identified as the alternative that causes the least damage to the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources. It should be noted, however, that the differences between action alternatives is slight. In the case that a successful MOU is not developed with Beaufort officials for establishment of this site, the impacts related to implementation of Alternative C: 10th Street would still protect, preserve, and enhance historic, cultural, and natural resources to an almost equal extent.

NPS PREFERRED ALTERNATIVE

Based on the planning efforts leading up to and included in this EA/AoE, the NPS has identified Alternative B: Front Street as the NPS Preferred Alternative. The previous section provides the rationale behind the selection of this alternative as the Environmentally Preferred Alternative, and during the Value Analysis study conducted in November, Alternative B ranked very slightly above Alternative C. The impacts of both alternatives are very similar with the only differences being the level of disturbance during development, since the visitor facilities would need to be newly constructed under Alternative C whereas most visitor facilities could be incorporated within the rehabilitated Post Office building under Alternative B. There would also be some dredging required under Alternative C for establishment of ferry service. Both action alternatives meet the purpose, needs, and objectives for this project. As mentioned above, if a successful MOU is not developed for implementation of Alternative B, Alternative C would be an acceptable substitute.

3

AFFECTED ENVIRONMENT

SOILS AND TOPOGRAPHY

The topography of coastal North Carolina is very flat, with elevations varying only by a few feet along the water. The soils at both proposed departure sites are categorized in part as being “urban land” soils, which implies that much of the area has already been disturbed and filled during previous development projects. Along the Beaufort waterfront, including the Front Street site, the urban soils are found in association with the Mandarin series and are thus classified as a Mandarin-Urban land complex. The urban land component is estimated to be approximately 40 percent of the composition in this area (NRCS 2010). A vast majority of the soil within the Front Street study area is heavily compacted by the current uses at the site. The waterfront on the opposite side of Front Street was formerly the site of a warehouse building, according to local officials, and as such, much of the soil at Grayden Paul Town Park and the adjacent land is fill material. The marine sediments surrounding the dock are also disturbed, as this dock has been in use for many years and the channel undergoes regular maintenance dredging.

At the 10th Street site, the soils are classified as a Wand-Urban land complex with 0 to 6 percent slopes. As at Front Street, the urban land component is approximately 40 percent of the soils within this area (NRCS 2010). The soils at the Train Station building have been disturbed and compacted for many years due to its presence adjacent to US 70. At the waterfront portion of the site, a couple of gravel parking lots dominate the area. Use of these areas as parking for public access at these docks and during special events has caused compaction of the soil in this area. As at the Front Street docks, the marine sediments surrounding the dock are also disturbed, as this dock has been in use for many years and the channel undergoes regular maintenance dredging.

COASTAL RESOURCES

The coastal communities of Beaufort and Morehead City are separated from those barrier islands making up the park by a number of estuarine waterways. Beaufort has its banks on Taylor Creek and Back Sound. In the downtown area, Front Street parallels the waterfront and travels only 25 to 100 feet from the shoreline. As such, the shoreline is heavily developed and stabilized. In most places, the shoreline is a backfilled vertical seawall. Some areas of shoreline have small sandy beaches. The Front Street site is adjacent to a small sandy beach, but is itself protected by a wooden bulkhead with no exposed shoreline.

On the other side of the mouth of the Newport River, Morehead City has its primary waterfront along a creek that opens on the east and west to Bogue Sound. The shoreline is very similar to that of Beaufort. Shepard Street runs along the downtown waterfront. Much of the shoreline in and adjacent to the main commercial center is developed and as such is composed of fill material behind vertical seawalls. Some areas have small sandy beaches. The shoreline on either side of the existing boat ramp and docks at the 10th Street site is partially an emergent tidal fringe wetland. At the landside base of the dock, there is a wooden bulkhead. Bulkheads also extend into the sediment from each dock.

Both towns have federally authorized and maintained channels along their waterfront, which provide access to the intracoastal waters between the mainland and the park's barrier islands. These channels are used heavily by a variety of boaters including charter fishing cruises, educational tours, recreational small craft, commercial fishermen, and pleasure craft. Since these harbors are used regularly and are occasionally dredged for maintenance, there is very little submerged aquatic vegetation (SAV) in these areas.

The routes used by existing ferry operators providing service to the park vary by operator and can even vary by trip, although most routes travel along established channels. From Beaufort, ferries generally pass by Carrot Island, along the east side of Radio Island through the Bulkhead Channel, and past Fort Macon State Park. From there, ferry operators can cross the Beaufort Inlet into the Back Sound to the existing boat dock and beaches on the north side of Shackleford Banks, or they can continue through Back Sound to the Cape Lookout Lighthouse. Existing ferry operators are free to provide any other service they see fit (such as to Carrot Island).

One ferry is currently provided from Morehead City. The route generally used travel around the western tip of Sugarloaf Island into Bogue Sound and through the Morehead City Channel between Fort Macon State Park and Radio Island. From here, a ferry from Morehead City would be likely to use the same channels as a ferry from Beaufort. Operations from both locations along both potential routes have the potential to disturb benthic sediment and to accidentally release substances such as motor oil or fuel.

WETLANDS

Much of the shoreline at both the Beaufort and Morehead City is stabilized and no longer provides conditions where wetlands can persist. At the Front Street site, any existing wetlands are completely submerged beyond the stabilized seawall containing the fill on which the town park is built. The submerged lands here are highly disturbed by existing boat traffic and dredging; they support little to no vegetation.

At both waterfronts, however, there are a few remaining areas where wetlands do exist. One such area is at the 10th Street site on either side of the existing boat launch ramp and associated docks. In accordance with the Cowardin wetland classification system (Cowardin et al. 1979), these tidal wetlands may be classified as estuarine, intertidal, emergent-persistent, regularly flooded (E2EM1N). Vegetation in this type of wetland is typically dominated by saltmarsh cordgrass (*Spartina alterniflora*), with scattered occurrences of black needlerush (*Juncus roemerianus*),

saltmeadow hay (*Spartina patens*), and salt grass (*Distichlis spicata*). On the landward edge of the marsh, a small scrub-shrub fringe is present with dominant marsh elder (*Iva frutescens*) and a few scrub associates such as groundsel tree (*Baccharis halimifolia*), wax myrtle (*Myrica cerifera*), and seaside goldenrod (*Solidago sempervirens*). Soils throughout this area are mucky loam in texture, modified by varying amounts of partially decomposed organic material. The upper limit of normal tidal fluctuation, which is observed by physical benchmarks in the field such as sediment deposits on the standing vegetation, indicates that the wetland substrate in this area is fully inundated at high tide.

ESSENTIAL FISH HABITAT

The waters of Back Sound and Bogue Sound provide habitat for a number of commercially and ecologically valuable invertebrates and fish. Sandy shoals, SAV, and emergent wetlands in these waters provide habitat for foraging, staging and loafing shorebirds and colonial waterbirds, and shelter for fishery resources.

In 1981, viable SAV in Core and Bogue Sounds (including Back Sound) covered almost 20,000 acres. Specifically, a large amount of SAV has been identified in the eastern half of Back Sound by North Carolina Division of Marine Fisheries (NCDMF). According to the NCDMF's 2005 Coastal Habitat Protection Plan, the primary factor controlling distribution of SAV is the penetration of light through the water column (NCDMF 2005). Availability of light to SAV can be adversely impacted by turbidity caused by suspended particulate matter such as sediment.

Boating activity also is known to directly impact SAV beds when outboard vessels travel through water that is shallower than the draft of the boat. The propeller cuts the plants' leaves, roots, and stems, as well as creates a narrow trench through the sediment. The damaged area is referred to as a "prop scar." Once started, SAV damage can increase beyond the initial footprint of the prop scar due to physical scouring by tidal currents, storms, or biological disturbance such as crab burrowing (NCDMF 2005).

Areas of extensive SAV have been recognized as essential fish habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC). The SAFMC 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 EFH within this zone. EFH is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity."

The South Atlantic Habitat and Ecosystem Internet Map Server, as maintained by South Atlantic Fisheries Management Council, also covers the state of North Carolina and was reviewed for EFH (and habitat areas of particular concern [HAPC]) in the vicinity of the study area. According to these maps, the study area may contain EFH for shrimp and the snapper grouper complex (SAFMC 2010).

Much of the study area has been designated as a coastal inlet habitat type within the EFH-HAPC 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. Seagrass beds such as those found in the Back and Core Sounds are also critical (SAFMC 1993).

Subaquatic vegetation was identified within Back and Core Sounds as part of the snapper grouper complex EFH. Large numbers of juvenile snappers and some groupers are found in grass and algae beds in estuarine areas (SAFMC 1983).

Shellfish are another commercially and ecologically valuable type of wildlife found within the study area. The North Carolina Department of Environment and Natural Resources Division of Environmental Health - Shellfish Sanitation and Recreational Water Quality Section (SS+RWQS) identifies Shellfish Growing Areas (SGAs). The SS+RWQS performs water sampling throughout the year to determine the extent of contamination or cleanliness of SGAs and submits recommendations to the NCDMF to close or open waters for shellfish harvesting. The NCDMF disseminates a proclamation with the SS+RWQS's recommendation. The SGAs contain waters that are permanently closed (prohibited), open (approved), or subject to being opened or closed (conditionally approved - open or conditionally approved - closed).

The arrival sites and much of the routes travelled by ferries en route from the Beaufort/Morehead City area to the park are declared open (approved). Much of the water in the harbor/channel areas at the towns' waterfront are closed (prohibited) (SS+RWQS 2010). Because of this frequent disturbance at the developed town waterfronts, neither site provides the sort of habitat described earlier in this section, including SAV.

SPECIAL STATUS SPECIES

The developed shorelines of Beaufort and Morehead City are relatively inhospitable for special status species. However, Cape Lookout National Seashore and its surrounding waters provide important habitat for a number of special status species including birds, turtles, and plants. The diverse coastal habitats offered on or near Shackleford Banks and the southern South Core Banks provide areas for foraging, nesting, breeding, wintering habitat, and migration stopover habitat. Ferries travel through these areas as they transport visitors to the park.

In 2006 the park prepared an Interim Protected Species Management Plan/EA (NPS 2006b) as a prelude to a formal Off Road Vehicle Management Plan. As part of the Interim Protected Species Management Plan/EA, the park acquired an Incidental Take Permit from the USFWS for these species in relation to recreational and off road vehicle use (USFWS 2006a). This permit specifies monitoring of these species to further inform future species management within the park. This monitoring is being carried out at the park to facilitate federally listed species management and conservation.

PROTECTED BIRD SPECIES

Cape Lookout National Seashore is located along the Atlantic Flyway used by a multitude of migratory birds, some of which are considered special status species. Due to the pivotal role the

park plays in bird migration, breeding, and wintering, the American Bird Conservancy designated the park as a Globally Important Bird Area in 1999 (NPS 2006b).

Federally Threatened Species

Cape Lookout National Seashore is the southern home range of the Atlantic Coast piping plover (*Charadrius melodus*) population and is wintering habitat for the Great Lakes population. Although the species itself is not listed as threatened or endangered, the Atlantic Coast population was listed as threatened in 1986 because of pressures on Atlantic Coast beach habitat from development and human disturbance (USFWS 2001a), and the Great Lakes population was listed as endangered in 1986 because of habitat destruction and degradation, human and predator disturbance, and genetic and geographic consequences of small population size (USFWS 2003). Recovery plans exist for both populations.

The Atlantic Coast population nests above the high tide line on coastal beaches, sandflats at the ends of sandspits and barrier islands, gently sloping foredunes, blowout areas behind primary dunes, sparsely vegetated dunes, and washover areas cut into or between dunes. Feeding areas include intertidal portions of ocean beaches, washover areas, mudflats, sandflats, wrack lines, and shorelines of coastal ponds, lagoons, or salt marshes (USFWS 2001a). The recovery plans recommend that piping plover populations and breeding habitat be managed to maximize survival and productivity in part through developing and implementing public information and education programs (NPS 2006b).

Wintering Piping Plover critical habitat has been designated by USFWS. Populations are estimated to migrate to wintering habitats during late July through September and leave late February to early April (USFWS 2001a). Wintering piping plovers may include individuals from the Great Lakes and northern Great Plains breeding populations as well as birds that nest along the Atlantic coast. Existing ferry routes pass by the designated critical habitat of Carrot Island and Horse Island. Both ends of Shackleford Banks and Cape Point (including Lookout Bight) have also been designated as critical habitat for wintering piping plovers (USFWS 2010a). The primary constituent elements for piping plover wintering habitat are those biological and physical features that are essential to the conservation of the species. These areas typically include those coastal areas that support intertidal beaches and flats and associated dune systems and flats above annual high tide (USFWS 2001a). Primary constituent elements of wintering piping plover critical habitat include sand or mud flats or both with no or sparse emergent vegetation. Adjacent unvegetated or sparsely vegetated sand, mud, or algal flats above high tide are also important, especially for roosting piping plovers (USFWS 2001a). The units designated as critical habitat are those areas that have consistent use by piping plovers and that best meet the biological needs of the species.

Both the federally threatened northeastern U.S. nesting population and the federally threatened Western Hemisphere population (otherwise known as the Caribbean population) of roseate terns (*Sterna dougallii dougallii*) can be found in North Carolina. These populations were listed in 1987 due to encroachment by gulls and habitat loss. Critical habitat has not been designated for either population (USFWS 1998). The roseate tern is exclusively marine, usually breeding on small islands, but occasionally on sand dunes at the ends of barrier beaches. All recorded nestings in the

northeast US have been in colonies of common terns. In these mixed colonies, roseate terns usually select the areas that provide dense cover such as more vegetated areas (USFWS 1998).

U.S. Shorebird Conservation Plan Species of High Concern

The American oystercatcher (*Haematopus palliatus*) is identified in the *U.S. Shorebird Conservation Plan* as a “Species of High Concern” (USFWS 2001b). Because of extremely low breeding success in North Carolina, the North Carolina Wildlife Resources Commission and the Southeastern Shorebird Conservation Plan proposed the oystercatcher as a state-listed species of special concern. Major threats to the species include loss of habitat from coastal development, disturbance from human recreational activities, elevated predation associated with human activities, and contamination of primary food sources by non-point pollution and oil spills (Schulte et al 2007). Breeding habitat typically includes accreting undeveloped barrier beaches, sandbars, shell rakes, and to some extent, salt marsh islands. Shell rakes are a habitat type of high importance to oystercatchers. The NPS’s focus of management of American oystercatchers within the park is to attempt to minimize impacts of park visitors in order to improve nesting success (NPS 2006b).

The Wilson’s plover (*Charadrius wilsonia*) has been proposed for listing as a state-listed species of special concern and is identified in the *U.S. Shorebird Conservation Plan* as a “Species of High Concern.” These plovers are sometimes found living with other plover species and typically inhabit sparsely vegetated coastal areas, including along beaches, sandbars, salt flats, and lagoons. Foraging takes place during low tide on intertidal mudflats (NPS 2006b).

The red knot (*Calidris canutus rufa*) breeds in the Canadian arctic but is known to visit North Carolina’s outer banks as a migrant in mid-May to mid-June. The red knot has been officially recognized by the USFWS as a candidate for listing under the Endangered Species Act as of 2006 (USFWS 2006b). Like the Wilson’s plover, the red knot also has been identified in the *U.S. Shorebird Conservation Plan* as a “Species of High Concern” (NPS 2006b). During migration stopovers, red knots feed on invertebrates, especially bivalves, small snails, and crustaceans, with a noted dependence specifically on horseshoe crab eggs. Increased take of horseshoe crabs as fishing bait and decreased arctic habitat has caused a recent decline in red knot populations.

State-listed Threatened Species and Species of Special Concern

In addition to the birds listed above, the park also hosts nesting sites for gull-billed terns (*Gelochelidon nilotica*), common terns (*Sterna hirundo*), least terns (*Sternula antillarum*), and black skimmers (*Rynchops niger*). Gull-billed terns are a state-listed threatened species, and the other three are state-listed species of special concern. These species use coastal habitats in ways similar to the previously described bird species, but these species have shown a greater ability to adapt to using a wider variety of habitats heavily influenced and/or created by humans including dredge disposal sites (USFWS 2010b). Nonetheless the loss of pristine coastal habitat has caused recent declines in populations and lowered reproductive success. Recreational pressures also have been implicated in contributing to these pressures (NPS 2006b).

SEA TURTLES

Five species of sea turtles are found within the waters around the park. Four of these five species are known to nest on the oceanside beaches within the park. Most of these nests (53%) occur along South Core Banks, while Shackleford Banks hosts a relatively small 13%. Hawksbill turtles (*Eretmochelys imbricate*) have rarely been found only as dead strandings (NPS 2006b).

The loggerhead turtle (*Caretta caretta*) was listed as federally threatened in 1978 and is the species most often observed at the park. Turtles nesting at the park fall into the Northern Recovery Unit of the Northwest Atlantic loggerhead population. Terrestrial threats to turtles are generally associated with shoreline alteration and human presence. Recreational beach use has the potential to cause nesting females to abort nesting attempts, reduce hatchling emergence, and can disorient hatchlings. Vessel strikes are another risk to the species. Between 1997 and 2005, approximately 15% of stranded loggerheads in the U.S. Atlantic and Gulf of Mexico were documented as having sustained some type of propeller or collision injuries although it is not known what proportion of these injuries were post or ante-mortem. Most focus is on the risk of bycatch, which is not relevant to this project. Otherwise, efforts to increase public education and awareness and efforts to improve communication and access to information are identified within the recovery plan as conservation methods relevant to this project (NMFS and USFWS 2008).

Green turtles (*Chelona mydas*), leatherback turtles (*Dermochelys coriacea*), Hawksbill sea turtle (*Eretmochelys imbricata*), and Kemp's Ridley turtles (*Lepidochelys kempii*) are more infrequent users of the park's beaches (NPS 2006b). However, they also are granted federal protection due to their fragile population sizes. The green turtle was listed 1978 as threatened (except for the breeding populations in Florida and on the Pacific coast of Mexico, which were listed as endangered) (NMFS and USFWS 1991). The Kemp's ridley sea turtle was listed as endangered throughout its range in 1970 (NMFS, USFWS, and SEMARNAT 2010), as was the leatherback sea turtle (NMFS and USFWS 1992) and the Hawksbill turtle (NMFS and USFWS 1993). These turtles are subject to the same risks and recovery efforts as described for the loggerhead turtle above.

Critical habitat for the Hawksbill turtle was designated in 1998 in coastal waters surrounding Mona and Monito Islands, Puerto Rico (NMFS and USFWS 1993). No critical habitat has been identified for the other sea turtle species.

WEST INDIAN MANATEE

The West Indian manatee, *Trichechus manatus*, was listed as federally endangered in 1967 and includes two distinct subspecies, the Florida manatee (*Trichechus manatus latirostris*) and the Antillean manatee (*Trichechus manatus manatus*). In addition to being listed under the ESA, the West Indian manatee is also protected under the Marine Mammal Protection Act and is listed as endangered under the North Carolina Endangered Species Act. The primary threats to this species are habitat loss and watercraft-related mortality. Watercraft related mortality has the greatest impact on manatee population growth, resilience, and long-term persistency (USFWS 2009). Critical habitat was designated for the West Indian manatee in 1976; however, none of it falls within the study area of this document.

SEABEACH AMARANTH

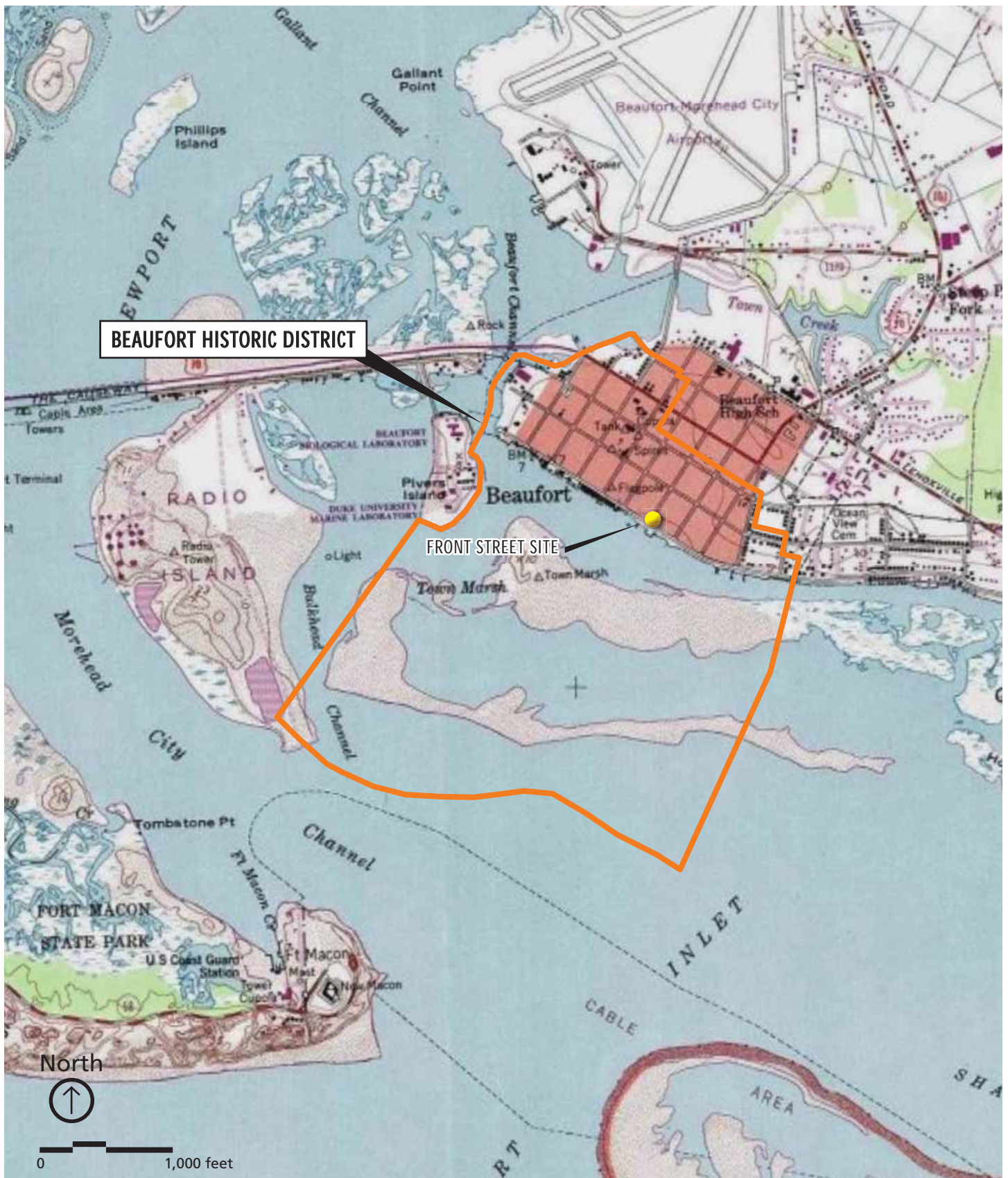
Seabeach amaranth (*Amaranthus pumilus*) is an annual plant native to barrier island beaches along the Atlantic Coast, which was listed as federally threatened in 1993 due to its vulnerability to human and natural impacts. It requires extensive areas of barrier island beaches and inlets, functioning a relatively natural and dynamic manner. It often grows in the same areas selected for nesting by shorebirds such as plovers, terns, and skimmers. Threats include beach stabilization efforts, intensive recreational use, and herbivory by webworm. It has been eliminated from two-thirds of its historic range (USFWS 1996). It is known to occur on the south-facing beaches of Shackleford Banks (NPS 2006b).

HISTORIC STRUCTURES AND DISTRICTS

Alternative B, the NPS preferred alternative, is located within the Beaufort Historic District (Figure 8) which was listed in the National Register of Historic Places in May of 1974. The district is roughly bounded by water to the east and south and approximately follows Pine Street from the Beaufort Channel to Craven, Brad, Gibbon, Ann and Hill Streets. It also includes an area of water across Town Marsh and Carrot Island deemed to be a vital part of the “distinctive maritime character of the quiet seaside town and which provides the dramatic view from Beaufort’s waterfront” (NPS 1974). The relationship between the town of Beaufort and the sea is one of the most noteworthy features addressed in the National Register nomination. The small town characteristics of the seaport are seen in its compact grid extending landward from the wharf and dock area that form the boundary of the historic district. The historic district is also distinguished by the undisturbed scale and plan as well as the presence of numerous houses with gabled roofs and one-and-two-story porches in the residential area.

The location of Alternative B is the downtown Beaufort Post Office building on Front Street and the adjacent dock next to Grayden Paul Town Park and landside areas in the vicinity of the park and the post office within the historic district. The post office building, which dates to the 1930s, is a one-story brick structure with a five-bay side gable section in front and two rectangular rear sections. The entire building displays Flemish bond brick coursing on the exterior, accentuated by brick piers, wide entablature with dentils, and cast stone water table. A small classical cupola is centered in the front section’s roof ridge. The front entrance is contained within a round-arched opening with paired wood doors that are topped with a large 4-pane transom and framed by fluted Doric columns and a dentillated entablature. The building’s fenestration is composed of single windows with 12/12 and 6/6 wood sash, with cast stone lintels and sills. The building’s front lobby features original terrazzo flooring, marble wainscot, wood doors and casings, and framed painted murals, which date to 1940.

The site proposed for use within Morehead City is located less than 0.2 miles south of the Morehead City National Register Historic District. There are no listed historic properties within the area of potential effect in Morehead City.



Cape Lookout National Seashore
Passenger Ferry Departure Site EA/AoE



National Park Service
U.S. Department of the Interior
Cape Lookout National Seashore

Figure 8
Area of Potential Effect

SOCIOECONOMIC RESOURCES AND GATEWAY COMMUNITIES

The primary study areas considered in this analysis are Beaufort and Morehead City both located in Carteret County, North Carolina. Ferry service to Shackleford Banks within the park has historically operated out of Beaufort and Morehead City. Therefore, these communities have provided an important transportation link to visitors wishing to visit the park. Since this report analyzes the impacts associated with changes to ferry service operations, it is necessary to understand the socioeconomic environment, in this case Beaufort and Morehead City, in which the proposed changes may occur.

Beaufort, which lies directly to the east of Morehead City, is a popular tourism destination in the region and is the county seat of Carteret County. The primary attraction in Beaufort is the historic downtown area bordered by Turner and Front Streets. The waterfront district offers a range of upscale restaurants, marinas, and retail establishments. Beaufort is also located in close proximity to popular regional attractions, including the Rachel Carson Estuarine Reserve, the North Carolina Maritime Museum and numerous historic sites.

The downtown waterfront area of Morehead City is the one the main areas frequented by visitors. This region offers fine dining options for travelers and access to charters, diving excursions, tours, and other water based recreation. In recent years, the downtown waterfront area has been upgraded with improved pedestrian walkways, new docks, public restrooms, parks, and other amenities.

DEMOGRAPHICS SUMMARY

The population of Morehead City was 9,513 in 2008 while the population of Beaufort was less than one-half this amount at 4,189. Together, Morehead City and Beaufort populations represent approximately 22% of Carteret County's population. In addition, from 2000 to 2008, the population of Morehead City has grown at double the rate of population growth in Beaufort, or 2.4% compared to 1.2%. Population growth for Carteret County over this period averaged 0.8% per year, which is lower than growth rates in both Morehead City and Beaufort and is below the annual population growth rate for the entire state of North Carolina over this period of 1.7%.

Average household income is nearly the same in Carteret County and Morehead City yet slightly lower in Beaufort. The proportion of the population below the poverty line is greater in both Beaufort and Morehead City relative to the county, at 16.6% and 14.6%, respectively, compared to 10.7% for the county. The greater proportion of the population below the poverty line highlights the rural nature of the region in which Beaufort and Morehead City are located.

OVERVIEW OF THE LOCAL ECONOMY IN BEAUFORT AND MOREHEAD CITY

The following sections summarize key aspects of the Beaufort and Morehead City economies including the largest industries by economic output, employment, and labor income. The software program IMPLAN used to estimate impacts in this analysis provides useful economic

metrics regarding the composition and size of the Beaufort and Morehead City economies. The following sections summarize the existing levels of economic output, labor income, employment, and state/local taxes for the communities of Beaufort and Morehead city. The data presented for economic output, labor income/employment, and state/local taxes is used to understand the magnitude of impacts to these indicators, which are discussed in Chapter 4 of this document.

Economic Output by Industry

Table 3 below shows that veneer/plywood, boat building, rental activities, and food service/drinking places are some of the largest producers of goods and services in Beaufort. The prominence of the food services industry, including restaurants, bars and cafes, which alone represents 7% of total annual economic output, reflects the importance of tourism in the local economy. Similarly, the strength of the real estate sector likely reflects vacation rentals in the community, again signifying the importance of tourism to the Beaufort economy.

In addition, the importance of the construction industries in Beaufort, collectively representing 11% of the local economy would tend to indicate a community that is growing as new housing, medical, and commercial facilities are constructed. IMPLAN estimates that total economic output in 2008, the latest year for which estimates are available, was approximately \$567 million in 2010 dollars.

Table 3: Top Ten Industries by Economic Output in Beaufort, 2008 (\$2010)		
	Value of Output	% of Total Local Output
Veneer and plywood manufacturing	\$57,777,580	10%
Boat building	\$41,615,084	7%
Imputed rental activity for owner-occupied dwellings	\$40,254,024	7%
Food services and drinking places	\$36,904,016	7%
Wholesale trade businesses	\$35,722,348	6%
Education (state/local government)	\$29,169,632	5%
Construction of new nonresidential commercial and health care structures	\$25,734,232	5%
Real estate establishments	\$19,494,606	3%
Construction of new residential permanent site single- and multi-family structures	\$15,599,769	3%
Construction of other new nonresidential structures	\$14,537,183	3%
Total Value of Output for Top-Ten Industries	\$316,808,474	56%
Total Value of Output in Beaufort	\$567,237,763	100%

Source: IMPLAN 2008 County Plus Data for Carteret County

Table 4 below indicates that some of the top producers of goods and services in Morehead City are the food services, health, wholesale trade, and housing rental industries. Considering the range of industries in Morehead City relative to Beaufort, it is clear that economy of Morehead City is more diversified compared to Beaufort. Similar to Beaufort, the high degree of goods and services produced by the foods services industry in Morehead City likely reflects the importance of tourism to the local economy.

IMPLAN data indicates that total economic output in Morehead City in 2008 was approximately \$1.28 billion in 2010 dollars. The table also reveals that the economy of Morehead City is more than twice as large as Beaufort, producing \$1.28 billion worth goods and services annually, compared to \$567 million in Beaufort.

Table 4: Top Ten Industries by Economic Output in Morehead City, 2008 (\$2010)

	Value of Output	% of Total Local Output
Food services and drinking places	\$92,306,520	7%
Offices of physicians, dentists, and other health practitioners	\$82,497,856	6%
Wholesale trade businesses	\$62,514,112	5%
Imputed rental activity for owner-occupied dwellings	\$50,842,648	4%
Air conditioning, refrigeration, and warm air heating equipment manufacturing	\$48,117,060	4%
Retail Stores - General merchandise	\$44,084,856	3%
Construction of new nonresidential commercial and health care structures	\$43,555,720	3%
Monetary authorities and depository credit intermediation activities	\$40,139,736	3%
State and local government (non-education)	\$38,154,036	3%
Education (state/local government)	\$36,842,560	3%
Total Value of Output for Top-Ten Industries	\$539,055,104	42%
Total Value of Output in Morehead City	\$1,276,405,703	100%

Source: IMPLAN 2008 County Plus Data for Carteret County

Employment by Industry

According to the 2000 Census, the largest employers within Beaufort were the following industries:

- Arts, entertainment, recreation, accommodation and food services – *18% of workforce*,
- Education, health and social services – *13% of workforce*,
- Retail trade - *10% of workforce*,
- Construction - *10% of workforce*

The large concentration of employment within the arts, entertainment, recreation, accommodation, and food services as well as retail industries again highlights the importance of the tourism industry in Beaufort. At the time of the 2000 Census, these industries employed nearly one-third of all workers in Beaufort. The IMPLAN model provides more current estimates of labor income/employment for Beaufort. This information is provided in Appendix B.

The largest employment is in the food services industry, which constitutes 13% of all jobs in Beaufort. The table indicates that the food services sector paid \$11.7 million in labor income to employees and proprietors in 2008. Again, the high level of employment in food services in Beaufort is a reflection of the importance of regional tourism. In 2008, there were 5,581 full and part-time jobs in Beaufort representing \$176.7 million in labor income.

The 2000 Census reported the largest employers within Morehead City consisted of the following industries:

- Education, health and social services – *20% of the labor force*
- Arts, entertainment, recreation, accommodation and food services – *14% of labor force*
- Retail trade - *12% of labor force*
- Construction - *12% of workforce*

Similar to Beaufort, the large degree of employment within the arts, entertainment, recreation, accommodation, and food and retail industries in Morehead City is a reflection of the importance of tourism in the local economy. At the time of the 2000 Census, these industries employed nearly one-quarter of all workers in Morehead City. The IMPLAN model provides more current estimates of labor income/employment for Morehead City and is contained in Appendix B.

According to more detailed information generated by the IMPLAN model, the largest employer in Morehead City is the food services industry. The food service industry alone represents 12% of total employment, followed by healthcare and state/local government, representing 6% and 5% of total employment, respectively. One of the main differences between employment in Morehead City and Beaufort is the greater prominence of the retail sector in Morehead City.

Estimated State/Local Taxes

The share of state and local taxes generated by Beaufort and Morehead City were estimated using the most recent data available from the 2008 IMPLAN model. In the impact analysis section of this study, impacts to state and local taxes are estimated and compared to the existing shares of state/local taxes in Beaufort and Morehead City. Estimated 2008 state/local taxes in Beaufort total approximately \$77 million in adjusted 2010 dollars. Estimated 2008 state/local taxes in Morehead City total approximately \$220 million in adjusted 2010 dollars. The larger share of state/local taxes in Morehead City is a reflection of the city's larger and more diversified economy compared to Beaufort.

CURRENT FERRY SERVICE IN BEAUFORT AND MOREHEAD CITY

Currently there are two ferry service providers located in Beaufort and one in Morehead City. All ferry service providers are required to apply annually for a NPS-issued CUA which allows the operator to provide commercial ferry service to the park. Historically, the vast majority of visitor ridership has been provided by ferry operators located in Beaufort. Ferry operators primarily provide visitors with access to the west end of Shackleford Banks and will occasionally provide service to the Cape Lookout Lighthouse. Ferry service to the Lighthouse is mainly provided by four CUA ferry operators located on Harkers Island. The ferry operators in Beaufort and Morehead City have been providing ferry service for the last 10 to 15 years.

Ferry service to Shackleford Banks provided by operators in Beaufort is just one of several services provided by these operators. Other services provided include a range boat tours and charter trips that include excursions to the park and other popular destinations in the region. The ferry operator in Morehead City provides limited service to Shackleford Banks.

The ferry operators in Beaufort use small skiffs to transport passengers to Cape Lookout and offer scheduled hourly service primarily during the summer, spring and fall seasons. Ferry service during the winter is provided based on demand and is always subject to cancellation due to inclement weather. In the summer, one ferry operator in Beaufort (Outer Banks Ferry) provides half-day tours of the lighthouse. Finally, there is also a sailboat tour operator located in Beaufort that provides half-day tours/excursions to the park during the summer months using a large catamaran vessel. This operator does not provide regular ferry service to the park. Ferry rates typically range between \$12.00 to \$15.00 for adults and \$6.00 to \$8.00 for children, with group discounts generally offered.

According to data provided by NPS, ferry ridership out of Beaufort has averaged approximately 22,200 during the last three years, from 2007 to 2009. Ferry ridership out of Morehead City typically averages between 200 and 300 passengers per year. These figures exclude tours and multi-destination excursions provided by the ferry operators in these locations. Currently, the CUA ferry operators in Beaufort and Morehead City are only required to report their ridership volumes and gross revenues to the NPS and the North Carolina Utilities Commission.

VISITOR USE AND EXPERIENCE

Cape Lookout National Seashore has received over 600,000 recreational visits each year since 2001, with a peak in 2007 of over 850,000 visits (NPS 2010b). Since there is no bridge to the seashore, all visitors arrive by boat. Visitors to the Cape Lookout Lighthouse can take the vehicle ferry from Davis to South Core Banks and from there can either take the beach shuttle or drive themselves with a four-wheel drive vehicle. Alternatively, visitors can take a passenger ferry or private charter from Harkers Island, Beaufort, or Morehead City, which will drop them off at the boardwalk leading directly to the lighthouse and its associated buildings. These same ferries operating out of Harkers Island, Beaufort, and Morehead City also provide service to the undeveloped Shackleford Banks. In 2007, ferries operating from either Beaufort or Morehead City transported approximately 36,000 (4%) of the total recreational visitors.

Visitors wishing to take a passenger ferry from the Beaufort/Morehead City area to either Shackleford Banks or the Cape Lookout Lighthouse are faced with choosing and finding a ferry operator that will suit their needs. Some ferry operators accommodate dogs; some are more accessible for those with disabilities than others. The park provides a list of currently authorized operators and their phone numbers on the park website (www.nps.gov/caloc). Additionally, many local hotels, restaurants, and merchants can also provide ferry information.

Although there are a few operators who are known locally as providing service to the park and who have been annually authorized to do so for many years, the nature of the current permitting system does nothing to ensure that an operator will provide authorized ferry service the following year. These sites currently serve as a gateway to the park; however, NPS has a need for a gateway with greater presence that carries the NPS image and provides orientation and information to visitors about park resources.

Visitors using the Beaufort/Morehead City area as their gateway to Cape Lookout National Seashore generally arrive along US 70 from an inland point of origin (e.g., Raleigh or Interstate 95). This approach brings them to Morehead City first, and then if they continue along US 70, Beaufort is just 4 miles to the east. At no point along US 70 are any signs posted indicating access to Cape Lookout National Seashore in either town.

There are generally three or four ferry operators, depending upon the number of operators that apply for a CUA. Currently, there are two operators providing passenger ferry service out of Beaufort to Shackleford Banks and one providing service out of Morehead City.

Facilities and the level of service provided vary by ferry operator. Most services do not provide restrooms (some may provide portable toilets) or a covered area in which to wait for the next ferry. Current ferry service is provided as scheduled hourly service during the summer and shoulder (spring and fall) seasons. Only one of the current ferry services operates year-round. Trips to Shackleford Banks are provided on a pre-arranged basis. Once visitors have decided upon and found a ferry operator, visitors generally purchase ferry tickets at a booth adjacent to the ferry dock and then board the ferry vessel. Most vessels providing ferry service to the park are small approximately 15-passenger skiffs (e.g., Carolina Skiffs). Visitors with disabilities may be accommodated to different degrees by different dock facilities and ferry vessels. Under certain conditions, the skiffs offer an uncomfortable, wet ride. Some visitors may be personally uncomfortable in such a small boat. Current ferry operators provide limited to no information on park, safety, resources and regulations.

The routes used by ferry operators vary and are dependent upon their departure site, weather, and available channels. Because of the uncertain orientation provided prior to or during ferry service, visitors may not be aware of when they are entering a unit of the national park system. The NPS has signs posted at either arrival site to provide visitors with some level of orientation to and interpretation of the park and its resources.

OPERATIONS AND INFRASTRUCTURE

Existing ferry services to Shackleford Banks and the Cape Lookout Lighthouse are permitted under CUAs issued to private operators by the NPS. CUAs are meant to authorize suitable commercial services to NPS visitors under for up to two years. The NPS does not closely supervise these authorized ferry operators, and there is no NPS staff or volunteers assisting with ferry operations.

The location, condition, and maintenance of the departure docks as well as the accessory structures (such as ticketing booth) and the type of boat used are determined by the individual ferry operators. Individual operators are also responsible for maintaining the water depth needed for their operations at their main departure sites. They set their own schedules and are free to include additional stops outside the park during their operations. The NPS does not authorize use of the NPS arrowhead logo on ferry signs or boats, nor does the NPS require that the operators maintain their facilities as ADA/ABAAS accessible.

The NPS is considering partnering with either the town of Beaufort or the town of Morehead City to establish a long-term ferry site from which a consolidated ferry service could operate. This ferry service would operate under a 10-year concession contract with the park. This concession contract would be rebid every 10 years.

Currently, most of the property proposed for the consolidated ferry departure sites are under public ownership, with some exceptions. Those areas that are not currently under town ownership have been investigated by town officials and reported as being available for use pending further coordination between the town and the NPS and between the town and the current land owner. The existing infrastructure at the Front Street site includes the Post Office building, the gazebo and bulkhead at Grayden Paul Town Park, and the dock extending off the town park. This dock is approximately 90 feet long and 10 feet wide. There are utilities (e.g., electric and water) available within the town park.

The existing infrastructure at the 10th Street site includes gravel parking lot, a fishing pier directly off 10th Street, a small boat ramp, and docks extending 170 and 115 feet, respectively, into the water on either side of the boat ramp. Although these docks were probably intended to discourage shoaling between them and therefore facilitate boat launching, the bulkhead under the western dock has been breached, and there is a noticeable amount of sand collecting within the channel. Utilities are available along Shepard Street.

The docks at both arrival sites are the only infrastructure relevant to ferry operation. The dock at Shackleford Banks has been recently rehabilitated and further repairs are not anticipated in the near future. The Cape Lookout Lighthouse dock is approximately 200 feet long with a 50-foot segment perpendicularly placed at the end to form a “T” shaped dock. This dock is currently in good condition but could be upgraded in the future to improve accessibility.

Finally, the NPS does not currently undertake any maintenance dredging of the arrival sites. The General Development section of national seashore’s GMP/DCP acknowledges that certain channels to park arrival sites will be “maintained” generally by “prop wash” from vessel traffic.

At the departure sites, current ferry operations utilize channels along the Beaufort waterfront (Taylor Creek), Morehead City waterfront, and the parts of the main Beaufort Inlet shipping channel maintained by other agencies as well as natural channels formed by currents (such as Shackleford Slough).

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. NEPA requires consideration of context, intensity, and duration of adverse and beneficial impacts (direct, indirect, and cumulative) and measures to mitigate for impacts. NPS policy also requires that unacceptable adverse impacts and impairment of resources be evaluated in all environmental documents; therefore, these items are addressed in the “Conclusion” section under each alternative impact analysis for each impact topic.

METHODOLOGY FOR ASSESSING IMPACTS

The CEQ regulations that implement NEPA require assessment of impacts to the human environment, which includes natural and cultural resources. As required by NEPA, 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

Impacts can be beneficial or adverse. Beneficial impacts would improve resource conditions, while adverse impacts would deplete or negatively alter resources.

- 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 impacts would occur at the location of the action, local impacts would occur within the general vicinity of the project area, parkwide impacts would affect a greater portion outside the project area yet within the park, and regionwide impacts would extend beyond park boundaries.

Site specific: The impact would occur within project site.

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. A short-term impact would be temporary in duration and would be associated with the construction process. Depending on the resource, impacts would last as long as construction was taking place, or up to one year after construction is completed. Long-term impacts last beyond the construction period, and the resources may need more than one year postconstruction to resume their preconstruction condition. Impact duration for each resource may differ and is presented for each resource topic, where applicable.

Short-term: Impacts that occur only during construction or last less than one year.

Long-term: Impacts that last longer than one year.

Level of Intensity

Impact intensity is the degree to which a resource would be adversely affected. Because the level of intensity definitions (negligible, minor, moderate, major) vary by resource, separate definitions are provided for each impact topic analyzed.

Cumulative Impacts

The CEQ regulations that implement NEPA 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 present and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions (40 CFR 1508.7).

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 NPS, 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 EA/AoE include previous and future development related to this passenger ferry service, as summarized below.

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.

Ongoing Recreational Use at the Proposed Departure Sites

The docks being considered for departure sites at both Beaufort and Morehead City are currently being used as local water access. At the Front Street site, the Grayden Paul Town Park is used for casual observation of the waterfront, the dock off the town park is used for tying up dinghies, and the small sandy beach next to the dock serves as a small boat launch. At the Morehead City site, the existing pier is used for fishing, while the existing docks are occasionally used for launching small boats. This use has the potential to impact soils and topography and coastal resources.

Beaufort/Morehead City Area Ferry Operations

Several ferry operators are known to operate out of Beaufort and Morehead City and provide service to a number of local islands, including those under jurisdiction of the park. Those ferry operators wishing to provide service to the park are currently required to hold a CUA and have the flexibility to include other islands on their route. The number and location of operators can vary from year to year. These ferry operations have the potential to impact coastal resources, wildlife and wildlife habitat, and special status species.

Harkers Island Ferry Service

Currently, ferry service to Cape Lookout Lighthouse is provided by several ferry operators located on Harkers Island. These operators are authorized annually by a CUA, as are the Beaufort/Morehead City operators. The 2007 CSP directs the NPS to provide passenger ferry service from Beaufort or Harkers Island to Shackleford Banks and the Cape Lookout Lighthouse. Since the park visitor center property on Harkers Island is under federal ownership, is the primary administrative site for the park, and houses an existing boat basin, it has been selected as the Harkers Island departure site. Pending the completion of the NEPA compliance (completed separately from this EA/AoE), a single ferry operator would be provided with a concession contract to depart from the park docks on Harkers Island and provide service to the Cape Lookout Lighthouse. Service to the lighthouse would be required, while service to Shackleford Banks would be authorized. This ferry service has the potential to impact similar resources to

those potentially impacted by the ferry service addressed in this document, including coastal resources, wildlife and wildlife habitat, special status species, and visitor use and experience.

Private Tour Operations

There is one current tour operator who visits the park as part of educational tours. Such operations are also being permitted via an annual CUA. Such an arrangement is consistent with the intended application of a CUA and as such can continue under that arrangement. This operation has the potential to impact coastal resources, wildlife and wildlife habitat, and special status species.

Dredging of the Beaufort and Morehead City Channels

Both Beaufort and Morehead City are located on federally authorized and maintained channels. The Army Corps of Engineers maintains these channels with regular dredging. This activity has the potential to impact coastal resources and wildlife and wildlife habitat.

Reuse Implementation Plan/EA for Cape Lookout Village Historic District

The Cape Lookout Historic Village Cultural Landscape Treatment Plan was completed in 2005. This Reuse Implementation Plan/EA proposes to rehabilitate and adaptively use a number of former residences in the Cape Lookout Village Historic District for the next 25 years. The implementation of the NPS preferred alternative of this plan would provide renovated space for interpretation and concessions. This has the potential to improve visitor experience and operations and infrastructure in the vicinity of the Cape Lookout Lighthouse arrival site.

Off Road Vehicle Use

Vehicles can currently gain access to the beaches of Cape Lookout National Seashore via ferries arriving at the Core Banks and can do so without a permit. The use of these vehicles has increased recreational access and use of the Core Banks. Currently such use is limited only by vehicle ferry operation (March or April through December) and the closure of areas for resource protection or safety reasons. Concerns have arisen over the lack of regulation associated with this use, and as a result, a off road vehicle management plan/EIS is being developed in tandem with a special regulation in order to ensure continued resource protection, reduce conflicts between seashore users, and ensure continued public safety. Both past actions related to off road vehicle use and future management of it has the potential to impact special status species, visitor use and experience, and operations and infrastructure.

Interim Protected Species Management Plan/EA

There is a concern that recreational use of the park, including use of off road vehicles in particular, is in part responsible for low breeding success and declining population trends in a number of protected species. While special regulations and an associated plan/EIS are being prepared for the regulation and management of off road vehicles within the park, this plan/EA has been prepared in order to guide park management of protected species and to inform the decision on off road vehicle management. This plan has the potential to impact special status species and visitor use and experience.

Impairment

In addition to determining the environmental consequences of the NPS preferred and other alternatives, *NPS Management Policies 2006* (NPS 2006a) and DO-12 require analysis of potential impacts to determine whether actions have the potential for impairment of park resources and values.

A fundamental purpose of the NPS, as provided for in its Organic Act (1916) and reaffirmed by the General Authorities Act (1970), as amended in 1978, is a mandate to conserve park resources and values. However, the laws give the NPS management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of the park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirements that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that would otherwise be present for the enjoyment of those resources and values. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

1. Necessary to fulfill specific purposes identified in establishing legislation or proclamation of the park;
2. Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
3. Identified in the park's general management plan or other relevant NPS planning documents as being of significance (NPS 2006a).

Impairment may result from NPS activities in managing the park, as well as visitor activities or activities undertaken by concessioners, contractors, and others operating in the park. An impairment determination for relevant impact topics is provided in Appendix C.

SOILS AND TOPOGRAPHY

METHODOLOGY

In order to assess impacts on soils and topography within the study area, information on local soil classification was gathered from the NRCS and existing conditions within the study area were examined. Following establishment of the existing conditions, impacts are described related to the proposed action under each potential alternative. The thresholds for the intensity of an impact are defined below.

- Negligible:** Impacts to soils would be below or at the lower levels of detection.
- Minor:** The impacts to soils would be detectable and small. Mitigation may be needed to offset adverse impacts and would be relatively simple to implement and likely be successful.
- Moderate:** The impacts on soils would be readily apparent and result in a change to soils a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and likely be successful.
- Major:** The impacts on soils would be readily apparent and would substantially change the character of the soils over a large area in and out of the park. Mitigation measures to offset adverse impacts would be needed, extensive, and their success could not be guaranteed.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under Alternative A, ferry service from the Beaufort/Morehead City area to Shackleford Banks and the Cape Lookout Lighthouse would continue to be provided by a variety of ferry service operators. At the time of this document, there were several operators providing service from the Beaufort waterfront, and none provided service from the Morehead City waterfront. These ferry operators generally use established docks and landside accommodations; however, they would also be free to alter and/or update their facilities at their own discretion. Overall, Alternative A would have an indirect long-term, negligible, adverse impact on soils and topography because these changes would generally be below the level of detection.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on soils and topography in and around the study area. These actions include recreational use at both the Beaufort and Morehead City sites. This use would contribute to soil compaction and disturbance at both sites. This action, along with Alternative A, would have a long-term, negligible, adverse cumulative impact on soils and topography. Alternative A would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, Alternative A would result in a long-term, negligible, adverse impact on soils and topography. Alternative A would contribute an imperceptible adverse increment to a long-term, negligible, adverse cumulative impact.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Impact Analysis

Under Alternative B, ferry service would be provided to the park from the Front Street site in Beaufort. Establishment of a permanent base of operations for the NPS concessioner would include erection of structures to provide orientation, ticketing, and a passenger queuing area. Any additional visitor services would be accommodated by the Post Office building across Front Street. This development would result in the disturbance of up to approximately 160 square feet of soils within the study area during construction. Implementation of best management practices such as appropriate erosion and sediment controls would minimize any loss of sediment and the accompanying sedimentation. Any increase in impervious surface within the study area would be minimal (up to 160 square feet). Finally, the soils at this site may experience a slight increase in foot traffic during peak season; however, since this area is already used as a public park and boat dock, any impacts to soils and topography would likely be unnoticeable.

Overall, Alternative B would have short-term, minor, adverse impact on soils and topography, related to small but detectable disturbances during construction that would require relatively simple mitigation measures. Alternative B would have long-term, negligible, adverse impacts on soils and topography related to a slight increase in impervious surface and frequency of foot traffic. These impacts would be below or at the lower levels of detection and would not require mitigation measures.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on soils and topography in and around the study area. These actions and their impacts are associated with the ongoing recreational use of the site and are described under Alternative A. This use would contribute to soil compaction and disturbance at both sites. This action, along with Alternative B, would have a long-term, negligible, adverse cumulative impact on soils and topography. Alternative B would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, Alternative B would have short-term, minor, adverse impact on soils and topography, related to small but detectable disturbances during construction that would require relatively simple mitigation measures. Alternative B would have long-term, negligible, adverse impacts on soils and topography related to a slight increase in impervious surface and frequency of foot traffic. These impacts would be below or at the lower levels of detection and would not require mitigation measures. Alternative B would contribute an imperceptible adverse increment to a long-term, negligible, adverse cumulative impact.

ALTERNATIVE C: 10TH STREET

Impact Analysis

Under Alternative C, ferry service would be provided to the park from the 10th Street site in Morehead City. The existing parking lot at the site would be expanded and improved. This would result in the disturbance of approximately 21,000 square feet. As part of the improvement of this area, it would be hardened and marked in order to maximize parking capacity on site. The specific type of treatment for the new parking lot has not been determined; the park would like to avoid using impervious surface if this is determined to be a feasible option during future design phases.

Additionally, establishment of a permanent base of operations for the NPS concessioner would include erection of structures to provide orientation, ticketing, restrooms, concessions, and a passenger queuing area. This development would result in the disturbance of up to approximately 1,540 square feet of soils within the study area during construction. The greater disturbance to soils in comparison to Alternative B is due to the need for additional facilities at this site. As under Alternative B, implementation of best management practices such as appropriate erosion and sediment controls would minimize any loss of sediment and the accompanying sedimentation. The improved parking lot would result in approximately 21,000 square feet of hardened surface. Although this surface may not be an impervious one, the continued use of the site as a parking lot would result in continued soil compaction in this area. Approximately 1,540 square feet of impervious surface would be associated with the new structures. The NPS would implement appropriate stormwater controls at the site, depending upon the level of mitigation required.

During construction, approximately 22,540 square feet of soils would be disturbed. The impacts to soils and topography under this alternative would be greater than under Alternatives A or B; however, the development is consistent with the already developed character of the site.

Overall, Alternative C would have short-term, minor, adverse impacts on soils and topography related to detectable but relatively small disturbances during construction at the site. Alternative B would have long-term, minor, adverse impacts on soils and topography related to the small increase in impervious surfaces at the site. Both the short-term and long-term impacts would require only relatively simple mitigation measures that would be relatively simple to implement.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on soils and topography in and around the study area. These actions and their impacts are associated with the ongoing recreational use of the site and are described under Alternative A. This use would contribute to soil compaction and disturbance at both sites. This action, along with Alternative C, would have a long-term, minor, adverse cumulative impact on soils and topography. Alternative B would contribute a noticeable adverse increment to this cumulative impact.

Conclusion

Overall, Alternative C would have short-term, minor, adverse impacts on soils and topography related to detectable but relatively small disturbances during construction at the site. Alternative B would have long-term, minor, adverse impacts on soils and topography related to the small increase in impervious surfaces at the site. Both the short-term and long-term impacts would require only relatively simple mitigation measures that would be relatively simple to implement. Alternative C would contribute a noticeable adverse increment to a long-term, minor, adverse cumulative impact.

COASTAL RESOURCES

METHODOLOGY

The analysis of coastal resources within the study area is based on a review of existing data for the project area and shorelines in similar geomorphic settings and recent scientific literature. This analysis also included water quality conditions. In order to determine the level of impact intensity, the following definitions for negligible, minor, and major were used:

- Negligible:** An action that would have a very small impact on the shoreline. The consequences of such action would have no measurable impact on the shoreline. Impacts (chemical, physical, biological) would not be detectable, would be well below water quality standards or criteria, and would be within historical or desired water quality conditions.
- Minor:** An action that would have a small but measurable impact on the shoreline. The results would require scientific effort to measure and would include subtle changes in shoreline profile, nearshore slope, and vegetation along the shore. It would be difficult to determine whether such changes were a result of natural forces or the effects of the action alternative. Minor impacts also include those that are short-term in nature. Impacts (chemical, physical, biological) would be detectable, but would be well below water quality standards or criteria and within historical or desired water quality conditions.
- Moderate:** An action would have a noticeable impact on the shoreline. Such effects could be permanent, could be the result of the action alternative, and could require mitigation and/or shoreline stabilization to minimize. Loss of land area and shoreline habitat or wetland area at the land/water interface could result. Impacts (chemical, physical, biological) would be detectable, but would be at or below water quality standards or criteria and within historical or desired water quality conditions.
- Major:** An action would have significant impact on the shoreline. Such effects would be permanent, would clearly be the result of the action alternative, would occur quickly, and could require mitigation and/or shoreline stabilization to minimize. Loss of land area and shoreline habitat or wetland area at the land/water interface

would result. Impacts (chemical, physical, biological) would be detectable, and would be frequently altered from the historical baseline or desired water quality conditions, and/or chemical, physical, or biological water quality standards or criteria would be slightly and singularly exceeded on a long-term basis.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under Alternative A, ferry service from the Beaufort/Morehead City area to Shackleford Banks and the Cape Lookout Lighthouse would continue to be provided by a variety of ferry service operators. At the time of this document, there were several operators providing service from the Beaufort waterfront, and none provided service from the Morehead City waterfront. These ferry operators generally use established docks. Maintenance of and upgrades to their facilities are at their own discretion. Ferry routes are determined by the individual ferry operators and may result in some disturbance of benthic sediment in shallow channels. There is also the risk of accidental spills of substances such as motor oil or fuel. Overall, Alternative would have long-term, negligible, adverse impact on coastal resources because actions would have a relatively small impact on the shoreline with impacts within historical water quality conditions.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on coastal resources in and around the study area. These actions include recreational use at both the Beaufort and Morehead City sites, Harkers Island ferry service, existing Beaufort/Morehead City Area ferry operations, private tour operations, and dredging of the Beaufort and Morehead City channels. These actions would contribute to disturbance of benthic substrata and potential degradation of water quality related to construction activities or accidental releases of oil or fuel. These actions, along with Alternative A, would have a long-term, minor, adverse cumulative impact on coastal resources. Alternative A would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, Alternative would have long-term, negligible, adverse impact on coastal resources because actions would have a relatively small impact on the shoreline with impacts within historical water quality conditions. Alternative A would contribute an imperceptible adverse increment to a long-term, minor, adverse cumulative impact.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Impact Analysis

Under Alternative B, ferry service to the park would be consolidated at the Front Street site in Beaufort. The existing dock extending off of Grayden Paul Town Park would be used for this service. Only minor upgrades to the dock's electrical and light systems and the installation of a

floating dock would be necessary for safe and accessible ferry boat operations to begin at this location. Current water depths would be adequate for ferry operations at this site, and maintenance dredging of the site is not anticipated to be necessary. Floating dock installation would require some disturbance of benthic substrata and would result in a localized increase in suspended solids within the water column; however, such impacts would be temporary during dock installation and would be mitigated by the use of best management practices. Impacts would likely be contained to an area of approximately 1,000 square feet. This would result in a short-term, minor, adverse impact.

The ferry would be required to provide service to Shackleford Banks. The route along which the ferry would travel is approximately the same as those ferries currently providing service from Beaufort to Shackleford Banks. The authorized service to the Cape Lookout Lighthouse would also be likely to use existing routes. This service would exclude extraneous stops such as Carrot Island. Because of refined ferry routes associated with the required and authorized services and a potential decrease in boat traffic (due to consolidated ferry service), impacts on coastal resources such as disturbance of benthic sediment and accidental oil or fuel releases could be slightly less than under Alternative A.

Overall, Alternative B would result in short-term, minor, adverse impacts on coastal resources related to floating dock installation causing small but measurable impacts which are still within historical water quality conditions. Alternative B would result in long-term, negligible, adverse impacts on coastal resources because regular operations would have a relatively small impact on the shoreline with impacts within historical water quality conditions.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on coastal resources in and around the study area. These actions and their impacts are associated with recreational use at both the Beaufort and Morehead City sites, Harkers Island ferry service, existing Beaufort/Morehead City Area ferry operations, private tour operations, and dredging of the Beaufort and Morehead City channels and are described under Alternative A. These actions, along with Alternative B, would have a long-term, minor, adverse cumulative impact on coastal resources. Alternative B would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, Alternative B would result in short-term, minor, adverse impacts on coastal resources related to floating dock installation causing small but measurable impacts which are still within historical water quality conditions. Alternative B would result in long-term, negligible, adverse impacts on coastal resources because regular operations would have a relatively small impact on the shoreline with impacts within historical water quality conditions. Alternative B would contribute an imperceptible adverse increment to a long-term, minor, adverse cumulative impact.

ALTERNATIVE C: 10TH STREET

Impact Analysis

Under Alternative C, ferry service to the park would be consolidated at the 10th Street site in Morehead City. The docks extending on either side of the existing boat launch would be reconstructed in order to upgrade them to accommodate the proposed ferry service. Shoaling occurs in this vicinity, and occasional dredging of the site may be necessary in order to maintain the depth needed for ferry operation. Any dredging would result in disturbance of benthic substrata and would result in a localized increase in suspended solids within the water column; however, such impacts would be temporary during each dredging event and would be mitigated by the use of best management practices. A maximum of approximately 8,500 square feet of waterside area would be impacted during initial site preparation. The dock reconstruction would be a one-time, short-term, moderate, adverse impact; maintenance dredging would be a repeated short-term, moderate, adverse impact. Dredging would take place once a year or as needed to maintain ferry operations.

The ferry would be required to provide service to Shackleford Banks. The route along which the ferry would travel is approximately the same as historic ferries providing service to Shackleford Banks. The authorized service to the Cape Lookout Lighthouse would also be likely to use former routes. This service would exclude any extraneous stops that would be an option under a more casual operating authorization. Because of refined ferry routes associated with the required and authorized services, impacts on coastal resources such as disturbance of benthic sediment and accidental oil or fuel releases could be slightly less than under Alternative A.

Overall, Alternative C would result in short-term, moderate, adverse impacts on coastal resources related to dock upgrades and periodic dredging events, both of which would have a noticeable impact that could require mitigation. Alternative C would result in long-term, negligible, adverse impacts on coastal resources because regular operations would have a relatively small impact on the shoreline with impacts within historical water quality conditions.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on coastal resources in and around the study area. These actions and their impacts are associated with recreational use at both the Beaufort and Morehead City sites, Harkers Island ferry service, existing Beaufort/Morehead City Area ferry operations, private tour operations, and dredging of the Beaufort and Morehead City channels and are described under Alternative A. These actions, along with Alternative C, would have a long-term, minor, adverse cumulative impact on coastal resources. Alternative C would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, Alternative C would result in short-term, moderate, adverse impacts on coastal resources related to dock upgrades and periodic dredging events, both of which would have a noticeable impact that could require mitigation. Alternative C would result in long-term,

negligible, adverse impacts on coastal resources because regular operations would have a relatively small impact on the shoreline with impacts within historical water quality conditions. Alternative C would contribute an imperceptible adverse increment to a long-term, minor, adverse cumulative impact.

WETLANDS

METHODOLOGY

This section analyzes the impacts of the proposed action on wetland resources. The thresholds of change for the intensity of an impact are as follows:

- Negligible:** Wetland resources would not be affected or the impacts on the resources would be below or at the lower levels of detection.
- Minor:** The impacts on wetland resources would be detectable and relatively small in terms of area and the nature of change. The action would affect a limited number of individual plant or wildlife species within the wetlands.
- Moderate:** The impacts on wetland resources would be readily apparent over a relatively small area, but the impact could be mitigated by restoring previously degraded wetlands. The action would have a measurable impact on plant or wildlife species within the wetlands, but all species would remain indefinitely viable.
- Major:** The impacts on wetland resources would be readily apparent over a relatively large area. The action would have measurable consequences for the wetland area that could not be mitigated. Wetland species dynamics would be upset, and plant and/or animal species would be at risk of extirpation from the area.

According to NPS DO-77-1: *Wetland Protection*, an SOF 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 an SOF, 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, an SOF for wetlands is not included in this document.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under Alternative A, any remaining wetlands along the Beaufort and Morehead City waterfronts would remain unaffected by the proposed action. Impacts would be related to actions undertaken by existing ferry operators at their own discretion. For the purpose of this document, it is assumed that any impacts to wetlands would be adverse but on a very small scale. Overall, Alternative A would have an indirect, long-term, negligible, impact on wetlands.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on wetlands in and around the study area. These actions include recreational use at both the sites and both past and continuing Beaufort/Morehead City area ferry operations. These actions would result in potential trampling of wetlands and potential development of wetland areas. These actions, along with Alternative A, would have a long-term, negligible, adverse cumulative impact on wetlands. Alternative A would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, Alternative A would result in an indirect, long-term, negligible, adverse impact on wetlands. Alternative A would contribute an imperceptible adverse increment to a long-term, negligible, adverse cumulative impact.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Impact Analysis

Under Alternative B, consolidated ferry service would be based out of the Front Street site in Beaufort. The shoreline at this site is stabilized with a wooden seawall that protrudes into the water beyond where natural wetlands occur adjacent to the site, to the west. Submerged lands would be affected during pile placement; however, these lands are regularly disturbed by existing boat traffic and channel maintenance and support little to no vegetation. Construction activities are not expected to impact any other wetlands on or adjacent to the site. Overall, Alternative B would result in a long-term, negligible, adverse impact on wetlands because the resulting impact of the structure on the wetlands would be at or below levels of detection.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on wetlands in and around the study area. These actions and their impacts are associated with recreational use at both sites and Beaufort/Morehead City area ferry operations and are described under Alternative A. These actions, along with Alternative B, would have a long-term, negligible, adverse cumulative impact on wetlands. Alternative B would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Alternative B would result in a long-term, negligible, adverse impact on wetlands because the resulting impact of the structure on the wetlands would be at or below levels of detection. Alternative B would not result in any impacts on wetlands. Alternative B would an imperceptible adverse increment to a long-term, negligible, adverse cumulative impact.

ALTERNATIVE C: 10TH STREET

Impact Analysis

Under Alternative C, the docks on either side of the existing boat launch would be reconstructed to better serve the consolidated ferry service at the 10th Street site. There is an emergent tidal fringe wetland at the shoreline on either side of the boat launch. During development of the site, there is the potential for wetlands along both the 100- and 70-foot long proposed docks to be impacted during construction, although impacts would be minimized by strategic location of construction machinery. There is also the potential for the existing wetlands to be shaded by the new docks, which would be slightly taller and wider than the existing docks, and associated structures such as the passenger queuing area. The total area impacted would be less than 1,700 square feet (0.04 acres).

Overall, Alternative C would result in short-term, minor, adverse impacts on wetlands related to relatively small but detectable construction impacts affecting a limited number of individual species within the wetlands. Alternative C would result in long-term, negligible, adverse impacts on wetlands related to shading from a slightly larger dock structure being developed at this site. The resulting impact of the structure on the wetlands would be at or below levels of detection.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on wetlands in and around the study area. These actions and their impacts are associated with recreational use at both sites and Beaufort/Morehead City area ferry operations and are described under Alternative A. These actions, along with Alternative C, would have a long-term, negligible, adverse cumulative impact on wetlands. Alternative C would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, Alternative C would result in short-term, minor, adverse impacts on wetlands related to relatively small but detectable construction impacts affecting a limited number of individual species within the wetlands. Alternative C would result in long-term, negligible, adverse impacts on wetlands related to shading from a slightly larger dock structure being developed at this site. The resulting impact of the structure on the wetlands would be at or below levels of detection. Alternative C would contribute an imperceptible adverse increment to a long-term, negligible, adverse cumulative impact.

ESSENTIAL FISH HABITAT

METHODOLOGY

Available information on EFH was compiled and analyzed in relation to the management actions. When available, mapped EFH was compared with the proposed ferry routes. The thresholds for the intensity of an impact are defined as follows:

- Negligible:** There would be no observable or measurable impacts on the physical, chemical, or biological alterations 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. Impacts would be of short duration and well within natural fluctuations.
- Minor:** Changes in physical, chemical, or biological alterations of the waters or substrate would be detectable, but would not be outside the natural range of variability. There may be some loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. 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 alterations of the waters or substrate would be detectable and could be outside the natural range of variability. 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 might 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 alterations 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 might 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, impacts on wildlife and wildlife habitat, including EFH, would be related to ferries travelling through Back and Bogue Sounds. Ferry operators from the Beaufort/Morehead City area would continue to use whatever routes suited their location,

preferred operations, boats, and customers. Routes could change year to year, based on the location of the operators.

Travelling through the shallow waters of the sound could disrupt benthic sediment and SAV and causes increases in noise along ferry routes. The potential exists for ferry operators to create new prop scars through SAV; however, they also would be likely to use existing scars when possible to reduce damage to their boats and motors. These impacts have the potential to disturb wildlife within these habitats, however, such disturbances are generally of a low enough intensity or isolated enough that mobile wildlife can temporarily avoid such disturbances. These routes may or may not traverse areas of EFH or shellfish beds. Continued use of existing ferry routes would not contribute any noticeable impacts on the availability of coastal inlet habitat for shrimp. Nor would it noticeably reduce the amount of subaquatic vegetation available for use by for juvenile snappers and some groupers. Knowledge of such resources may vary between operators.

Overall, Alternative A would have a long-term, negligible to minor, adverse impact on wildlife and wildlife habitat, including EFH, because there would be no observable or measurable impacts on the abundance and diversity of native species and/or the quality of their habitat.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on wildlife and wildlife habitat, including EFH, in and around the study area. These actions include the Harkers Island ferry service, existing Beaufort/Morehead City Area ferry operations, private tour operations, and dredging of the Beaufort and Morehead City channels. Navigation of boats in Back and Bogue Sounds introduces the potential for habitat and wildlife disturbance such as those described above. Dredging actions conducted to maintain the Beaufort and Morehead City channels is the reason that those areas are not generally considered quality wildlife habitat. These actions, along with Alternative A, would have a long-term, minor to moderate, adverse cumulative impact on wildlife and wildlife habitat, including EFH. Alternative A would contribute an imperceptible adverse increment to this cumulative impact.

Conclusion

Overall, Alternative A would have a long-term, negligible to minor, adverse impact on wildlife and wildlife habitat, including EFH, because there would be no observable or measurable impacts on the abundance and diversity of native species and/or the quality of their habitat. Alternative A would contribute an imperceptible adverse increment to a long-term, minor to moderate, adverse cumulative impact.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Impact Analysis

Under Alternative B, ferry service would be consolidated with a single operator based at the Front Street site in Beaufort. As under Alternative A, primary impacts on wildlife and wildlife habitat, including EFH, would be related to operation of boats along the ferry route. Under

Alternative B, the ferry would pass by Carrot Island, along the east side of Radio Island through the Bulkhead Channel, and past Fort Macon State Park. The ferry would then cross the Beaufort Inlet into the Back Sound to the existing boat dock and beaches on the northwest side of Shackleford Banks. The concessioner also would have the option to provide additional service east through the Back Sound to the Cape Lookout Lighthouse.

Along these routes, ferry operations may cause disturbance of sediment and SAV and cause noise which may disrupt some wildlife. Continued use of existing ferry routes would not contribute any noticeable impacts on the availability of coastal inlet habitat for shrimp. Nor would it noticeably reduce the amount of subaquatic vegetation available for use by for juvenile snappers and some groupers.

Impacts on these resources are likely to be lesser than Alternative A for two reasons. First, the consolidation of multiple operators using various routes to a single operator generally using a more regular route could itself reduce impacts on wildlife and wildlife habitat, including EFH. Second, under a long-term concessions contract, the NPS would be more likely to coordinate with ferry operators to establish particular ferry routes that would avoid sensitive resources, thereby mitigating potential impacts. While such coordination and education may not eliminate adverse impacts, it would lessen their intensity.

Overall, Alternative B would have long-term, negligible, adverse impacts on wildlife and wildlife habitat, including EFH, related to regular operations that would result in no observable or measurable impacts on the abundance and diversity of native species and/or the quality of their habitat.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on wildlife and wildlife habitat, including EFH, in and around the study area. These actions include the Harkers Island ferry service, existing Beaufort/Morehead City Area ferry operations, private tour operations, and dredging of the Beaufort and Morehead City channels and are described under Alternative A. These actions, along with Alternative B, would have a long-term, minor to moderate, adverse cumulative impact on wildlife and wildlife habitat, including EFH. Alternative B would contribute an imperceptible beneficial increment to this cumulative impact.

Conclusion

Overall, Alternative B would have long-term, negligible, adverse impacts on wildlife and wildlife habitat, including EFH, related to regular operations that would result in no observable or measurable impacts on the abundance and diversity of native species and/or the quality of their habitat. Alternative B would contribute an imperceptible beneficial increment to a long-term, minor to moderate, adverse cumulative impact.

ALTERNATIVE C: 10TH STREET

Impact Analysis

Under Alternative C, ferry service would be consolidated with a single operator based at the 10th Street Site in Morehead City. As under Alternatives A and B, primary impacts on wildlife and wildlife habitat, including EFH, would be related to operation of boats along the ferry route. Under Alternative C, the ferry route would be the same as under Alternative B except that the route would start in Morehead City and would travel around Sugarloaf Island before passing between Radio Island and Fort Macon State Park. As under Alternative B, there is the potential for reduced impacts under this alternative when compared to Alternative A.

Under Alternative C, there may be the need for occasional dredging of the 10th Street departure site docks in order to maintain water depth needed for ferry operations. Dredging is generally a threat to EFH because of the temporary increases in turbidity, total suspended solids, and the potential for exposure of contaminated sediment. The 10th Street docks are located in area frequented by commercial and recreational boats as they travel through the USACE-maintained Beaufort Channel. The dredging that would be required at this location is very minor compared to the maintenance of the Beaufort Channel, and dredging at the site is expected to be required for startup but would be infrequent afterwards. The location, magnitude, and infrequency of this event should not realistically affect any EFH within the study area.

Overall, Alternative C would have long-term, negligible, adverse impacts on wildlife and wildlife habitat, including EFH, related to regular operations that would result in no observable or measurable impacts on the abundance and diversity of native species and/or the quality of their habitat.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on wildlife and wildlife habitat, including EFH, in and around the study area. These actions include the Harkers Island ferry service, existing Beaufort/Morehead City Area ferry operations, private tour operations, and dredging of the Beaufort and Morehead City channels and are described under Alternative A. These actions, along with Alternative C, would have a long-term, minor to moderate, adverse cumulative impact on wildlife and wildlife habitat, including EFH. Alternative C would contribute an imperceptible beneficial increment to this cumulative impact.

Conclusion

Overall, Alternative C would have long-term, negligible, adverse impacts on wildlife and wildlife habitat, including EFH, related to regular operations that would result in no observable or measurable impacts on the abundance and diversity of native species and/or the quality of their habitat. Alternative C would contribute an imperceptible beneficial increment to a long-term, minor to moderate, adverse cumulative impact.

SPECIAL STATUS SPECIES

METHODOLOGY

Endangered Species Act (16 USC 1531 et. seq.) mandates that all federal agencies consider the potential impacts of their actions on species listed as threatened or endangered. If the NPS determines that an action may adversely impact a federally listed species, consultation with the USFWS is required to ensure that the action will not jeopardize the species' continued existence or result in the destruction or adverse modification of critical habitat. NPS *Management Policies 2006* (NPS 2006a) states that potential impacts of agency actions will also be considered on state or locally listed species. The NPS is required to control access to critical habitat of such species, and to perpetuate the natural distribution and abundance of these species and the ecosystem upon which they depend. The USFWS was contacted for a list of rare, threatened, and endangered species and designated critical habitats that may be within the project area or affected by any of the alternatives. Information on possible threatened or endangered candidate species, and species of special concern was gathered from past Cape Lookout National Seashore studies and plans, as well as from USFWS and NMFS management/recovery plans. Map locations of habitats associated with threatened, endangered, candidate species, and species of special concern were compared with locations of proposed developments and existing facilities. Known impacts caused by development and human-uses were also considered. The thresholds of change for the intensity of an impact are as follows:

- No Effect:** Under the Endangered Species Act, these impacts could be qualified as “no effect.” In this case, the proposed action would not affect a listed species or designated critical habitat.
- Negligible:** Under the Endangered Species Act, these impacts could be qualified as “may affect, but not likely to adversely affect” a given species when effects on listed species are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species. Insignificant effects relate to the size of the impact and should never reach the scale where “take” occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur.
- Minor:** Under the Endangered Species Act, these impacts could be qualified as “may affect/likely to adversely affect” a given species. When any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial. If the overall effect of the proposed action is beneficial to the listed species, but is also likely to cause some adverse effects, the proposed action “is likely to adversely affect” the listed species.

- Moderate:** Impacts are similar to those described for minor; however, incidental take is anticipated to occur as a result of the proposed action, then it “is likely to adversely affect” the species. Incidental take is the take of a listed species that results from, but is not the purpose of, carrying out an otherwise lawful activity.
- Major:** Under the Endangered Species Act, these impacts could be qualified as “likely to jeopardize species /adversely modify critical habitat.” The appropriate conclusion when the NPS or the USFWS identifies an adverse effect that could jeopardize the continued existence of a species or destroy or adversely modify critical habitat of a species within or outside project boundaries.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under Alternative A, ferry service would continue to be provided by a number ferry operators using various ferry routes and offering limited orientation to the park’s special status species.

Impacts on Birds

The Atlantic Coast piping plover population nests above the high tide line. Therefore the only impacts to nesting habitat would be the indirect result of visitor use of the park. Such impacts would be occasional unintentional flushing of birds. Feeding areas used year-round by the Atlantic Coast population and in the winter by both the Atlantic Coast and the Great Lakes population include the intertidal beaches and flats. This behavior may continue to be disrupted occasionally by ferry travel through Back Sound and ferry landing. It may also indirectly be disturbed by visitor use of the park. The level of disruption would not be of such a magnitude that it would be considered “take” under the Endangered Species Act. Therefore, impacts are expected to continue to be insignificant; in other words, a person would not be able to meaningfully measure, detect, or evaluate the effects of the disruptions on the populations. These actions are unlikely to adversely affect piping plovers.

Roseate terns are rarely known to use habitat in North Carolina. They are is exclusively marine, usually breeding on small islands, but occasionally on sand dunes at the ends of barrier beaches (USFWS 1998). Should a roseate tern nest at the park or use it as a migratory stopover, any impacts on this species would be similar to those described for the piping plover above. Any roseate terns using the area may continue to be disrupted occasionally by ferry travel through Back Sound and ferry landing. They may also indirectly be disturbed by visitor use of the park. The level of disruption would not be of such a magnitude that it would be considered “take” under the Endangered Species Act. Therefore, impacts are expected to continue to be insignificant; in other words, a person would not be able to meaningfully measure, detect, or evaluate the effects of the disruptions on the populations. These actions are unlikely to adversely affect roseate terns.

Intertidal beaches are also used for foraging by several species listed as being of high concern in the *U.S. Shorebird Conservation Plan* (USFWS 2001b). These species include the American

oystercatcher, the Wilson's plover, and the red knot. Impacts on these species would be similar to those discussed above for piping plovers. There may be some temporary flushing of birds foraging along the shoreline related to ferry operations and landings and, indirectly, visitor use. However, this impact is expected to be insignificant, as defined above.

Finally, impacts on gull-billed terns, common terns, least terns, and black skimmers would continue to be related to temporary flushing by ferry operations and landings and visitor use of the park and would be insignificant, as defined above.

Impacts on Sea Turtles

As mentioned in the loggerhead sea turtle recovery plan, boat strikes are known to occur off the coast, in the area of water between the low tide mark and the drop-off of the continental shelf (NMFS and USFWS 2008). The possibility of this applies to all sea turtles that may occur in this area; however, the loggerhead turtle is the most frequently observed species to nest at the park. There is no specific data to differentiate this from boat strikes that occur in estuaries such as Back Sound; however, turtles do not generally frequent these estuarine environments. Because turtles would not be expected along the estuarine ferry routes, direct impacts to turtles are extremely unlikely to occur. Boat traffic associated with the ferry service is unlikely to adversely affect sea turtles. Disturbance and boat strikes would be discountable as extremely unlikely to occur.

In addition to boat traffic, there is the potential for indirect impacts on sea turtles related to visitor use of beaches. Recreational beach use has the potential to cause nesting females to abort nesting attempts, reduce hatchling emergence, and can disorient hatchlings. Because ferry service does not typically operate at night (when nesting and hatching generally occurs), it is unlikely that users traveling to the park via ferry would interfere with these activities. The NPS further attempts to avoid such situations by educating visitors within the boundaries of the park. Thus, continued ferry service would be unlikely to adversely affect sea turtle species. Any disturbance of nesting and hatching activities would be discountable as extremely unlikely to occur.

Impacts on West Indian Manatee

The primary threats to this species are habitat loss and watercraft-related mortality. Watercraft related mortality has the greatest impact on manatee population growth, resilience, and long-term persistency (USFWS 2009). Current ferry operators are owned and operated by private individuals; as such, the NPS cannot enforce any particular avoidance guidelines on them. Ferry operators generally use sandy channels through the shallow waters of the sounds when not travelling in the deeper commercial channels. Manatees tend to forage in beds of seagrass, which would entangle boat propellers. As such, there is some inherent spatial separation of uses along the ferry routes. Vigilant ferry operators are likely to be able to avoid manatees in the water. Boat strikes by these operators would be discountable as extremely unlikely to occur.

Impacts on Seabeach Amaranth

Ferry operation itself does not have the potential to directly affect seabeach amaranth; however, by delivering visitors to the park with little to no orientation to sensitive resources, existing ferry services have the potential to indirectly subject seabeach amaranth to trampling where it is not already protected by park managers. Due to these existing park management efforts and the ability of seabeach amaranth to adapt to the dynamic dune environment, impacts on seabeach amaranth are likely to be insignificant.

Summary

Overall, while Alternative A is not likely to adversely affect special status species, it is possible that impacts could occur. Effects on existing populations of shorebirds and sea turtles are expected to be insignificant and discountable, respective, and as such, Alternative A would result in long-term, negligible impacts on special status species.

Section 7 Summary: For the rational described above for each species of concern, the proposed action may affect but is not likely to adversely affect federally threatened and endangered species.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on special status species in and around the study area. These actions include the Harkers Island ferry service, existing Beaufort/Morehead City area ferry operations, private tour operations, off road vehicle use, and the interim protected species plan/EA. Boats navigating in Back and Bogue Sounds have the same potential for discountable and/or insignificant impacts to a special status species. The off road vehicle use of park beaches has reduced nesting success of some species. The implementation of the interim protected species management plan/EA, including the conservation measures described in the associated UWFWS BO, and the foreseeable future regulation of off road vehicle use are expected to mitigate these landside adverse impacts, and the park has been granted a permit for incidental take of relevant species. These actions, along with Alternative A, would have long-term, moderate, adverse and long-term beneficial cumulative impacts on special status species, according to the NEPA definition of cumulative impacts. Alternative A would contribute an imperceptible increment to this cumulative impact.

Section 7 Cumulative Effects: The ESA defines cumulative effects on federally listed species differently than NEPA. According to the ESA, cumulative effects are “effects resulting from future state or private activities, not involving federal activities that are reasonably certain to occur within the action area of the federal action subject to consultation.” Of the cumulative actions listed above, the continued private tour operations, is the only action that may contribute to the cumulative effect on special status species in the action area. This action may affect, but is not likely to adversely affect the special status species described above for the same reasons described for the proposed passenger ferry service.

Conclusion

Overall, while the proposed action is not likely to affect special status species, it is possible that impacts could occur. Effects on existing populations of shorebirds and sea turtles are expected to be insignificant and discountable, and as such, Alternative A would result in long-term, negligible impacts on special status species. Alternative A would contribute an imperceptible increment to long-term, moderate, adverse and long-term, beneficial cumulative impacts.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Impact Analysis

Under Alternative B, ferry service would be consolidated with a single operator based at the Front Street site in Beaufort. Under the consolidated ferry service, the number of ferry vessels traveling to the park is likely to be reduced because of a single operator operating on a set schedule using larger boats (when possible). Under this concessioner contract, the NPS also would be able to consistently provide increased orientation to the park's special status species through signs and pamphlets at the departure site and potentially through interpretation during the ferry trip which should reduce indirect disturbance to special status species.

Impacts on Birds

As under Alternative A, the actions proposed under this alternative are unlikely to affect piping plovers. The only impacts to nesting habitat for piping plover would be the indirect result of visitor use of the park. Such impacts would be occasional unintentional flushing of birds and could be reduced by increased visitor awareness provided during orientation to the park's resources and regulations at the improved ferry departure site. Foraging in the intertidal zones may continue to be disrupted occasionally by ferry travel through Back Sound and ferry landings; however, this level of disruption would be reduced due to consolidated vessel trips. As under Alternative A, impacts would not be of such a magnitude that it would be considered "take" under the Endangered Species Act. Therefore, impacts are expected to continue to be insignificant; in other words, a person would not be able to meaningfully measure, detect, or evaluate the effects of the disruptions on the populations.

Impacts to roseate terns would be similar to those described under Alternative A, as well. The consolidation of ferry service may lead to a slight decrease in boat traffic through Back, Bogue, and Core Sounds and visitors would be better educated on the park's resources and how to avoid sensitive species. As under Alternative A, impacts would not be of such a magnitude that it would be considered "take" under the Endangered Species Act. Therefore, impacts are expected to continue to be insignificant.

Intertidal beaches are also used for foraging by several species listed as being of high concern in the *U.S. Shorebird Conservation Plan* (USFWS 2001b). These species include the American oystercatcher, the Wilson's plover, and the red knot. Impacts on these species would be similar to those discussed above for piping plovers. Temporary flushing of foraging birds by

visitors may be reduced by additional orientation efforts. Temporary flushing related to ferry operations and landings may also be reduced and would continue to be insignificant.

Finally, impacts on gull-billed terns, common terns, least terns, and black skimmers would continue to be related to temporary flushing by ferry operations and landings and visitor use of the park. This impact may be reduced over Alternative A and would continue to be insignificant, as defined above.

Impacts on Sea Turtles

As mentioned in the loggerhead sea turtle recovery plan, boat strikes are known to occur off the coast, in the area of water between the low tide mark and the drop-off of the continental shelf (NMFS and USFWS 2008). The possibility of this applies to all sea turtles that may occur in this area; however, the loggerhead turtle is the most frequently observed species to nest at the park. There is no specific data to differentiate this from boat strikes that occur in estuaries such as Back Sound; however, turtles do not generally frequent these estuarine environments. Because turtles would not be expected along the estuarine ferry routes, direct impacts to turtles are extremely unlikely to occur. Boat traffic associated with the ferry service may be reduced under this alternative because of the consolidated ferry service (e.g., fewer ferries travelling to and from the park) and would continue to be unlikely to adversely affect sea turtles. Disturbance and boat strikes would be discountable as extremely unlikely to occur.

In addition to boat traffic, there is the potential for indirect impacts on sea turtles related to visitor use of beaches, as described under Alternative A. Consolidation of ferry service and improved visitor orientation and education may further reduce impacts related to nesting and hatchling success due to visitor use of the park. As such, this alternative would be unlikely to adversely affect sea turtle species. Any disturbance of nesting and hatching activities would be discountable as extremely unlikely to occur.

Impacts on West Indian Manatee

The primary threats to this species are habitat loss and watercraft-related mortality. Watercraft related mortality has the greatest impact on manatee population growth, resilience, and long-term persistency (USFWS 2009). Under Alternative B, the NPS would issue a concession contract to the ferry operator and would include in this contract the guidelines for avoiding impacts to the West Indian manatee developed by the Raleigh Field Office of the USFWS. Vigilant ferry operators are likely to be able to avoid manatees in the water. Boat strikes by these operators would be discountable as extremely unlikely to occur.

Impacts on Seabeach Amaranth

Ferry operation itself does not have the potential to directly affect seabeach amaranth; however, by orienting visitors to the park and its sensitive resources, the concessioner-run ferry service have the potential to reduce the level of indirect impacts on seabeach amaranth. Due to ongoing park management efforts and the ability of seabeach amaranth to adapt to the dynamic dune environment, impacts on seabeach amaranth are likely to be insignificant.

Summary

Overall, while Alternative B would be unlikely to adversely affect special status species, some impacts may occur. Effects on populations of shorebirds and sea turtles are expected to be less than those occurring under Alternative A because of consolidated ferry service and improved visitor orientation, and these effects would continue to be insignificant and discountable, as described above. As such, Alternative B would result in long-term, negligible impacts on special status species.

Section 7 Summary: For the rational described above for each species of concern, the proposed action may affect but is not likely to affect federally threatened and endangered species.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on special status species in and around the study area. These actions include the Harkers Island ferry service, existing Beaufort/Morehead City Area ferry operations, private tour operations, off road vehicle use, and the interim protected species plan/EA and are described under Alternative A. These actions, along with Alternative B, would have long-term, moderate, adverse and long-term, beneficial cumulative impacts on special status species. Alternative B would contribute an imperceptible increment to this cumulative impact.

Section 7 Cumulative Effects: The ESA defines cumulative effects on federally listed species differently than NEPA. According to the ESA, cumulative effects are “effects resulting from future state or private activities, not involving federal activities that are reasonably certain to occur within the action area of the federal action subject to consultation.” Of the cumulative actions listed above, the continued private tour operations, is the only action that may contribute to the cumulative effect on special status species in the action area. This action may affect, but is not likely to adversely affect the federally listed species above described above for the same reasons described for the proposed passenger ferry service.

Conclusion

Overall, while Alternative B would be unlikely to adversely affect special status species, some impacts may occur. Effects on populations of shorebirds and sea turtles are expected to be less than those occurring under Alternative A because of consolidated ferry service and improved visitor orientation, and these effects would continue to be insignificant and discountable, as described above. As such, Alternative B would result in long-term, negligible impacts on special status species. Alternative B would contribute an imperceptible increment to long-term, moderate, adverse and long-term beneficial cumulative impacts.

ALTERNATIVE C: 10TH STREET

Impact Analysis

Under Alternative C, ferry service would be consolidated with a single operator based at the Front Street site in Beaufort. Under the consolidated ferry service, the number of ferry vessels

traveling to the park is likely to be reduced because of a single operator operating on a set schedule using larger boats (when possible). Under this concessioner contract, the NPS also would be able to consistently provide increased orientation to the park's special status species through signs and pamphlets at the departure site and potentially through interpretation during the ferry trip which should reduce indirect disturbance to special status species. All impacts under this alternative would be the same as described under Alternative B above with one exception. Under Alternative C, there may be the need for occasional dredging of the 10th Street departure site docks in order to maintain water depth needed for ferry operations. This difference is discussed in more detail under the sea turtle section below.

Impacts on Birds

As under Alternatives A and B, the actions proposed under this alternative are unlikely to affect piping plovers. The only impacts to nesting habitat for piping plover would be the indirect result of visitor use of the park. Such impacts would be occasional unintentional flushing of birds and could be reduced by increased visitor awareness provided during orientation to the park's resources and regulations at the improved ferry departure site. Foraging in the intertidal zones may continue to be disrupted occasionally by ferry travel through Back Sound and ferry landings; however, this level of disruption would be reduced due to consolidated vessel trips. As under Alternative A, impacts would not be of such a magnitude that it would be considered "take" under the Endangered Species Act. Therefore, impacts are expected to continue to be insignificant; in other words, a person would not be able to meaningfully measure, detect, or evaluate the effects of the disruptions on the populations.

Impacts to roseate terns would be similar to those described under Alternatives A and B, as well. The consolidation of ferry service may lead to a slight decrease in boat traffic through Back, Bogue, and Core Sounds and visitors would be better educated on the park's resources and how to avoid sensitive species. As under Alternatives A and B, impacts would not be of such a magnitude that it would be considered "take" under the Endangered Species Act. Therefore, impacts are expected to continue to be insignificant.

Intertidal beaches are also used for foraging by several species listed as being of high concern in the *U.S. Shorebird Conservation Plan* (USFWS 2001b). These species include the American oystercatcher, the Wilson's plover, and the red knot. Impacts on these species would be similar to those discussed above for piping plovers. Temporary flushing of foraging birds by visitors may be reduced by additional orientation efforts. Temporary flushing related to ferry operations and landings may also be reduced and would continue to be insignificant.

Finally, impacts on gull-billed terns, common terns, least terns, and black skimmers would continue to be related to temporary flushing by ferry operations and landings and visitor use of the park. This impact may be reduced over Alternative A and would continue to be insignificant, as defined above.

Impacts on Sea Turtles

As mentioned in the loggerhead sea turtle recovery plan, boat strikes are known to occur off the coast, in the area of water between the low tide mark and the drop-off of the continental shelf (NMFS and USFWS 2008). The possibility of this applies to all sea turtles that may occur in this area; however, the loggerhead turtle is the most frequently observed species to nest at the park. There is no specific data to differentiate this from boat strikes that occur in estuaries such as Back Sound; however, turtles do not generally frequent these estuarine environments. Because turtles would not be expected along the estuarine ferry routes, direct impacts to turtles are extremely unlikely to occur. Boat traffic associated with the ferry service may be reduced under this alternative because of the consolidated ferry service (e.g., fewer ferries travelling to and from the park) and would continue to be unlikely to adversely affect sea turtles. Disturbance and boat strikes would be discountable as extremely unlikely to occur.

Dredging is listed as a threat to sea turtles because of the temporary increases in turbidity, total suspended solids, and the potential for exposure of contaminated sediment. The 10th Street docks are located in area frequented by commercial and recreational boats as they travel through the USACE-maintained Beaufort Channel. The dredging that would be required at this location is very minor compared to the maintenance of the Beaufort Channel, and dredging at the site is expected to be required for startup but would be infrequent afterwards. The location, magnitude, and infrequency of this event should not realistically affect any federally listed species within the study area.

In addition to boat traffic and dredging, there is the potential for indirect impacts on sea turtles related to visitor use of beaches, as described under Alternative A. Consolidation of ferry service and improved visitor orientation and education may further reduce impacts related to nesting and hatchling success due to visitor use of the park. As such, this alternative would be unlikely to adversely affect sea turtle species. Any disturbance of nesting and hatching activities would be discountable as extremely unlikely to occur.

Impacts on West Indian Manatee

The primary threats to this species are habitat loss and watercraft-related mortality. Watercraft related mortality has the greatest impact on manatee population growth, resilience, and long-term persistency (USFWS 2009). Under Alternative B, the NPS would issue a concession contract to the ferry operator and would include in this contract the guidelines for avoiding impacts to the West Indian manatee developed by the Raleigh Field Office of the USFWS. Vigilant ferry operators are likely to be able to avoid manatees in the water. Boat strikes by these operators would be discountable as extremely unlikely to occur.

Impacts on Seabeach Amaranth

Ferry operation itself does not have the potential to directly affect seabeach amaranth; however, by orienting visitors to the park and its sensitive resources, the concessioner-run ferry service have the potential to reduce the level of indirect impacts on seabeach amaranth. Due to ongoing park management efforts and the ability of seabeach amaranth to adapt to the dynamic dune environment, impacts on seabeach amaranth are likely to be insignificant.

Summary

Overall, while Alternative C would be unlikely to adversely affect special status species, some impacts may occur. Effects on populations of shorebirds and sea turtles are expected to be less than those occurring under Alternative A because of consolidated ferry service and improved visitor orientation, and these effects would continue to be insignificant and discountable, as described above. As such, Alternative C would result in long-term, negligible impacts on special status species.

Section 7 Summary: For the rational described above for each species of concern, the proposed action may affect but is not likely to affect federally threatened and endangered species.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on special status species in and around the study area. These actions include the Harkers Island ferry service, existing Beaufort/Morehead City Area ferry operations, private tour operations, off road vehicle use, and the interim protected species plan/EA and are described under Alternative A. These actions, along with Alternative C, would have long-term, moderate, adverse and long-term, beneficial cumulative impacts on special status species. Alternative C would contribute an imperceptible increment to this cumulative impact.

Section 7 Cumulative Effects: The ESA defines cumulative effects on federally listed species differently than NEPA. According to the ESA, cumulative effects are “effects resulting from future state or private activities, not involving federal activities that are reasonably certain to occur within the action area of the federal action subject to consultation.” Of the cumulative actions listed above, the continued private tour operations, is the only action that may contribute to the cumulative effect on special status species in the action area. This action may affect, but is not likely to adversely affect the federally listed species above described above for the same reasons described for the proposed passenger ferry service.

Conclusion

Overall, while Alternative C would be unlikely to adversely affect special status species, some impacts may occur. Effects on populations of shorebirds and sea turtles are expected to be less than those occurring under Alternative A because of consolidated ferry service and improved visitor orientation, and these effects would continue to be insignificant and discountable, as described above. As such, Alternative C would result in long-term, negligible impacts on special status species. Alternative C would contribute an imperceptible increment to long-term, moderate, adverse and long-term beneficial cumulative impacts.

HISTORIC STRUCTURES AND DISTRICTS

METHODOLOGY

For purposes of analyzing potential impacts to historic structures/buildings, the thresholds of change for the intensity of an impact are defined as follows:

- Negligible:** Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. An assessment of effect according to section 106 of the NHPA would result in a determination of *no adverse effect*.
- Minor:** Adverse impact – Alteration of a character-defining feature(s) would not diminish the overall integrity of the resource. An assessment of effect according to section 106 of the NHPA would result in a determination of *no adverse effect*.
Beneficial impact – Stabilization/preservation of character-defining features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.
- Moderate:** Adverse impact – Alteration of a character-defining feature(s) would diminish the overall integrity of the resource. An assessment of effect according to section 106 of the NHPA would result in a determination of *adverse effect*. A MOA is executed among the NPS and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.
Beneficial impact – Rehabilitation of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.
- Major:** Adverse impact – Alteration of a character-defining feature(s) would diminish the overall integrity of the resource. An assessment of effect according to section 106 of the NHPA would result in a determination of *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon, and the NPS and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a MOA in accordance with 36 CFR 800.6(b).
Beneficial impact – Restoration of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under Alternative A, ferry service from the Beaufort/Morehead City area to Shackleford Banks and the Cape Lookout Lighthouse would continue to be provided by a variety of ferry service operators. At the time of this document, there were several operators providing service from the Beaufort waterfront, and none provided service from the Morehead City waterfront. These ferry

operators generally use established docks and landside accommodations; however, they would also be free to alter and/or update their facilities at their own discretion. The NPS would not be involved in any potential impacts on historic structures or districts.

Cumulative Impacts

Although other past, present, and reasonably foreseeable future actions may affect historic structures in the area, the no action alternative would have no impacts on historic structures and therefore would not contribute to the effects of other actions. Consequently, there would be no cumulative impacts on historic structures under the no action alternative.

Conclusion

The NPS would not be involved in any potential impacts on historic structures or districts.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Impact Analysis

Under this alternative, ferry service would be consolidated at the Front Street site in Beaufort. Orientation and restroom facilities would be provided within the existing Post Office building with parking provided in existing parking areas. Dock facilities would remain the same; however some incremental improvements may be made over time. A passenger and queuing area providing shade and protection from rain would also be provided in the area.

The Beaufort Post Office is a contributing element to the Beaufort National Register Historic District and is located within the locally-designated Beaufort Historic District. The town of Beaufort is responsible for acquiring the Post Office for use at this site. The NPS assumes that protective covenants to run with the land in perpetuity would be part of the sale. This would ensure that the building would be preserved in accordance with the *Secretary of the Interior's Standards for Rehabilitation*, with any construction, alteration, remodeling, demolition, or other undertakings on the property subject to review and approval by the SHPO.

The temporary gateway orientation area and temporary ferry ticketing area would be installed by spring of 2013 but would be removed by spring of 2016, at which point the Post Office renovations would be complete.

The passenger and queuing shade structure would be designed to avoid visual intrusion and obstructions to the historic characteristics of the existing town development and its water orientation.

A total of 70 designated ferry passenger parking spaces would be provided in existing parking along Front Street between Queen Street and Live Oak Street. An additional 15 spaces would be provided next to the Post Office building just off Pollack Street. Overall, these designated spaces would accommodate up to 85 cars. During the summer season, some overflow parking beyond these designated spaces may be required; however, this peak season overflow parking is not

expected to exceed existing ferry customer use of on-street parking. The town may arrange to use the BB&T parking lot on the weekends, to keep this excess parking from overflowing onto town streets and provide parking in close proximity to the site. There is very little designated ferry parking for the existing ferry operators, and the ferry passengers currently use existing street parking within Beaufort. Therefore, having some overflow onto street parking should not noticeably impact the historic district. No new parking areas would be created under this alternative; the proposed arrangement uses existing spaces.

The NPS is coordinating with the SHPO through scoping prior to development of this combination EA/AoE document and through this document itself. Additional detail on continued consultation regarding this, the NPS preferred alternative, is included in Chapter 5: Consultation and Coordination.

Overall, Alternative B would have long-term, negligible impacts on historic structures and districts because the addition of site elements would be neither adverse nor beneficial.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on historic structures and districts within the study area. These actions include continued operation of other ferry services along the Beaufort waterfront. The low level of impacts associated with these developments is not expected to have either beneficial nor adverse effects on the Beaufort Historic District. These impacts, when combined with Alternative B, would result in a long-term, negligible cumulative impact on historic structures and districts. Alternative B would contribute an imperceptible increment to this impact.

Conclusion

Overall, Alternative B would have long-term, negligible impacts on historic structures and districts because the addition of site elements would be neither adverse nor beneficial. Alternative B would contribute an imperceptible increment to a long, term negligible cumulative impact on historic structures and districts.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects), the NPS concludes that implementation of Alternative B would not result in an adverse effect to historic structures and districts. For purposes of Section 106, the determination of effect would be no adverse effect.

ALTERNATIVE C: 10TH STREET

The 10th Street site is located within 0.2 miles of the Morehead City National Register Historic District. Approximately 65 parking spaces would be provided off the street at the 10th Street site. Any overflow parking during the peak season is unlikely to spill into the historic district because there is sufficient public parking available closer to the site than the historic district. No new parking areas would be created under this alternative; the proposed arrangement would improve

existing parking areas. There are no anticipated impacts to historic structures or districts under this alternative.

Cumulative Impacts

Although other past, present, and reasonably foreseeable future actions may affect historic structures in the area, Alternative C would have no impacts on historic structures and therefore would not contribute to the effects of other actions. Consequently, there would be no cumulative impacts on historic structures under Alternative C.

Conclusion

There are no anticipated impacts to historic structures or districts under this alternative.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects), the NPS concludes that implementation of Alternative C would not result in an adverse effect to historic structures and districts. For purposes of Section 106, the determination of effect would be no adverse effect.

SOCIOECONOMIC RESOURCES AND GATEWAY COMMUNITIES

METHODOLOGY

Because of the importance of the potential impacts on socioeconomics and the potential gateway communities of Beaufort and Morehead City, this section provides a relatively extensive analysis of potential impacts under each alternative. In order to maintain clarity of the impact analysis, an extensive methodology section is provided. Methodology is based on standard NPS NEPA methodologies but is defined specifically for this analysis below.

The primary sources of impacts to economic output, personal income, taxes, and the current CUA ferry operators within the project area include:

- Net changes in visitor spending on ferry services
- Net changes in visitor spending on other goods/services
- Net changes in ferry industry employment
- Net changes in ferry fuel expenditures
- Net changes in ferry vessel repair and maintenance
- Construction expenditures on new ferry facilities

Since the action alternatives being considered locate all ferry services to Shackleford Banks in either Beaufort or Morehead City, the impact analysis presented in this report examines the impacts to both communities under each alternative. Since ferry service operations currently exist in Beaufort and Morehead City, this analysis examines the marginal or net change in spending and employment in these communities that would occur under each alternative, which avoids double counting the magnitude of the associated impacts.

An important assumption in this analysis is that all shifts in spending and changes in employment/personal income occur in either Beaufort or Morehead City. This is a reasonable assumption for spending on ferry services, as this spending is expected to be concentrated in the location where the ferry concession is ultimately developed. However, other spending shifts, such as visitor spending on other goods/services, are likely to be more dispersed and distributed between Beaufort and Morehead City or other locations in Carteret County. For example, if ferry concession operations are located in Morehead City (Alternative C), visitors planning to ride the ferry will not necessarily shift all of their expenditures on other goods/services to Morehead City, but will likely continue to visit and make purchases in Beaufort and other areas of Carteret County as well. However, there is little information available that would allow us to estimate the distribution of spending shifts between Beaufort and Morehead City for a particular alternative. For this reason, the magnitude of the estimated impacts presented in this analysis represent conservative, upper-bound estimates, while the magnitude of the actual impacts would likely be smaller than those estimated in this report.

The input/output software IMPLAN was used in this analysis to model impacts to the local economies of Beaufort and Morehead City under each of the action alternatives.

It is important to recognize that different economies are linked to each other (to a greater or lesser extent) via imports and exports of goods and services. IMPLAN accounts for these linkages by analyzing the trade flows (imports/exports) of goods and services within and between economies. However, IMPLAN does not permit analysis of impacts between economies using the 2008 IMPLAN zip code data on which this analysis is based. For example, impacts to economic output, employment/personal income, and taxes in Morehead City that result from changes in visitor spending in Beaufort cannot be analyzed. In this case, only the impacts to economic output, employment/personal income, and taxes in Beaufort can be analyzed, not the transferred impacts (acting through imports/exports) occurring in Morehead City.

This study utilizes the IMPLAN 2008 County Plus Package data for Carteret County, North Carolina. This data package allows Carteret County to be separated into ZIP codes that can be analyzed individually, which allows impacts to local economies to be analyzed. In this case, we use the ZIP codes for Beaufort (28516) and Morehead City (28557) to represent the economies of these communities.

Impact intensity is the degree to which a resource would be affected by the impact ranging from negligible, minor, moderate, to major. The following impact intensities are defined for each impact topic addressed in this analysis and are based on professional judgment.

Issues of local economy and land use were identified through the scoping process and include impacts on adjacent landowners and nearby towns, and the economic contribution of the park to the local economy. The thresholds of change for the intensity of an impact are as follows:

Negligible: No impacts would occur, or the impacts on economic conditions would be below or at the level of detection. The impact would be slight, and no long-term impacts on economic conditions would occur. Economic output would be less than

\$250,000. Impacts to labor income/employment would be less than \$200,000 (or less than 10 new jobs). Impacts to state/local taxes would be less than \$100,000.

Minor: The impacts on economic conditions would be detectable, although short-term or small when compared to current levels of economic activity. Economic output would be between \$250,000 and \$1.5 million. Impacts to labor income/employment would be between \$200,000 and \$1.0 million (or between 10 and 30 new jobs). Impacts to state/local taxes would be between \$100,000 and \$400,000.

Moderate: The impacts on economic conditions would be readily apparent and likely long-term. Economic output would be between \$1.5 million and \$5.0 million. Impacts to labor income/employment would be between \$1.0 million and \$5.0 million (or between 30 and 90 new jobs). Impacts to state/local taxes would be between \$400,000 and \$1.0 million.

Major: The impacts on economic conditions would be readily apparent, long-term, and would cause substantial changes to economic conditions in the region. Economic output would be greater than \$5.0 million. Impacts to labor income/employment would be greater than \$5.0 million (or greater than 90 new jobs). Impacts to state/local taxes would be greater than \$1.0 million and would represent a significant change in the tax base of the local economy.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under Alternative A, there would be no changes to existing ferry services serving the southern region of the park, including primarily Shackleford Banks. Ferry services would continue to be authorized by the NPS via the granting of CUA permits to ferry operators in Beaufort and Morehead City. In addition, no new ferry facilities would be developed under Alternative A, and ferry service providers would continue to operate from their current locations. Ferry operators would be responsible for all capital improvements at their departure sites.

Since no changes to existing ferry service would occur under Alternative A, there would be no net impacts to economic output, labor income/employment, or state/local taxes in Beaufort, Morehead City, and Carteret County. The provision of ferry services in both Beaufort and Morehead City would continue to represent long-term, beneficial contributions to local economic output, labor income/employment, and state/local taxes; this translates to an overall long-term, beneficial impact on socioeconomic resources and gateway communities.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on socioeconomic resources and gateway communities. These actions include the Harkers Island ferry service and continued tour operations. Provision of the Harkers Island

ferry service to the east end of Shackleford Banks may represent a potential source of competition for the ferry concessioner in Beaufort/Morehead City who would also be providing ferry services to Shackleford Banks. However, the Beaufort/Morehead City area is a popular vacationing region and demand for ferry service to Shackleford Banks is likely to continue, particularly given the close proximity of Beaufort/Morehead City to the west end of Shackleford Banks. Therefore, it is unlikely that the Harkers Island ferry operation would pull a significant amount of business away from the Beaufort/Morehead City ferry operator. Given these considerations, Harkers Island ferry service would have long-term, negligible, adverse impacts on socioeconomic resources and gateway communities. Additionally, it is assumed that continuing tours including the park would not interfere with or hinder ferry concession operations. Given this assumption, continuing tours would result in long-term, beneficial impacts on socioeconomic resources and gateway communities. These actions, along with Alternative A, would have a long-term, beneficial cumulative impact on socioeconomic resources and gateway communities. Alternative A would contribute an imperceptible beneficial increment to this cumulative impact.

Conclusion

The provision of ferry services in both Beaufort and Morehead City would continue to represent long-term, beneficial contributions to local economic output, labor income/employment, and state/local taxes; this translates to an overall long-term, beneficial impact on socioeconomic resources and gateway communities. Alternative A would contribute an imperceptible beneficial increment to a long-term, beneficial cumulative impact on socioeconomic resources and gateway communities.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Impact Analysis

Under Alternative B, ferry services serving the southern region of Cape Lookout National Seashore, including primarily Shackleford Banks, would be located at the Front Street site in Beaufort and operated under a single concession contract. The concessioner would be required to provide scheduled services to Shackleford Banks and authorized to provide ferry service to the lighthouse.

The greatest impacts to the local economy result from changes in labor income/employment because of the large degree of localized spending impacts associated with greater employment and labor income levels in the local economy. In addition, given that the concession contract would be for a 10-year period, there is the potential that the demand for ferry services could start out low and then grow over the period, which would result in growth in economic output, employment/labor income, and taxes. As mentioned under the Methodology section above, the IMPLAN model was used to forecast these impacts. Tables detailing the impacts described below are included in Appendix B.

The total long-term impacts to economic output would be approximately \$129,000 or an increase in total economic output in Beaufort of roughly 0.02%. The largest impact is associated with an increase in labor income of nearly \$39,000 which is estimated to generate \$85,000 in economic

output. Associated with this increase in Beaufort, total economic output in Morehead City would be a reduction in economic output of \$19,000 or 0.001%. The largest impact results from the decline of \$7,738 in visitor spending on other goods/services that would result from all ferry operations being relocated to Beaufort.

A total of nearly \$50,000 in additional labor income or 1.6 jobs would be created as result of the spending and employment changes under Alternative B. This translates into an increase of roughly 0.03% in both labor income and employment in Beaufort. This would be accompanied by a decline in labor income/employment in Morehead City; labor income/employment would decline by nearly \$10,000 or 0.2 jobs, representing a decline in labor income of 0.002% and a decline in employment of 0.001%.

A total of approximately \$13,000 in additional state/local tax revenues would be generated as a result of the spending and employment changes under Alternative B. This represents an increase of roughly 0.02% in state/local taxes in Beaufort. As a result of the decline in spending and employment in Morehead City under Alternative B, state/local tax revenues would be decline by roughly \$2,000 or 0.001%.

In addition to impacts on the economy as a whole, it should be noted that under both action alternatives, including Alternative B, the establishment of long-term ferry departure site via a partnership between the NPS and a local public entity would remove financial burden from the ferry operator. Under the ferry concession contract, the concessioner would be required to utilize two larger capacity vessels capable of transporting approximately 48 passengers each, and also utilize a smaller skiff with an approximate 16 passenger capacity. The use of these vessels would represent the primary capital investment that a concessioner would be required to make. Other site improvements would be provided by either the NPS or the partner entity, as would be laid out in the final MOU.

Short-term impacts on socioeconomic resources would be related to the construction and development of the new ferry concession facilities. Short-term impacts to economic output were estimated at approximately \$674,000 due to construction spending on new ferry facilities, representing an increase in economic output in Beaufort of 0.24%. The short-term impacts associated with the construction of new ferry facilities are estimated to generate \$174,000 in additional labor income or 5.4 jobs. This short-term impact would represent an increase in current labor income in Beaufort of 0.10% and a 0.10% increase in employment. The short-term impacts associated with the construction of new ferry facilities is estimated to generate approximately \$17,000 in additional state/local tax revenues or an increase of 0.02% in state/local taxes in Beaufort. The construction of new ferry facilities would occur over the course of approximately one year. Once the construction project is completed, the impacts to the local economies of Beaufort would cease. There would be no short-term impacts to Morehead City under this alternative.

Overall, Alternative B would result in short-term, beneficial impacts on socioeconomic resources and gateway communities in Beaufort because of the increase in spending, economic output, and labor income/employment associated with construction of the new ferry concession facilities.

Alternative B would also result in local, long-term, beneficial impacts to socioeconomic resources and gateway communities in Beaufort because of an increase in economic output, labor income/employment, and state/local tax revenues. These beneficial impacts would be balanced by local, long-term, negligible, adverse impacts on socioeconomic resources in Morehead City because of decreased economic output, labor income/employment, and state/local tax revenues. These impacts would be closely related, and both towns would share both beneficial and adverse impacts; therefore, at the regional scale of Carteret County, Alternative B would have long-term, beneficial impacts on socioeconomic resources and gateway communities because an improved gateway to Cape Lookout National Park would be provided in the Beaufort/Morehead City Area.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on socioeconomic resources and gateway communities. These actions include the Harkers Island ferry service and continued tour operations and are described under Alternative A. These actions, along with Alternative B, would have a long-term, beneficial impact on socioeconomic resources and gateway communities. Alternative B would contribute an imperceptible to noticeable beneficial increment to this cumulative impact.

Conclusion

Overall, Alternative B would result in short-term, beneficial impacts on socioeconomic resources and gateway communities in Beaufort because of the increase in spending, economic output, and labor income/employment associated with construction of the new ferry concession facilities. Alternative B would also result in local, long-term, beneficial impacts to socioeconomic resources and gateway communities in Beaufort because of an increase in economic output, labor income/employment, and state/local tax revenues. These beneficial impacts would be balanced by local, long-term, negligible, adverse impacts on socioeconomic resources in Morehead City because of decreased economic output, labor income/employment, and state/local tax revenues. These impacts would be closely related, and both towns would share both beneficial and adverse impacts; therefore, at the regional scale of Carteret County, Alternative B would have long-term, beneficial impacts on socioeconomic resources and gateway communities because an improved gateway to Cape Lookout National Park would be provided in the Beaufort/Morehead City Area. Alternative B would contribute an imperceptible to noticeable beneficial increment a long-term, beneficial impact on socioeconomic resources and gateway communities.

ALTERNATIVE C: 10TH STREET

Impact Analysis

Under Alternative C, ferry services serving the southern region of Cape Lookout National Seashore, including primarily Shackleford Banks, would be located at the 10th Street site in Morehead City and operated under a single concession contract. The concessioner would be required to provide scheduled ferry service to Shackleford Banks and authorized to provide service to lighthouse.

As under Alternative B, the greatest impacts to the local economy result from changes in labor income/employment because of the large degree of localized spending impacts associated with greater employment and labor income levels in the local economy. In addition, given that the concession contract would be for a 10-year period, there is the potential that the demand for ferry services could start out low and then grow over the period, which would result in growth in economic output, employment/labor income, and taxes. As mentioned under the Methodology section above, the IMPLAN model was used to forecast these impacts. Tables detailing the impacts described below are included in Appendix B.

Total long-term impacts on economic output in Morehead City would be an increase in economic output of \$1.33 million or 0.10% of total economic output. The largest impact would result from the increase in visitor spending of \$733,000 which would generate \$614,000 in economic output. Total long-term impacts on economic output in Beaufort would be a decline of approximately \$1.25 million in economic output, representing a decrease of roughly 0.22%. The largest impact is associated with a decrease in local visitor spending of \$684,000 which is estimated to reduce economic output by \$574,000. The decline in ferry employment implicitly assumes that current ferry operators in Beaufort would need to lay-off employees currently providing ferry service to the park or equivalently that ferry employees would relocate to Morehead City.

A total of nearly \$673,000 in additional labor income or 17.5 jobs would be created as result of the spending and employment changes under Alternative C. This translates into an increase of roughly 0.14% and 0.12% in labor income and employment in Morehead City, respectively. The short-term impacts associated with construction spending on new ferry facilities are estimated to generate \$387,000 in additional labor income or 11.8 jobs. Labor income in Beaufort would decline by \$581,000 or 0.33% and the number of jobs would decline by 15.5 or 0.28% of total employment.

A total of \$133,000 in additional state/local tax revenues would be generated as a result of the spending and employment changes under Alternative C. This represents an increase of roughly 0.06% in state/local taxes in Morehead City. State/local tax revenues would be decline by \$106,000 or 0.14% as a result of the decline in spending and employment in Beaufort under Alternative C.

In addition to impacts on the economy as a whole, it should be noted that under both action alternatives, including Alternative B, the establishment of long-term ferry departure site via a partnership between the NPS and a local public entity would remove financial burden from the ferry operator. Under the ferry concession contract, the concessioner would be required to utilize two larger capacity vessels capable of transporting approximately 48 passengers each, and also utilize a smaller skiff with an approximate 16 passenger capacity. The use of these vessels would represent the primary capital investment that a concessioner would be required to make. Other site improvements would be provided by either the NPS or the partner entity, as would be laid out in the final MOU.

Short-term impacts on socioeconomic resources would be related to the construction and development of the new ferry concession facilities. Short-term impacts to economic output resulting from construction spending on new ferry facilities were estimated at approximately

\$1.44 million representing an increase in economic output in Morehead City of 0.21%. Short-term impacts would represent an increase in current labor income and employment in Morehead City of 0.08%. Short-term impacts associated with construction spending on new ferry facilities is estimated to generate approximately \$44,000 in additional state/local tax revenues or an increase of 0.02% in state/local taxes in Morehead City. The construction of new ferry facilities would occur over the course of approximately one year. Once the construction project is completed, the impacts to the local economies of Morehead City would cease. There would be no short-term impacts to Beaufort under this alternative.

Overall, Alternative C would result in short-term, beneficial impacts on socioeconomic resources and gateway communities in Morehead City because of the increase in spending, economic output, and labor income/employment associated with construction of the new ferry concession facilities. Alternative C would also result in local, long-term, beneficial impacts to socioeconomic resources and gateway communities in Morehead City because of an increase in economic output, labor income/employment, and state/local tax revenues. These beneficial impacts would be balanced by local, long-term, negligible to minor, adverse impacts on socioeconomic resources in Beaufort because of decreased economic output, labor income/employment, and state/local tax revenues. These impacts would be closely related, and both towns would share both beneficial and adverse impacts; therefore, at the scale of Carteret County, Alternative C would have regional, long-term, beneficial impacts on socioeconomic resources and gateway communities because an improved gateway to Cape Lookout National Park would be provided in the Beaufort/Morehead City Area.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on socioeconomic resources and gateway communities. These actions include the Harkers Island ferry service and continued tour operations and are described under Alternative A. These actions, along with Alternative C, would have a long-term, beneficial impact on socioeconomic resources and gateway communities. Alternative C would contribute an imperceptible to noticeable beneficial increment to this cumulative impact.

Conclusion

Overall, Alternative C would result in short-term, beneficial impacts on socioeconomic resources and gateway communities in Morehead City because of the increase in spending, economic output, and labor income/employment associated with construction of the new ferry concession facilities. Alternative C would also result in local, long-term, beneficial impacts to socioeconomic resources and gateway communities in Morehead City because of an increase in economic output, labor income/employment, and state/local tax revenues. These beneficial impacts would be balanced by local, long-term, negligible to minor, adverse impacts on socioeconomic resources in Beaufort because of decreased economic output, labor income/employment, and state/local tax revenues. These impacts would be closely related, and both towns would share both beneficial and adverse impacts; therefore, at the scale of Carteret County, Alternative C would have regional, long-term, beneficial impacts on socioeconomic resources and gateway communities because an improved gateway to Cape Lookout National

Park would be provided in the Beaufort/Morehead City Area. Alternative C would contribute an imperceptible to noticeable beneficial increment a long-term, beneficial impact on socioeconomic resources and gateway communities.

VISITOR USE AND EXPERIENCE

METHODOLOGY

NPS *Management Policies 2006* (NPS 2006a) states that enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks and that the NPS is committed to providing appropriate, high-quality opportunities for visitors to enjoy parks. Past interpretive and administrative planning documents provided background on changes to visitor use and experience over time. Anticipated impacts on visitor use and experience were analyzed using information from previous studies. For this analysis, visitor use and experience includes visitor understanding and satisfaction, site access and circulation, visual quality, and ethnographic resources are included in this topic. The means by which the visitor experiences the resource relates to the quality of the ethnographic resources. Based on these findings, the following intensity levels were developed:

- Negligible:** Changes in visitor use and/or experience would be below or at the level of detection. The visitor would not likely 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 would be slightly 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 or exceptionally beneficial. 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, visitors would continue to depend upon whichever ferry operators choose to provide service to the park and was authorized to do so. Ferry providers would be subject to change on a yearly basis. Service could be based out of Beaufort alone, Morehead City alone, or both. The park and local lodging and dining establishments would provide information to visitors on how to contact and/or locate these ferry operators. Provision of wayfinding signs to the docks

and to parking would be up to individual ferry operators. Current signage is very limited and generally only labels the ferry dock itself. Visitors would not be presented with any easily recognizable gateway to the park.

Facilities and level of service would continue to vary by each ferry operator. Each ferry operator could also change their facilities and level of service without approval by the NPS. Different ferry services may offer different levels of accessibility to passengers with physical disabilities. The facilities provided by most services do not meet ADA or other federal accessibility standards. The use of small skiffs can lead to an uncomfortable ride with very little to prevent visitors from getting wet under certain conditions. Some visitors also may be personally uncomfortable riding in these small vessels. Visitors would continue to be provided with limited orientation to or interpretation of the park and its resources. Although local residents who are familiar with existing ferry operators may enjoy the unique experiences provided by each operator, the lack of introduction to the park and the potentially confusing logistics of arranging for ferry transportation can reduce other visitors' enjoyment of their visit to the park. Overall, Alternative A would have a long-term, moderate, adverse impact on visitor use and experience because existing issues with locating an appropriate ferry service are apparent enough that visitors would be able to express an opinion on them.

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 study area. These actions include the Harkers Island ferry service and the interim protected species management plan/EA. The proposed consolidation of ferry service from Harkers Island to the existing NPS facilities would provide a long-term, easily recognizable gateway to Cape Lookout Lighthouse (and possibly Shackleford Banks). The existence of the visitor center and its amenities would provide plentiful opportunities for visitors to be oriented to the park. An element of the interim protected species management plan/EA calls for increased interpretation of the park's protected species. Such clear introduction and interpretation of the park and its resources would be likely to improve visitor experience. These actions, along with Alternative A, would have a long-term, beneficial impact on visitor use and experience. Alternative A would contribute a noticeable adverse increment to this cumulative impact.

Conclusion

Overall, Alternative A would have a long-term, moderate, adverse impact on visitor use and experience because existing issues with locating an appropriate ferry service are apparent enough that visitors would be able to express an opinion on them. Alternative A would contribute a noticeable adverse increment to a long-term, beneficial cumulative impact.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Impact Analysis

Under Alternative B, ferry service would be provided by a consolidated ferry concessioner operating a small fleet of ferries (including a small skiff and two larger vessels) under a 10-year contract with the NPS. The consolidated ferry service would depart from the Front Street site in Beaufort and would include established facilities for orientation/interpretation, restrooms, ticketing, and passenger queuing. Improved wayfinding signs would guide visitors from US 70 to the site where the NPS concessioner presence would be clear through use of the NPS arrowhead logo or other easily recognized symbols. The site would also be designed (or existing facilities improved) to provide universal access. In order to further provide improved service, accessibility, and comfort, visitors may have the option of riding to the park in one of the larger ferries within the fleet (although the use of a larger boat would depend upon visitor demand, boat maintenance schedules, and availability of navigable channels).

The ferry route from this departure site would pass by Carrot Island where visitors may get a glimpse of the wild horses, along the east side of Radio Island, through the Bulkhead Channel, and past Fort Macon State Park. The ferry would then cross the Beaufort Inlet into the Back Sound and continue to the existing boat dock and beaches on the north side of Shackleford Banks. The concessioner also would have the option to provide additional service east through the Back Sound to the Cape Lookout Lighthouse but would not be authorized to stop anywhere else.

During the first few years of consolidated ferry service, there would be some adverse impacts to visitor experience as some temporary facilities may be provided at the waterfront while the Post Office building space is being finalized. Residents and visitors who are used to using services offered by the existing ferry operators would need to adjust to the new arrangement for acquiring ferry service to the park, especially if the concessioner chose not to provide service to the Cape Lookout Lighthouse. In this case, visitors would need to travel to Harkers Island for passenger ferry service to the lighthouse.

Overall, Alternative B would have a short-term, minor, adverse impact on visitor use and experience as facilities are established and regular visitors adjust to the new method of accessing the park. Alternative B would have a long-term, beneficial impact on visitor use and experience related to the establishment of improved, long-term, recognizable visitor 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 study area. These actions include the Harkers Island ferry service and the interim protected species management plan/EA and are described under Alternative A. These actions, along with Alternative B, would have a long-term, beneficial impact on visitor use and experience. Alternative A would contribute an appreciable beneficial increment to this cumulative impact.

Conclusion

Overall, Alternative B would result in a short-term, minor, adverse impact on visitor use and experience as facilities are established and regular visitors adjust to the new method of accessing the park and a long-term, beneficial impact on visitor use and experience related to the establishment of improved, long-term, recognizable visitor facilities. Alternative B would contribute an appreciable beneficial increment to a long-term, beneficial cumulative impact.

ALTERNATIVE C: 10TH STREET

Impact Analysis

Under Alternative C, impacts on visitor use and experience would be very similar to those described under Alternative B with a few notable exceptions. The long-term, consolidated ferry service would depart from the 10th Street site in Morehead City rather than the Front Street site in Beaufort. The same improved visitor facilities would be provided, albeit in a different arrangement. The ferry route would take visitors past Sugarloaf Island and travel through the relatively industrial setting of the Morehead City Channel before matching the ferry route described above at the Beaufort Inlet. Service to Cape Lookout Lighthouse would be authorized.

As under Alternative B, there would be some adverse impacts associated with establishment of the improved facilities at the consolidated location. On an interim basis, as funding and permitting of the new facilities was completed, visitor services would be provided two blocks north of the ferry docks at the Train Station building at the corner of US 70 (Arendell St) and 10th Street. The consolidation of ferry service in Morehead City may also impose a slightly greater inconvenience to regular visitors who are used to seeking ferry service in Beaufort, since that is where most of the existing ferry service is offered.

Overall, Alternative C would have a short-term, minor, adverse impact on visitor use and experience as facilities are established and regular visitors adjust to the new method of accessing the park. Alternative C would have a long-term, beneficial impact on visitor use and experience related to the establishment of improved, long-term, recognizable visitor 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 study area. These actions include the Harkers Island ferry service and the interim protected species management plan/EA and are described under Alternative A. These actions, along with Alternative B, would have a long-term, beneficial impact on visitor use and experience. Alternative C would contribute an appreciable beneficial increment to this cumulative impact.

Conclusion

Overall, Alternative C would result in a short-term, minor, adverse impact on visitor use and experience as facilities are established and regular visitors adjust to the new method of accessing the park and a long-term, beneficial impact on visitor use and experience related to the

establishment of improved, long-term, recognizable visitor facilities. Alternative C would contribute an appreciable beneficial increment to a long-term, beneficial cumulative impact.

OPERATIONS AND INFRASTRUCTURE

METHODOLOGY

Operations, for the purpose of this analysis, refer to the quality of and effectiveness of the infrastructure and the ability to maintain the infrastructure used in the operation of the park in order to adequately protect and preserve vital resources and provide for an enhanced 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. The thresholds of change for the intensity of this impact are defined as follows:

- Negligible:** Operations and infrastructure would not be affected, or the impacts would be at low levels of detection and would not have an appreciable impact on operations and infrastructure.
- Minor:** The impact would be detectable but would be of a magnitude that would not have an appreciable impact on operations and infrastructure.
- 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 in a manner noticeable to staff and the public, and be markedly different from existing operations and infrastructure.

ALTERNATIVE A: NO-ACTION

Impact Analysis

Under Alternative A, ferry service would continue to be provided by private operators authorized through CUAs, which is inconsistent with the CMIA of 1998. These operations would continue to have little oversight from the NPS. Operators would continue to determine their own departure site locations, schedules, routes, and ferry vessels. They would also continue to be responsible for maintenance of their boats and facilities. As mentioned earlier, the current small boat operators provide little or no accessibility. The visitor amenities and infrastructure (parking, drop-off areas, rest rooms, etc) at the current departure sites would vary greatly from operator to operator.

Overall, Alternative A would have a long-term, negligible, adverse impact on NPS operations and infrastructure because there would be no noticeable change in existing NPS operations and infrastructure; the provision of visitor amenities and infrastructure (parking, drop-off areas, rest rooms, etc) at the current departure sites would remain inconsistent and confusing for park

visitors. The impact would be adverse, however, because the non-compliance with the CMIA of 1998 would remain in place. .

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on operations and infrastructure in and around the study area. These actions include the Harkers Island ferry service and the Reuse Implementation Plan/EA for the Cape Lookout Village Historic District. The proposed consolidation of ferry service from NPS facilities at Harkers Island under a long-term concessions contract would require minimal improvements to the site in order to improve accessibility. It would also require some additional man hours to provide any additional interpretation in relation to this consolidated ferry service (e.g., prior to ferry departures or during ferry travel). The Reuse Implementation Plan/EA for the Cape Lookout Village Historic District would improve infrastructure in this area. These actions, along with Alternative A, would have a long-term, beneficial impact on operations and infrastructure. Alternative A would contribute an imperceptible adverse increment to this cumulative impact related to the lack of improved infrastructure and would contribute an imperceptible beneficial increment to this cumulative impact due to the lack of oversight associated with maintaining the status quo.

Conclusion

Overall, Alternative A would have a long-term, negligible, adverse impact on NPS operations and infrastructure related to the inconsistent provision of accessible access to the park and a long-term, beneficial impact on the burden placed on NPS staff to maintain the ferry-related operations and infrastructure. Alternative A would contribute an imperceptible adverse increment to the long-term, beneficial impact cumulative impact related to the lack of improved infrastructure and would contribute an imperceptible beneficial increment to the long-term, beneficial cumulative impact due to the lack of oversight associated with maintaining the status quo.

ALTERNATIVE B: FRONT STREET (NPS PREFERRED)

Impact Analysis

Under Alternative B, consistent with the CMIA of 1998, a single 10-year ferry concession contract would be awarded. (CUAs are meant to authorize suitable commercial services to NPS visitors under certain limited circumstances for a term of no more than two years.) Since ferry operations involve a rather large capital investment, a concession contract would be issued (as described in 36 CFR Part 51).

Operating under a concession contract, a ferry operator would be obligated to provide levels of service specified under the terms of the contract. These terms would be specified by the NPS in the bid/award process of selecting an operator. The terms of a concession contract would include details of ferry operations, such as: departure site locations, schedules, routes, ferry vessels, orientation/interpretation, ferry fares and ticketing.

The NPS would continue to coordinate with Beaufort to determine the final arrangement of the program elements of the Front Street site. Ferry startup would take place in the spring of 2013. The town would be responsible for providing the infrastructure improvements to accommodate the ferry service. Improved wayfinding signs and an NPS style monument entry sign would be installed to guide visitors from US 70, and at least 50 parking spaces would be designated specifically for NPS ferry users along Front Street. A loading and unloading area for tour buses also would be provided.

The Post Office building would be reconfigured by the town to house government offices and would include space (up to approximately 1,200 square feet) for NPS/ferry concessioner use. Within this space, the NPS could provide an orientation/interpretation area, and the concessioner could conduct ticketing and have some office space. ADA-accessible public restrooms would also be provided in this building. The orientation/interpretation space could be staffed by NPS staff or volunteers during peak season, and if time and funding allowed, additional orientation/interpretation could be provided on the ferry itself.

If the town is not able to provide the Post Office space and associated amenities for immediate ferry service startup, a temporary ticketing area (approximately 60 square feet) and orientation area (approximately 80 square feet) would be provided at an expanded deck area at the docks while the Post Office renovations are completed. ADA-accessible restrooms would also be provided during this interim. Final improvements would be completed within the first three years of operations and would be ready for use by spring of 2016.

Once renovations were completed, pedestrian traffic would utilize improved crossings and sidewalks from the Post Office building, across Front Street, to the ferry docks. A covered pavilion (approximately 400 to 600 square feet) at this location would provide a passenger queuing area and shelter from the sun and rain.

The NPS expects to use the town dock across from the Post Office Building and extending from Grayden Paul Town Park for ferry operations under this alternative. The main dock is approximately 10 feet wide and 90 feet long. The installation of a floating dock and upgrades to the docks electrical and light systems would be necessary for safe and accessible ferry boat operations to begin at this location. The town also would ensure that the docks were equipped with suitable ramps to meet federal accessibility standards.

The town would assume responsibility for daily janitorial tasks for the restrooms and all building maintenance. The concessioner would be responsible for daily janitorial duties (trash collection and sweeping) in the concession used facilities and for minor repair on ferry docks and visitor queuing areas. The concessioner also would be responsible for security and damage to concession-related personal property. Cyclic repairs and storm damage would be the responsibility of the town.

At this time, sea level rise is projected to be approximately 0.8 feet in 100 years based on NOAA data from 1953 to 2006. Other sources more specific to the North Carolina coast, such as the

North Carolina Sea-Level Rise Assessment Report by the North Carolina Coastal Resource Commission recommends a rise of 3.25 feet (1 meter) can be adopted as an anticipated sea level rise by 2100 (NCCRC 2010). If sea level rise is determined to be within the higher range in the future, appropriate operations adjustments would be made. This document addresses an approximate timeframe of up to 25 years. As such, the specific operational changes to address sea level rise are outside the scope of this EA/AoE.

Overall, Alternative B would have a long-term, beneficial impact on infrastructure and operations related to the improved facilities and consolidated operations at the departure site. Alternative B would have a long-term, negligible to minor, adverse impact on NPS operations related to a slight increase in the burden placed on NPS staff to oversee the ferry concession and its facilities per the final agreements with the town and the concessioner and to provide interpretive staff/volunteers. While the impact may be detectable, it would be of a magnitude that would not have an appreciable impact on operations and infrastructure.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on operations and infrastructure in and around the study area. These actions include the Harkers Island ferry service and the Reuse Implementation Plan/EA for the Cape Lookout Village Historic District and are described under Alternative A. These actions, along with Alternative B, would have a long-term, beneficial impact on operations and infrastructure. Alternative B would contribute a noticeable beneficial increment to this cumulative impact related to the establishment of improved infrastructure and would contribute a noticeable adverse increment to this cumulative impact due to the increased burden on the NPS to oversee the ferry concession and its facilities and to provide interpretive staff/volunteers.

Conclusion

Overall, Alternative B would have a long-term, beneficial impact on operations and infrastructure related to the improved facilities and consolidated operations at the departure site and a long-term, negligible to minor, adverse impact on operations related to a slight increase in on the burden placed on NPS staff to maintain the ferry service and its facilities per the final agreements with the town and the concessioner and provide interpretive staff/volunteers. Alternative B would contribute a noticeable beneficial increment to this cumulative impact related to the establishment of improved infrastructure and would contribute a noticeable adverse increment to this cumulative impact due to the increased burden on the NPS to oversee the ferry concession and its facilities and to provide interpretive staff/volunteers.

ALTERNATIVE C: 10TH STREET

Impact Analysis

Under Alternative C, general impacts on operations and infrastructure would be the same as under Alternative B. As under Alternative B, consistent with the CMIA of 1998, a single 10-year ferry concession contract would be awarded. Alternative C would require the concessioner to

operate out of the 10th Street site at Morehead City where the layout of the new facilities would be different from those described under Alternative B.

Operating under a concession contract, a ferry operator would be obligated to provide levels of service specified under the terms of the contract. These terms would be specified by the NPS in the bid/award process of selecting an operator. The terms of a concession contract would include details of ferry operations, such as: departure site locations, schedules, routes, ferry vessels, orientation/interpretation, ferry fares and ticketing.

The NPS would continue to coordinate with Morehead City to determine the final arrangement of the program elements of the 10th Street site. Ferry startup would take place in the spring of 2013. The town would be responsible for providing the infrastructure improvements to accommodate the ferry service.

In order to promote a straightforward approach to the site, the town would remove the restriction on left-hand turns from westbound US 70 onto 10th Street. Improved wayfinding signs and an NPS style monument entry sign would be installed to guide visitors from US 70. The existing paved parking area at the site would be expanded to a “U” shape configuration onto the gravel parking lot on the adjacent western parcel. This expanded parking lot would be hardened and striped to create one-way angled parking. This would provide approximately 65 parking spaces. Adequate additional spaces, including spaces for recreational vehicles (RVs) could be found on the adjacent town streets. A loading and unloading area is proposed at the north side of Shepard Street along with an improved pedestrian crossing. A pedestrian walkway would provide a direct access to the ferry dock from the street.

An orientation area (approximately 500 square feet) and a ticketing/restroom/concessions building (approximately 600 square feet) would be constructed near Shepard Street and would provide a clear gateway for visitors to the park. The NPS would provide interpretive displays for this space. A sheltered queuing area (approximately 440 square feet) would be constructed adjacent to the docks. The town would be responsible for ensuring that the visitor flow between all elements of the site is ADA-accessible.

Morehead City proposes to apply for grant funding to develop the site. Since this process could delay construction of program elements such as the ticketing booth, orientation area, and restrooms, the town has offered the NPS use of the Train Station building at the corner of US 70 (Arendell Street) and 10th Street, two blocks north of the 10th Street site, to facilitate start-up of the ferry service. The permanent facilities would be constructed by 2016.

Finally, in order to make the site operational for ferry service, several marine infrastructure improvements would have to be made to the site. The existing boat ramp, currently unused, would be permanently taken out of service and the associated docks would be reconstructed. The western dock would be 100 feet long, the eastern one would be 70 feet long, and both would be 8 feet wide. The docks would be equipped with electric power pedestals, dock lighting, and water. The town also would ensure that the docks were equipped with suitable ramps to meet federal accessibility standards. Some dredging would be required for deep draft vessels, and

maintenance dredging would have to be performed as required to maintain the existing channel approach to the dock and the maneuvering area in the vicinity of the dock.

The town would assume responsibility for daily janitorial tasks for the restrooms and all building maintenance. The concessioner would be responsible for daily janitorial duties (trash collection and sweeping) in the concession used facilities and for minor repair on ferry docks and visitor queuing areas. The concessioner also would be responsible for security and damage to concession-related persona property. Cyclic repairs, dredging, and storm damage would be the responsibility of the town.

Overall, Alternative C would have a long-term, beneficial impact on infrastructure and operations related to the improved facilities and consolidated operations at the departure site. Alternative C would have a long-term, negligible to minor, adverse impact on operations related to a slight increase in the burden placed on NPS staff to oversee the ferry concession and its facilities per the final agreements with the town and the concessioner and to provide interpretive staff/volunteers.

Cumulative Impacts

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impact on operations and infrastructure in and around the study area. These actions include the Harkers Island ferry service and the Reuse Implementation Plan/EA for the Cape Lookout Village Historic District and are described under Alternative A. These actions, along with Alternative C, would have a long-term, beneficial impact on operations and infrastructure. Alternative B would contribute a noticeable beneficial increment to this cumulative impact related to the establishment of improved infrastructure and would contribute a noticeable adverse increment to this cumulative impact due to the increased burden on the NPS to oversee the ferry concession and its facilities and to provide interpretive staff/volunteers.

Conclusion

Overall, Alternative C would have a long-term, beneficial impact on operations and infrastructure related to the improved facilities and consolidated operations at the departure site and a long-term, negligible to minor, adverse impact on operations related to a increase in the burden placed on NPS staff to oversee the ferry concession and its facilities per the final agreements with the town and the concessioner and to provide interpretive staff/volunteers. Alternative C would contribute a noticeable beneficial increment to this cumulative impact related to the establishment of improved infrastructure and would contribute a noticeable adverse increment to this cumulative impact due to the increased burden on the NPS to oversee the ferry concession and its facilities and to provide interpretive staff/volunteers.

5

CONSULTATION AND COORDINATION

NPS DO-12 requires the NPS to make “diligent” efforts to involve the interested and affected public in the NEPA 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 NEPA project to identify the range of issues, resources, and alternatives to address in the EA/AoE. Typically, both internal and public scoping is conducted to address 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 the late of 2009. This process introduced the purpose and need of the project and potential departure sites that could be used for a consolidated ferry service. Discussions with interested agencies and individuals were initiated at this time. The scoping process for this EA/AoE took place in close coordination with the feasibility study being conducted to assist in development of the final alternatives analyzed in this document.

INTERNAL SCOPING

The scoping process for the proposed action began in June of 2009 with the initial site visit to the Beaufort/Morehead City area by the feasibility study team. An internal scoping meeting was held shortly afterward with the EA/AoE team in August 2009.

The remaining options were evaluated during a Value Analysis meeting held February 17-19, 2010. The two action alternatives described below were considered to be the most advantageous sites and are therefore carried forth for analysis in this EA/AoE.

This EA/AoE evaluates the potential for environmental impacts associated with the alternatives described below, including identification of the NPS preferred alternatives; however, implementation of the NPS preferred alternative will be dependent upon the final MOU with the town upon completion of this EA/AoE.

PUBLIC SCOPING

The NPS held two public open houses at the Duke University Marine Laboratory on Pivers Island on August 27, 2009 (from 1:00 p.m. to 3:00 p.m. and 6:30 p.m. to 8:30 p.m.) and were attended by a total of 52 members of the public. At this time, the NPS solicited public input on proposed locations for the proposed ferry concessioners. The meeting also provided the public with information on the purpose and need of the project and the planning process that would be followed. This public meeting was followed by a 30-day public comment period during which a total of 34 public comments were received.

In addition to involving members of the general public, NPS staff made an effort to coordinate closely with particular stakeholders with specific knowledge and interest in the proposed action from Beaufort and Morehead City during the scoping process and continuing on into alternatives development. Specialized stakeholder meetings were held in June and December 2009.

AGENCY SCOPING

As part of the scoping effort, the NPS has contacted multiple state and federal agencies, including the North Carolina SHPO, the North Carolina State Environmental Review Clearinghouse, and the USFWS. North Carolina Division of Coastal Management (NCDQM) provided a letter dated September 14, 2009 with recommendations on the environmental and regulatory issues that should be addressed during the planning process for this project. The response from SHPO is dated November 9, 2010. The response from USFWS is dated November 26, 2010. These letters are included in "Appendix A: Relevant Correspondence." The NPS also conducted informal consultation with the NMFS via telephone calls in November.

FUTURE COMPLIANCE NEEDS/PERMITS

Implementation of the NPS preferred alternative at Cape Lookout National Seashore would require compliance with laws and regulations. It should be noted, however, that certain permitting pathways cannot be determined until a single alternative is selected and a MOU or similar agreement is developed. This MOU would detail specific actions and the parties responsible for these actions.

CONTINUED SHPO CONSULTATION

Under the preferred alternative, the town of Beaufort would need to ensure that adaptive reuse of the Post Office take place in compliance with Section 106 if any federal funding or permitting is acquired or needed. If the SHPO requires that the NPS also develop a formal agreement such as

an MOU, the agreement will be developed following the review of this combination EA/AoE document.

COASTAL AREA MANAGEMENT ACT

As indicated by a letter from NCDCM (Appendix A), if the departure site is to be constructed by a private party on private land, this aspect of the proposed action would require a CAMA permit. A CAMA permit is required for development activities within the coastal zone such as construction of docks and waterfront structures as included in the proposed action. All development would conform to the use standards contained in Chapter 7 of Title 15A of the NC Administrative Code to the extent practicable.

COASTAL ZONE MANAGEMENT ACT

Depending upon the level of federal involvement, development at either of the proposed departure sites 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 (CZMA). Depending up on the federal nexus, a non-federal entity would submit a Federal Coastal Zone Consistency Certification for review by DCM. A federal action taking place on federal land, however, would require that the NPS submit a Federal Coastal Zone Consistency Determination to DCM.

DOCK REHABILITATION AND DREDGING

A Section 404 permit issued by the U.S. Army Corps of Engineers (ACE) would be required prior to any dredging activities. This is likely to trigger a Section 401 Certification which is required for any federal permit involving impacts to water quality. Any dredging would take place in compliance with NC Dredge and Fill Law. Section 10 of the Clean Water Act may also require approval prior to dredging or dock rehabilitation activities.

OTHER PERMITTING REQUIREMENTS

Prior to any ground disturbance, the proper authorities would obtain a NPDES Stormwater Permit and local erosion and sediment control permits, as appropriate.

LIST OF PREPARERS AND CONTRIBUTORS

This document was prepared by Vanasse Hangen Brustlin, Inc. with input from Dornbusch Associates, Otak, staff at Cape Lookout National Seashore, the NPS Denver Service Center, and the NPS Southeast Regional Office. This list also includes key contributors to the feasibility study, which was crucial in the planning process.

PREPARERS

Vanasse Hangen Brustlin, Inc.		
Tracy Hamm	Environmental Planner	Document preparation; natural resources review and analysis
Tricia Wingard	Project Manager	Guidance of NEPA process; document review; and project management
Jake Hoogland	NPS Market Leader	Cultural resource review and analysis
Margaret Beavers	Environmental Scientist	Graphics and GIS analysis
Bill Cranshaw	Transportation Planner	Alternatives development; impact analysis
Tim Hogan	Senior Project Engineer	Alternatives development; impact analysis
Vik Desai	Project Engineer	Alternatives development; impact analysis

Otak, Inc.		
Chad Weiser	Principal/Senior Project Manager	Alternatives development; project management

Dornbusch Associates		
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Joe Ramey	Socioeconomic Analyst	Socioeconomic analysis

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APPENDIX A: RELEVANT CORRESPONDENCE



North Carolina Department of Environment and Natural Resources

Division of Coastal Management

Beverly Eaves Perdue
Governor

James H. Gregson
Director

Dee Freeman
Secretary

September 14, 2009

Wouter Ketel, Management Assistant
Cape Lookout national Seashore
131 Charles Street
Harkers Island, NC 28531

SUBJECT: Comments on the Proposed Seashore Passenger Ferry Departure Study, Carteret County, North Carolina (DCM#20090110)

Dear Mr. Ketel:

Thank you for the opportunity to review the scoping request for a proposed seashore passenger departure study for Beaufort and Morehead City in Carteret County, North Carolina. According to the scoping request, the study (Study) will examine potential sites for a ferry operation base somewhere in the Morehead City or Beaufort area. The purpose of the scoping request is to provide the North Carolina Division of Coastal Management (DCM) with an opportunity to identify the environmental and regulatory issues that the Study should address.

- The study may propose a variety of subprojects (that could require DCM regulatory review) related to the overall recommendations of the Study. For example, the proposed establishment of a ferry terminal may require DCM regulatory review through either the CAMA permit process or the Federal consistency review process. For instance, if a ferry terminal is to be constructed by a private party on private land, this aspect of the overall project would require a CAMA permit. If a terminal is to be constructed by the Park Service on Federal property, this aspect of the overall project would require consistency review. We suggest that the Study review the type and extent of DCM regulatory approval.
- We suggest that all State and Federal approvals that may be required to implement the proposals of the study be reviewed in the Study.
- We suggest that the Study evaluate its recommendations for implementation with current zoning and the current land use plan.
- We suggest that the Study define the operational period for ferry operations. Alternative B of the Commercial Services Plan anticipates that the ferry will operate from March 15th through December 31st of each year.
- We suggest that any development recommendations made in the Study conform to use standards contained in Chapter 7 of Title 15A of the North Carolina Administrative Code. Of specific interest, are sections 5A NCAC 07H .0205, 5A NCAC 07H .0206, 5A NCAC 07H .0207, 5A NCAC 07H .0208 and 5A NCAC 07H .0209.

- One of the objectives of the Study is an evaluation of “*site characteristics*”. Site characteristics include a variety of environmental issues. We recommend that the Study examine, at a minimum, the environmental issues below. The list below is not meant to be exhaustive, but as a representative sample.
 - The extent that proposed construction activities may be limited by moratorium periods.
 - Water depths and the necessity for dredging.
 - The existence of submerged aquatic vegetation (SAV), shell fish resources, Outstanding Resource Waters (ORV), and Primary Nursery Areas (PNA).
 - The effect of any recommended actions on water quality.
 - The development of graphics/narrative related to Normal High Water (NHW), contour, channels, wetlands, etc.
- We suggest the inclusion of a graphic that displays the boundaries of any Areas of Environmental Concern (AEC) that may exist in the study area.
- We suggest that the Study disclose and review the size of the any ferries to be used. The possible need for dredging in order to berth and operate the ferries. What types of cargo will the ferries/passengers be able to carry?
- We suggest the development of additional alternatives. Alternatives could include additional sites such a basing the ferry at the Park Headquarters on Harkers Island or operational actions such as having a ferry stop at both Beaufort and Morehead City as part of its normal route.
- We suggest that the Study examine cumulative and secondary impacts that may result from implementation of the Study recommendations. As a hypothetical example, would the construction of a ferry terminal result in traffic congestion, rerouting or traffic, construction entrances, etc.? What about parking for ferry passengers? Would Cape Lookout itself be able to accommodate the ferry passengers once they arrive? What additional facilities would be needed at Cape Lookout to accommodate the ferry passengers? Would increased human use result in adverse effects to habitat?
- We suggest that the Park Service, in preparing this Study, contact DCM for an onsite visit to review environmental issues such as the extent of any AECs that may exist in the study area.
- We suggest that the Study evaluate the effect of implementing its recommendations on existing small ferry shuttle businesses.
- The success of any ferry operation will be dependent on identifying the most likely location(s) where potential ferry passenger would congregate. We suggest that the Study evaluate where potential passengers are most likely to congregate.

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
Tere Barrett, Division of Coastal Management



North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

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

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

November 9, 2010

Russel Wilson
Cape Lookout National Seashore
131 Charles Street
Harkers Island, NC 28531

Re: Cape Lookout National Seashore Ferry Feasibility Study/Environmental Assessment, Carteret County,
ER 09-2962

Dear Mr. Wilson:

Thank you for your letter of October 20, 2010, transmitting the preliminary plans and the draft Environmental Assessment/Assessment of Effect (EA/AoE) document regarding ferry service to Cape Lookout National Seashore. We offer the following preliminary comments based upon the three alternatives proposed.

Alternative A: No Action

Under Alternative A, the National Park Service would continue to issue Conditional Use Authorizations (CUA) to passenger ferry operators out of Beaufort and Morehead City on an annual basis. We are aware of no historic resources which would be affected by this option, and have no comments on proposed Alternative A.

Alternative B: Front Street, Beaufort

Under Alternative B, the former United States Post Office building at the northeast corner of Front and Pollock Streets would be renovated/reconfigured for government office, National Park Service, and/or ferry concessioner use. The town dock (located across the street from the Post Office) and Grayden Paul Town Park would also be utilized for ferry operations. Temporary ticketing and orientation areas would be erected adjacent to the dock while the Post Office is renovated.

The Beaufort Post Office is a contributing element to the Beaufort National Register Historic District and is located within the locally-designated Beaufort Historic District. In December 2009, our office reviewed the United States Postal Service's proposed sale of the Beaufort Post Office. We concluded that the proposed sale would have no adverse effect on the historic site or the historic district if protective covenants to run with the land in perpetuity were part of the sale. This will ensure that the building is preserved in accordance with the *Secretary of the Interior's Standards for Rehabilitation*, with any construction, alteration, remodeling, demolition, or other undertakings on the property subject to review and approval by the North Carolina State Historic Preservation Office. Accordingly, any renovation of the Post Office to suit government offices and/or space for National Park Service/ferry concessioner use would be subject to the approval of our office.

Parking for the ferry service remains a concern as any major increase in parking demand within the residential neighborhood to the north and east of the Post Office will affect the historic district and require further review. On page 8 of the "Cape Lookout National Seashore: Ferry Departure Site Alternatives Package for the North Carolina SHPO," parking for NPS use includes "75 critical parking spaces east of Pollack [sic] Street and 25 parking spaces east of Marsh Street." However, these parking spaces do not appear to be shown on the accompanying map, Figure 5, which shows approximately 42 on-street parking spaces on Front Street, 10 on-street parking spaces on Pollock Street, and approximately 31 off-street parking spaces located on the BB&T Bank parcel. This will need to be clarified in the Environmental Assessment.

Finally, the temporary gateway orientation area and temporary ferry ticketing area will not adversely affect the historic district, if they are promptly removed after no more than two years or once the renovations to the Post Office are completed, whichever occurs first.

Alternative C: 10th Street, Morehead City

Under Alternative C, new program elements, including a ticketing booth, orientation area, and restrooms, would be constructed along the water near the intersection of 10th and Shepard Streets. The Train Station at the southwest corner of Arendell and 10th Streets would house these uses temporarily during the construction of the new program elements.


Please be aware, this proposed site is less than 0.2 miles south of the Morehead City National Register Historic District. The new program elements are unlikely to affect the historic district. However, any major increases in parking demand within the historic district will affect the historic district and require further review. This includes any major increases in parking demand at the interim departure site, the Train Station.

We appreciate the opportunity to review this draft of the EA/AoE, and look forward to continuing to work with you on this project.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and 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,



for Peter Sandbeck



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

26 November 2010

Mr. Wouter Ketel
Cape Lookout National Seashore
131 Charles Street
Harker's Island, NC 28531

Dear Mr. Ketel:

This letter is in response to your 22 October 2010 email request for comments from the U.S. Fish and Wildlife Service (Service) on the preparation of the Environmental Assessment (EA) for the Cape Lookout National Seashore Ferry Feasibility Study located in Carteret County, North Carolina. These comments provide information in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667d) and the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

The National Park Service (NPS) is preparing an EA to assess the impacts of providing a long-term ferry system that would operate from a single site in either Morehead City or Beaufort, NC. The project would involve only minor construction activities to rehabilitate existing dock and visitor facilities, and would result in fewer ferry trips running between either of the cities and various areas in the park.

The following federally listed species and other species of concern will be identified in the EA: Piping plover (*Charadrius melodus*) (and designated critical habitat for wintering Piping plovers), Loggerhead sea turtle (*Caretta caretta*), Green sea turtle (*Chelonia mydas*), Leatherback sea turtle (*Dermochelys coriacea*), Kemp's ridley sea turtle (*Lepidochelys kempii*), Seabeach amaranth (*Amaranthus pumilis*), American oystercatcher (*Haematopus palliatus*), Wilson's plover (*Charadrius wilsonia*), Red knot (*Calidris canutus rufa*), Gull-billed tern (*Geochelidon nilotica*), Common tern (*Sterna hirundo*), Least tern (*Sternula antillarum*), and Black skimmer (*Rynchops niger*). The Service recommends the consideration of the following additional species: West Indian manatee (*Trichechus manatus*), Hawksbill sea turtle (*Eretmochelys imbricata*), and Roseate tern (*Sterna dougallii dougallii*).

To protect manatees in North Carolina, the Service has prepared precautionary measures for general construction activities in waters used by the species (see enclosure). Implementation of these measures 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

10 November 2010

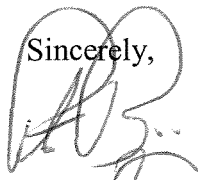
Environmental Policy Act, will expedite the Service's review of the document for the fulfillment of requirements under Section 7 of the Endangered Species Act.

The NPS has asked what documentation and level of analysis would the Service need to help determine if they concur with the findings presented in the EA? As long as the manatee conditions are incorporated, the Service deems that the information and analysis presented in the EA will be sufficient. A Biological Assessment will not be necessary.

Finally, since sea turtles fall under the purview of the Service only when they are on land, the NPS will need to consult with the National Oceanic and Atmospheric Administration regarding sea turtles in the waterways. Please contact Ron Sechler at 252-728-5090.

Thank you for your cooperation with our agency in protecting federally listed species. If you have any questions or comments, please feel free to contact Sarah McRae at (919) 856-4520x16.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Pete Benjamin', is written over the word 'Sincerely,'.

Pete Benjamin
Field Supervisor

Enclosure: "Guidelines for Avoiding Impacts to the West Indian Manatee"

cc: Ron Sechler, NOAA-CCFHR



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

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):
U.S. Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726
919/856-4520

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.

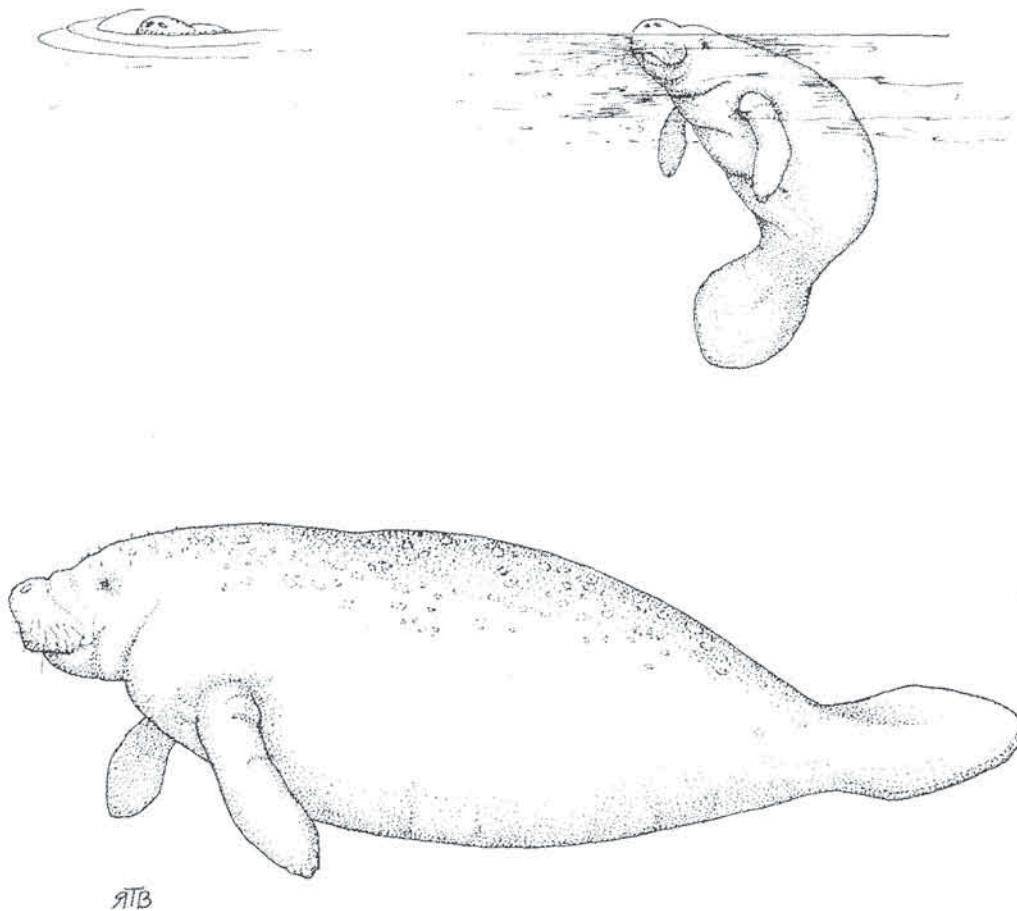


Illustration used with the permission of the North Carolina State Museum of Natural Sciences.
Source: Clark, M. K. 1987. Endangered, Threatened, and Rare Fauna of North Carolina: Part I. A re-evaluation of the mammals. Occasional Papers of the North Carolina Biological Survey 1987-3. North Carolina State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

APPENDIX B: SOCIOECONOMIC DATA

IMPLAN MODEL OUTPUTS

The following tables elaborate on and support the conclusions stated in the Socioeconomic Resources and Gateway Communities sections.

EXISTING CONDITIONS: EMPLOYMENT BY INDUSTRY

Table B-1: Top Ten Industries by Employment in Beaufort, 2008 (\$2010)

	# of Jobs	Labor Income	% of Total Employment
Food services and drinking places	727	\$11,728,427	13%
Education (state/local government)	543	\$25,753,768	10%
Veneer and plywood manufacturing	345	\$10,195,010	6%
Wholesale trade businesses	278	\$13,395,295	5%
State and local government (non-education)	238	\$10,163,146	4%
Construction of new nonresidential commercial and health care structures	210	\$6,516,968	4%
Boat building	170	\$8,220,352	3%
Real estate establishments	158	\$3,173,927	3%
Construction of new residential permanent site single- and multi-family structures	151	\$3,885,918	3%
Private household operations	145	\$728,937	3%
Total Employment/Labor Income for Top-Ten Industries	2,965	\$93,761,748	54%
Total Employment in Beaufort	5,581	\$176,654,963	100%

Source: IMPLAN 2008 County Plus Data for Carteret County

Table B-2: Top Ten Industries by Employment in Morehead City, 2008 (\$2010)

	# of Jobs	Labor Income	% of Total Employment
Food services and drinking places	1,818	\$29,335,837	12%
Offices of physicians, dentists, and other health practitioners	822	\$46,820,883	6%
State and local government (non-education)	789	\$33,686,068	5%
Retail Stores - General merchandise	768	\$19,337,384	5%
Education (state/local government)	686	\$32,528,168	5%
Investigation and security services	599	\$9,919,554	4%
Wholesale trade businesses	487	\$23,441,766	3%
Retail Stores - Motor vehicle and parts	383	\$14,361,173	3%
Construction of new nonresidential commercial and health care structures	355	\$11,030,103	2%
Retail Stores - Building material and garden supply	322	\$9,956,815	2%
Total Employment/Labor Income for Top-Ten Industries	7,029	\$230,417,751	47%
Total Employment in Morehead City	14,836	\$470,679,946	100%

Source: IMPLAN 2008 County Plus Data for Carteret County

ENVIRONMENTAL CONSEQUENCES

Alternative B: Front Street (NPS Preferred)

Table B-3: Impacts to Economic Output in Beaufort – Alternative B (\$2010)

	Direct Change	Total Impact to Economic Output	% Change in Local Output
Long-Term Impacts			
Net Change in Ferry Spending	\$23,256	\$30,116	0.0053%
Net Change in Visitor Spending	\$56,881	\$47,772	0.0084%
Net Change in Ferry Labor Income	\$38,714	\$85,130	0.0150%
Net Change in Ferry Fuel Expenditures	\$1,540	\$315	0.0001%
Net Change in Vessel R&M Expenditures	(\$28,574)	(\$34,554)	(0.0061%)
TOTAL	\$91,817	\$128,779	0.0227%
Short-Term Impacts			
New Ferry Facilities Construction	\$523,262	\$673,779	0.2424%
New Ferry Vessel Investment	\$670,000	\$839,391	0.3020%
TOTAL	\$1,193,262	\$1,513,170	0.5443%

Table B-4: Impacts to Economic Output in Morehead City – Alternative B (\$2010)

	Direct Change	Total Impact to Economic Output	% Change in Local Output
Long-Term Impacts			
Net Change in Ferry Spending	(\$3,167)	(\$4,040)	(0.00032%)
Net Change in Visitor Spending	(\$7,738)	(\$6,486)	(0.00051%)
Net Change in Ferry Labor Income	(\$15,000)	(\$32,495)	(0.00255%)
Net Change in Ferry Fuel Expenditures	(\$927)	(\$194)	(0.00002%)
Net Change in Vessel R&M Expenditures	(\$876)	(\$1,091)	(0.00009%)
TOTAL	(\$27,708)	(\$44,306)	(0.00347%)
Short-Term Impacts			
New Ferry Facilities Construction	\$0	\$0	None
New Ferry Vessel Investment	\$0	\$0	None
TOTAL	\$0	\$0	None

Table B-5: Impacts to Labor Income/Employment in Beaufort – Alternative B (\$2010)

	Direct Change	Total Impact to Labor Income	Total Impact to Jobs	% Change in Labor Income	% Change in Jobs
Long-Term Impacts					
Net Change in Ferry Spending	\$23,256	\$17,604	0.3	0.0100%	0.0054%
Net Change in Visitor Spending	\$56,881	\$16,901	0.7	0.0096%	0.0125%
Net Change in Ferry Labor Income	\$38,714	\$49,762	0.9	0.0282%	0.0161%
Net Change in Ferry Fuel Expenditures	\$1,540	\$92	0.0	0.0001%	0.0000%
Net Change in Vessel R&M Expenditures	(\$28,574)	(\$34,544)	(0.3)	(0.0196%)	(0.0054%)
TOTAL	\$91,817	\$49,815	1.6	0.0282%	0.0287%
Short-Term Impacts					
New Ferry Facilities Construction	\$523,262	\$173,599	5.4	0.0983%	0.0968%
New Ferry Vessel Investment	\$670,00	\$180,339	4.3	0.1021%	0.0770%
TOTAL	\$1,193,262	\$353,938	9.7	0.2004%	0.1738%

Table B-6: Impacts to Labor Income/Employment in Morehead City – Alternative B (\$2010)

	Direct Change	Total Impact to Labor Income	Total Impact to Jobs	% Change in Labor Income	% Change in Jobs
Long-Term Impacts					
Net Change in Ferry Spending	(\$3,167)	(\$2,429)	0.0	0.0000%	0.0000%
Net Change in Visitor Spending	(\$7,738)	(\$2,500)	(0.1)	(0.0005%)	(0.0007%)
Net Change in Ferry Labor Income	(\$15,000)	(\$19,533)	(0.4)	(0.0041%)	(0.0024%)
Net Change in Ferry Fuel Expenditures	(\$927)	(\$59)	0.0	(0.00001%)	0.0000%
Net Change in Vessel R&M Expenditures	(\$876)	(\$283)	0.0	(0.0001%)	0.0000%
TOTAL	(\$27,708)	(\$24,804)	(0.5)	(0.0053%)	(0.0034%)
Short-Term Impacts					
New Ferry Facilities Construction	\$0	\$0	\$0	None	None
New Ferry Vessel Investment	\$0	\$0	\$0	None	None
TOTAL	\$0	\$0	\$0	None	None

Table B-7: Impacts to State/Local Taxes in Beaufort – Alternative B (\$2010)

	Direct Change	Total Impact to State/Local Taxes	% Change in State/Local Taxes
Long-Term Impacts			
Net Change in Ferry Spending	\$23,256	\$2,911	0.0038%
Net Change in Visitor Spending	\$56,881	\$3,491	0.0045%
Net Change in Ferry Labor Income	\$38,714	\$8,230	0.0107%
Net Change in Ferry Fuel Expenditures	\$1,540	\$40	0.0001%
Net Change in Vessel R&M Expenditures	(\$28,574)	(\$2,029)	(0.0026%)
TOTAL	\$91,817	\$12,643	0.0165%
Short-Term Impacts			
New Ferry Facilities Construction	\$523,262	\$16,881	0.0220%
New Ferry Vessel Investment	\$670,000	\$23,018	0.0300%
TOTAL	\$1,193,262	\$39,899	0.0520%

Table B-8: Impacts to State/Local Taxes in Morehead City – Alternative B (\$2010)

	Direct Change	Total Impact to State/Local Taxes	% Change in State/Local Taxes
Long-Term Impacts			
Net Change in Ferry Spending	(\$3,167)	(\$430)	(0.0002%)
Net Change in Visitor Spending	(\$7,738)	(\$577)	(0.0003%)
Net Change in Ferry Labor Income	(\$15,000)	(\$3,463)	(0.0016%)
Net Change in Ferry Fuel Expenditures	(\$927)	(\$27)	(0.00001%)
Net Change in Vessel R&M Expenditures	(\$876)	(\$73)	(0.00003%)
TOTAL	(\$27,708)	(\$4,570)	(0.0021%)
Short-Term Impacts			
New Ferry Facilities Construction	\$0	\$0	None
New Ferry Vessel Investment	\$0	\$0	None
TOTAL	\$0	\$0	None

ALTERNATIVE C: 10TH STREET

Table B-9: Impacts to Economic Output in Morehead City – Alternative C (\$2010)

	Direct Change	Total Impact to Economic Output	% Change in Local Output
Long-Term Impacts			
Net Change in Ferry Spending	\$300,132	\$382,904	0.0300%
Net Change in Visitor Spending	\$733,168	\$614,454	0.0481%
Net Change in Ferry Labor Income	\$141,830	\$307,250	0.0241%
Net Change in Ferry Fuel Expenditures	\$28,248	\$5,924	0.0005%
Net Change in Vessel R&M Expenditures	\$12,462	\$15,521	0.0012%
TOTAL	\$1,215,840	\$1,326,053	0.1039%
Short-Term Impacts			
New Ferry Facilities Construction	\$1,088,925	\$1,443,799	0.2086%
New Ferry Vessel Investment	\$670,000	\$863,119	0.1247%
TOTAL	\$1,758,925	\$2,306,918	0.3333%

Table B-10: Impacts to Economic Output in Beaufort – Alternative C (\$2010)

	Direct Change	Total Impact to Economic Output	% Change in Local Output
Long-Term Impacts			
Net Change in Ferry Spending	(\$280,043)	(\$362,653)	(0.0639%)
Net Change in Visitor Spending	(\$684,025)	(\$574,473)	(0.1013%)
Net Change in Ferry Labor Income	(\$118,116)	(\$259,730)	(0.0458%)
Net Change in Ferry Fuel Expenditures	(\$27,635)	(\$5,648)	(0.0010%)
Net Change in Vessel R&M Expenditures	(\$41,911)	(\$50,683)	(0.0089%)
TOTAL	(\$1,151,730)	(\$1,253,187)	(0.2209%)
Short-Term Impacts			
New Ferry Facilities Construction	\$0	\$0	None
New Ferry Vessel Investment	\$0	\$0	None
TOTAL	\$0	\$0	None

Table B-11: Impacts to Labor Income/Employment in Morehead City – Alternative C (\$2010)

	Direct Change	Total Impact to Labor Income	Total Impact to Jobs	% Change in Labor Income	% Change in Jobs
Long-Term Impacts					
Net Change in Ferry Spending	\$300,132	\$230,168	4.1	0.0489%	0.0276%
Net Change in Visitor Spending	\$733,168	\$236,860	9.6	0.0503%	0.0647%
Net Change in Ferry Labor Income	\$141,830	\$184,691	3.3	0.0392%	0.0224%
Net Change in Ferry Fuel Expenditures	\$28,248	\$1,801	0.1	0.0004%	0.0007%
Net Change in Vessel R&M Expenditures	\$12,462	\$4,022	0.1	0.0009%	0.0007%
TOTAL	\$1,215,840	\$657,542	17.2	0.1397%	0.1161%
Short-Term Impacts					
New Ferry Facilities Construction	\$1,088,925	\$387,366	11.8	0.0823%	0.0795%
New Ferry Vessel Investment	\$670,000	\$196,121	4.7	0.0417%	0.0317%
TOTAL	\$1,758,925	\$583,487	16.5	0.1240%	0.1112%

Table B-12.: Impacts to Labor Income/Employment in Beaufort – Alternative C (\$2010)

	Direct Change	Total Impact to Labor Income	Total Impact to Jobs	% Change in Labor Income	% Change in Jobs
Long-Term Impacts					
Net Change in Ferry Spending	(\$280,043)	(\$211,986)	(3.8)	(0.1200%)	(0.0681%)
Net Change in Visitor Spending	(\$684,025)	(\$203,244)	(8.5)	(0.1151%)	(0.1523%)
Net Change in Ferry Labor Income	(\$118,116)	(\$151,822)	(2.7)	(0.0859%)	(0.0492%)
Net Change in Ferry Fuel Expenditures	(\$27,635)	(\$1,643)	(0.1)	(0.0009%)	(0.0018%)
Net Change in Vessel R&M Expenditures	(\$41,911)	(\$12,557)	(0.4)	(0.0071%)	(0.0072%)
TOTAL	(\$1,151,730)	(\$581,252)	(15.5)	(0.3290%)	(0.2786%)
Short-Term Impacts					
New Ferry Facilities Construction	\$0	\$0	0	None	None
New Ferry Vessel Investment	\$0	\$0	0	None	None
TOTAL	\$0	\$0	0	None	None

Table B-13: Impacts to State/Local Taxes in Morehead City – Alternative C (\$2010)

	Direct Change	Total Impact to State/Local Taxes	% Change in ZIP State/Local Taxes
Long-Term Impacts			
Net Change in Ferry Spending	\$300,132	\$40,803	0.0185%
Net Change in Visitor Spending	\$733,168	\$54,593	0.0248%
Net Change in Ferry Labor Income	\$141,830	\$32,741	0.0149%
Net Change in Ferry Fuel Expenditures	\$28,248	\$810	0.0004%
Net Change in Vessel R&M Expenditures	\$12,462	\$1,040	0.0005%
TOTAL	\$1,215,840	\$129,987	0.0591%
Short-Term Impacts			
New Ferry Facilities Construction	\$1,088,925	\$44,500	0.0202%
New Ferry Vessel Investment	\$670,000	\$28,197	0.0128%
TOTAL	\$1,758,925	\$72,697	0.0330%

Table B-14: Impacts to State/Local Taxes in Beaufort – Alternative C (\$2010)

	Direct Change	Total Impact to State/Local Taxes	% Change in State/Local Taxes
Long-Term Impacts			
Net Change in Ferry Spending	(\$280,043)	(\$35,061)	(0.0457%)
Net Change in Visitor Spending	(\$684,025)	(\$41,976)	(0.0547%)
Net Change in Ferry Labor Income	(\$118,116)	(\$25,111)	(0.0327%)
Net Change in Ferry Fuel Expenditures	(\$27,635)	(\$730)	(0.0010%)
Net Change in Vessel R&M Expenditures	(\$41,911)	(\$2,976)	(0.0039%)
TOTAL	(\$1,151,730)	(\$105,854)	(0.1380%)
Short-Term Impacts			
New Ferry Facilities Construction	\$0	\$0	None
New Ferry Vessel Investment	\$0	\$0	None
TOTAL	\$0	\$0	None

APPENDIX C: IMPAIRMENT DETERMINATION

THE PROHIBITION ON IMPAIRMENT OF PARK RESOURCES AND VALUES

NPS *Management Policies 2006*, Section 1.4.4, explains the prohibition on impairment of park resources and values:

While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

WHAT IS IMPAIRMENT?

NPS *Management Policies 2006*, Section 1.4.5, *What Constitutes Impairment of Park Resources and Values*, and Section 1.4.6, *What Constitutes Park Resources and Values*, provide an explanation of impairment.

Impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

Section 1.4.5 of *Management Policies 2006* states:

An impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Per Section 1.4.6 of *Management Policies 2006*, park resources and values that may be impaired include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park, but this would not be a violation of the Organic Act unless the NPS was in some way responsible for the action.

HOW IS AN IMPAIRMENT DETERMINATION MADE?

Section 1.4.7 of *Management Policies 2006* states, "[i]n making a determination of whether there would be an impairment, an NPS decision maker must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision."

Management Policies 2006 further define "professional judgment" as "a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision-maker's education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relation to the decision

IMPAIRMENT DETERMINATION

This determination on impairment has been prepared for the action alternatives described on pages 22-31 of this EA/AoE. An impairment determination is made for all resource impact topics analyzed for the action alternatives. An impairment determination is not made for visitor use and experience, socioeconomic resources and gateway communities, and operations and infrastructure because impairment findings relate back to park resources and values, and these impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values.

Soils and Topography

Alternative B would have short-term, minor, adverse impacts on soils and topography during construction, including soil exposure and disturbance. These impacts would be minimized by implementation of best management practices such as appropriate erosion and sediment controls. Alternative B would also have long-term, negligible, adverse impacts on soils and topography because of the slight increase in impervious surface (up to approximately 160 square feet) within the study area and the potential for increased foot traffic in this area.

Alternative B would not result in impairment of soils and topography because the disturbance of soil during construction would be temporary and the loss of sediment would be mitigated by the use of best management practices. In addition any increase in impervious surface and foot traffic would not noticeably alter the state of the existing soils and topography.

Coastal Resources

Alternative B would result in short-term, minor, adverse impacts on coastal resources related to dock upgrades and long-term, negligible, adverse impacts on coastal resources related to regular operations. Dock upgrades would replace dock piles in roughly the same locations. The current dock position and size is sufficient to serve the consolidated ferry service. Disturbance of benthic substrata would be temporary and limited to a 1,000 square foot area. Also, regular operation may cause some disturbance of benthic sediment in shallow areas and would continue to expose the ferry routes to accidental oil and fuel spills.

Alternative B would not result in impairment of coastal resources because the disturbance of benthic substrata during dock upgrades would be temporary and limited to an area of 1,000 square feet. In addition, the slight disturbance of sediment and potential spills along the ferry routes would not noticeably alter the coastal resources in the long term.

Wetlands

Alternative B would result in a long-term, negligible, adverse impact on wetlands because the resulting impact of the structure on the wetlands would be at or below levels of detection. The shoreline at this site is stabilized with a wooden seawall that protrudes into the water beyond where natural wetlands occur adjacent to the site, to the west. Submerged lands would be affected during pile placement; however, these lands are regularly disturbed by existing boat

traffic and channel maintenance and support little to no vegetation. Construction activities are not expected to impact any other wetlands on or adjacent to the site.

Alternative B would not result in impairment of wetlands because the disturbance would be of a previously degraded site (that would continue to be degraded in the absence of the NPS concessioner) and because the disturbance would be on a small scale.

Wildlife and Wildlife Habitat

Alternative B would have long-term, negligible, adverse impacts on wildlife and wildlife habitat related to potential disturbance of benthic sediments and SAV in addition to contributing to noise. These impacts would be limited to the ferry routes and could be minimized by consolidation of ferry service and avoidance of areas known as EFH or shellfish growing sites. Although the amount of ferry traffic may be approximately the same as exists currently, the boats would be likely to use the same routes and therefore isolate these impacts to those routes.

Alternative B would not result in impairment of wildlife and wildlife habitat because habitat disturbances would be of a very low intensity and could be tolerated or avoided by most wildlife. Impacts would be reduced by consolidation of ferry service and increased awareness of sensitive resources.

Special Status Species

Alternative B would be unlikely to adversely affect special status species. Effects would continue to be insignificant and discountable, as currently takes place in relation to ferry operations. As such, Alternative B would result in long-term, minor, adverse impacts on special status species. Alternative B would not result in impairment of special status species because the potential effects would be extremely unlikely and/or would not take place in such a way that the effects of the disruptions on the populations could be meaningfully measured, detected, or evaluated

Historic Structures and Districts

The passenger and queuing shade structure would be designed to avoid visual intrusion and obstructions to the historic characteristics of the existing town development and its water orientation. This impact would not constitute an impairment to the resources and values for which the elements within the study area were nominated as a Historic District listed in the National Register of Historic Places.



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.

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