Cape Lookout National Seashore
North Carolina

National Park Service
U.S. Department of the Interior

Draft Cape Lookout Village Historic Structures Reuse Implementation Plan

Environmental Assessment / Assessment of Effect

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Cape Lookout National Seashore
Carteret County, North Carolina

Cape Lookout National Seashore is in Carteret County, North Carolina, about 3 miles off the mainland coast. The national seashore occupies more than 28,000 acres of land and water extending from Ocracoke Inlet on the northeast to Beaufort Inlet on the southwest. The national seashore consists of four main barrier islands (North Core Banks, Middle Core Banks, South Core Banks, and Shackleford Banks). Various historic maritime activities have occurred within the national seashore, and the islands attract visitors seeking a diverse range of recreational opportunities.

This project concerns the Cape Lookout Village Historic District, which is near the southern end of the national seashore on the South Core Banks. The district has historically served as a site of maritime navigation and life-saving services, commercial fishing, and private residential and recreational use. The National Park Service (NPS) proposes to evaluate a range of alternative uses for 16 residences in the Cape Lookout Village Historic District. Although exhibiting various degrees of structural deterioration, all but three buildings are identified as contributing to the district's national register significance. Essential utility systems would be required for any alternative proposal for reuse of the buildings. This document examines six alternatives for alternatives uses of the buildings in the Cape Lookout Village Historic District for the next 25 years. It also analyzes the impacts of implementing each of the alternatives.

Under all alternatives, the national seashore would stabilize 13 historic structures in the village area (four of which are undergoing emergency stabilization) and remove two additional structures and other selected noncontributing outbuildings. Two noncontributing buildings would continue to be used by nonprofit organizations. Space for two NPS staff / volunteers would be developed in the 1873 Lighthouse Keeper's Quarters at the lighthouse complex. Under the **no-action alternative**, village structures would be connected to electrical service and two new septic systems. Limited exterior interpretation of the structures would be provided. Under **alternative A,** three village structures would be rehabilitated for NPS use, and three would be renovated for public interpretation (some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and three new septic systems.

Under alternative B, four village structures would be rehabilitated for NPS use, and seven would be renovated for public interpretation (some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and a central wastewater treatment system. Three historic structures would be relocated to original site locations. **Under alternative C,** four village structures would be rehabilitated for NPS use, and eight would be renovated for public interpretation. Three structures would be rehabilitated for use by private leaseholders. (Some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and a central wastewater treatment system. Three historic structures would be relocated to original site locations.

Under alternative D, four village structures would be rehabilitated for NPS use, and eight would be renovated for public interpretation. At a minimum, eight structures would be rehabilitated for use by a concessions operator. (Some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and a central wastewater treatment system. Three historic structures would be relocated to original site locations. **Under alternative E, u**p to four village structures would be rehabilitated for NPS use, and eight would be renovated for public interpretation. At a minimum, eight structures would be rehabilitated for use by either a concessions operator or private lease holders. (Some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and a central wastewater treatment system. Three historic structures would be relocated to original site locations.

This *Draft Reuse Implementation Plan / Environmental Assessment* has been distributed to other agencies and interested organizations and individuals for their review and comment. The public comment period for this document will last for 30 days after the document has been distributed to the public. Readers are encouraged to submit their comments on this draft plan. Please see "How to Comment on this Plan" on the next page.

HOW TO COMMENT ON THIS PLAN

Comments on this plan are welcome and will be accepted for 30 days after the document is distributed to the public. Comments/ responses to the material may be submitted either over the Internet or in writing. Please comment only once.

Please include your name and address on any correspondence to be sure that you are included on our mailing list.

Commenters are encouraged to use the Internet if at all possible.

Internet comments can be submitted at <www.nps.gov/calo/parkmgmt/planning.htm > and then choose the "Reuse Implementation Plan."

Written comments may be sent to:

Superintendent Bob Vogel
131 Charles Street
Harkers Island, NC 28531

Verbal comments may be made at public meetings. The dates, times, and locations of public meetings will be announced in the media following release of this document.

Before including your address, phone number, e-mail 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. Although 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.

SUMMARY

Cape Lookout National Seashore is in Carteret County, North Carolina, about 3 miles off the mainland coast. The national seashore occupies more than 28,000 acres of land and water extending from Ocracoke Inlet on the northeast to Beaufort Inlet on the southwest. The national seashore consists of four main barrier islands (North Core Banks, Middle Core Banks, South Core Banks, and Shackleford Banks). These narrow barrier islands are characterized by wide, bare sand beaches with low dunes covered by scattered grasses; flat grasslands bordered by dense vegetation; and large expanses of salt marsh alongside the sound. There are no bridges or causeways linking the islands to each other or the mainland, and visitors reach the islands by ferry or private boat.

Various historic maritime activities have occurred within the national seashore, and the islands attract visitors seeking a diverse range of recreational opportunities. The current project area is the Cape Lookout Village Historic District, which is near the southern end of South Core Banks. The district has historically served as a site of maritime navigation and life-saving services, commercial fishing, and private residential and recreational use. The harsh environment and relative isolation of the islands have served to limit human settlement other than at Cape Lookout Village and Portsmouth Village (at the northern end of the national seashore). Consequently, the natural environment and ecosystems remain largely intact and undisturbed throughout the national seashore.

The National Park Service (NPS) proposes to evaluate a range of alternative uses for buildings in the Cape Lookout Village Historic District. Many of the buildings were formerly occupied by private leaseholders as seasonal fishing cottages or used for other purposes. In accordance with NPS policy and the national seashore's purpose and mission goals, the National Park Service intends to rehabilitate and adaptively use selected buildings as feasible to preserve the integrity of the historic district and fulfill operational objectives. This action is needed because the buildings within the historic district have sustained varying degrees of deterioration. If left unchecked, the historical integrity of the district could be compromised. The six alternatives presented and evaluated in this plan represent options for preserving and enhancing the integrity of the historic district's buildings and cultural landscape while fulfilling visitor use and interpretive objectives.

A court order requires the national seashore "to conduct a public planning process to formulate a policy for the uses of the subject structures and other similar structures within the national seashore. During this process, the National Park Service will consider a range of uses of the structures including, but not limited to, leasing, employee housing, administrative purposes, or demolition, in accordance with applicable laws, regulations and policies."

This *Draft Reuse Implementation Plan / Environmental Assessment / Assessment of Effect* presents six alternatives for future management of Cape Lookout Village Historic District in Cape Lookout National Seashore. The alternatives, which are based on the national seashore's purpose, significance, and mission goals, present different ways to manage resources and visitor use and improve facilities and infrastructure in the historic district. The six alternatives are the no-action alternative (continue current management), alternative A, alternative B, alternative C, alterative D (the NPS preferred alternative), and alternative E.

Under all alternatives, the national seashore would stabilize 13 historic structures in the

village area (four of which are currently undergoing emergency stabilization —the Lewis-Davis House, the Guthrie-Ogilvie House, Fishing Cottage No. 2, and the Seifert-Davis House). Two additional structures would be removed — the Setzer-Dawsey House (determined noncontributing to the district's historical significance) and Fishing Cottage No. 1 (determined noncontributing and also condemned for occupancy). Selected noncontributing outbuildings in the district would also be removed. The noncontributing Les and Sally Moore House / Store would continue to be used by the nonprofit Cape Lookout Environmental Education Center, and the main U.S. Coast Guard Station building at the south end of the district would also continue to be used by the nonprofit North Carolina Maritime Museum. Space for two NPS staff / volunteers would be developed in the 1873 Lighthouse Keeper's Quarters at the lighthouse complex.

NO-ACTION ALTERNATIVE

None of the stabilized village structures would be further rehabilitated for occupancy or use by the National Park Service, concessions operators, or private leaseholders under the no-action alternative. The structures would be connected to electrical service. Electricity is currently delivered from the mainland at Harkers Island and is available in the lighthouse area. The electrical system would be extended to the village area, and would likely require upgrading or replacement to meet the additional operational needs of the village. Two new septic systems would also be constructed. The locations for these have not been selected.

Limited interpretation of the structures' exteriors would be provided, although visitors would not be able to enter the structures. Limited vegetation clearing would be carried out near the structures primarily to reduce the risk from fire and hazard tree limbs.

The key impacts of implementing this alternative include the long-term beneficial impacts on the Cape Lookout Village Historic District from stabilizing historic buildings. The long-term impacts from removing or thinning aged, diseased, or invasive plant materials would have a beneficial impact on the remaining vegetation and a negligible adverse impact on vegetation removed. Installation of the electrical lines would have a negligible long-term adverse impact on vegetation. The long-term water quality impacts of use of some structures with septic systems would be negligible. The national seashore's operations could be adversely impacted by the additional costs and staffing requirements associated with implementing preservation undertakings. In the long term, visitor use and experience would benefit from interpretive opportunities to see stabilized historic structures.

ALTERNATIVE A

Under alternative A, three of the village structures would be rehabilitated for NPS use and occupancy, and three would be renovated for interpretation to the public. (Individual buildings might be used for more than one purpose, i.e., public interpretation and NPS administrative use, so this does not mean six structures would be rehabilitated/ renovated.) None of the structures would be used by concession operators or private leaseholders. The structures would be connected to potable water piped from an existing well near the lighthouse. The electrical system would be extended to the village area and would likely require upgrading or replacement to meet the additional operational needs of the village. Three new septic systems would be constructed. The locations for these have not been selected. Selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

The key impacts of implementing this alternative include the long-term beneficial impacts on the Cape Lookout Village Historic District from stabilizing and rehabilitating historic buildings, and selective vegetation clearing to enhance the cultural landscape and historic views. The long-term impacts from removing or thinning aged, diseased, or invasive plant materials would have a beneficial impact on the remaining vegetation and a negligible adverse impact on vegetation removed. Installation of the electrical and potable water lines would have a negligible long-term adverse impact on vegetation. The long-term water quality impacts of use of some structures with septic systems would be negligible. The national seashore's operations could be adversely impacted by the additional costs and staffing requirements associated with implementing preservation undertakings. In the long term, visitor use and experience would benefit from interpretive opportunities to see stabilized and rehabilitated historic structures, and enhanced historic views.

ALTERNATIVE B

Four of the village structures would be rehabilitated for NPS use and occupancy, and seven would be renovated for interpretation to the public under alternative B. (Individual buildings might be used for more than one purpose, i.e., public interpretation and NPS administrative use, so this does not mean 11 structures would be rehabilitated/renovated.) None of the structures would be used by concessions operators or private leaseholders. The structures would be connected to potable water piped from an existing well in the lighthouse area. The electrical system would be extended to the village area and would likely require upgrading or replacement to meet the additional operational needs of the village. A new central wastewater treatment system would be constructed. Three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations. Selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

The key impacts of implementing this alternative include the long-term beneficial impacts on the Cape Lookout Village Historic District from stabilizing and rehabilitating historic buildings, selective vegetation clearing to enhance the cultural landscape and historic views, and relocation of three historic buildings to their original sites. The long-term impacts from removing or thinning aged, diseased, or invasive plant materials would have a beneficial impact on the remaining vegetation and a negligible adverse impact on vegetation removed. Installation of electrical and potable water lines and a wastewater treatment system would have a negligible to minor long-term adverse impact on vegetation. The long-term water quality impacts of increased use of some structures would be negligible. The national seashore's operations could be adversely impacted by the additional costs and staffing requirements associated with implementing preservation undertakings. In the long term, visitor use and experience would benefit from interpretive opportunities to see stabilized and rehabilitated historic structures, and enhanced historic views.

ALTERNATIVE C

In alternative C, four of the village structures would be rehabilitated for NPS use and occupancy, and eight would be renovated for interpretation to the public. Three structures would be rehabilitated for use by private leaseholders. (Individual buildings might be used for more than one purpose, i.e., public interpretation, leaseholders, and NPS administrative use, so this does not mean 15 structures would be rehabilitated/renovated.) The structures would be connected to potable water piped from an existing well in the

lighthouse area. The electrical system would be extended to the village area and would likely require upgrading or replacement to meet the additional operational needs of the village. A new central wastewater treatment system would be constructed. Three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations. Selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

The key impacts of implementing this alternative include the long-term beneficial impacts on the Cape Lookout Village Historic District from stabilizing and rehabilitating historic buildings, selective vegetation clearing to enhance the cultural landscape and historic views, and relocation of three historic buildings to their original sites. The long-term impacts from removing or thinning aged, diseased, or invasive plant materials would have a beneficial impact on the remaining vegetation and a negligible adverse impact on vegetation removed. Installation of electrical and potable water lines and a wastewater treatment system would have a negligible to minor long term adverse impact on vegetation. The long-term adverse impacts on water quality associated with occupancy of the structures in the village would be negligible. There would be a beneficial impact on terrestrial water systems in the historic district because of an increase in the availability of fresh water in the surficial aquifer. The long-term adverse impact on the freshwater saltwater interface and the estuarine or marine ecosystems would be negligible. The national seashore's operations could be adversely impacted by the additional costs and staffing requirements associated with implementing preservation undertakings. In the long term, visitor use and experience would benefit from interpretive opportunities to see stabilized and rehabilitated historic structures and enhanced historic views, and the limited availability of structures to lease-holders for overnight / extended-stay occupancy.

ALTERNATIVE D (PREFERRED)

Up to four of the village structures would be rehabilitated for NPS use and occupancy, and eight would be renovated for interpretation to the public under alternative D. At a minimum, eight structures would be rehabilitated for use by a concessions operator. (Individual buildings might be used for more than one purpose, i.e., public interpretation and NPS administrative use, so this does not mean 20 structures would be rehabilitated/ renovated.) The structures would be connected to potable water piped from an existing well in the lighthouse area. The electrical system would be extended to the village area and would likely require upgrading or replacement to meet the additional operational needs of the village. A new central wastewater treatment system would be constructed. Three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations. Selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

The key impacts of implementing this alternative include the long-term beneficial impacts on the Cape Lookout Village Historic District from stabilizing and rehabilitating historic buildings, selective vegetation clearing to enhance the cultural landscape and historic views, and relocation of 3 historic buildings to their original sites. The long-term impacts from removing or thinning aged, diseased, or invasive plant materials would have a beneficial impact on the remaining vegetation and a negligible adverse impact on vegetation removed. Installation of electrical and potable water lines and a wastewater treatment system would have a negligible to minor long-term

adverse impact on vegetation. The long-term adverse impacts on water quality associated with occupancy of the structures in the village would be negligible. There would be a beneficial impact on terrestrial water systems in the historic district because of an increase in the availability of fresh water in the surficial aquifer. If the volume of effluent discharged exceeds the assimilative capacity of the aquifer there could be a localized long-term adverse but negligible to minor impact on water quality in estuarine and marine systems. The national seashore's operations could be adversely impacted by the additional costs and staffing requirements associated with implementing preservation undertakings. In the long term, visitor use and experience would benefit from interpretive opportunities to see stabilized and rehabilitated historic structures and enhanced historic views, and the availability of structures to visitors under a concessions operation for overnight / extended-stay occupancy.

ALTERNATIVE E

Under alternative E, up to four of the village structures would be rehabilitated for NPS use and occupancy, and eight would be renovated for interpretation to the public. At a minimum, eight structures would be rehabilitated for use by either a concessions operator or private leaseholders. (Individual buildings might be used for more than one purpose, i.e., public interpretation, leaseholders, and NPS administrative use, so this does not mean 20 structures would be rehabilitated/renovated.) The structures would be connected to potable water piped from an existing well in the lighthouse area. The electrical system would be extended to the village area and would likely require upgrading or replacement to meet the additional operational needs of the village. A new central wastewater treatment system would be constructed. Three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations. Selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

The key impacts of implementing this alternative include the long-term beneficial impacts on the Cape Lookout Village Historic District from stabilizing and rehabilitating historic buildings, selective vegetation clearing to enhance the cultural landscape and historic views, and relocation of 3 historic buildings to their original sites. The long-term impacts from removing or thinning aged, diseased, or invasive plant materials would have a beneficial impact on the remaining vegetation and a negligible adverse impact on vegetation removed. Installation of electrical and potable water lines and a wastewater treatment system would have a negligible to minor long-term adverse impact on vegetation. The long-term adverse impacts on water quality associated with occupancy of the structures in the village would be negligible. There would be a beneficial impact on terrestrial water systems in the historic district because of an increase in the availability of fresh water in the surficial aquifer. If the volume of effluent discharged exceeds the assimilative capacity of the aquifer there could be a localized long-term adverse but negligible to minor impact on water quality in estuarine and marine systems. The national seashore's operations could be adversely impacted by the additional costs and staffing requirements associated with implementing preservation undertakings. In the long term, visitor use and experience would benefit from interpretive opportunities to see stabilized and rehabilitated historic structures and enhanced historic views, and the availability of structures to lease-holders or to other visitors under a concessions operation for overnight / extended-stay occupancy.

THE NEXT STEPS

After the distribution of the *Draft Reuse Implementation Plan / Environmental Assessment / Assessment of Effect* there will be a 30-day public review and comment period after which the NPS planning team will evaluate comments from other federal agencies, organizations, businesses, and individuals regarding the draft plan. If it is determined that there are no significant impacts, a "Finding of No Significant Impact" will be issued and the plan (one of the alternatives) will be signed by the NPS regional director. The "Finding of No Significant Impact" documents the NPS selection of an alternative for implementation. With the signed "Finding of No Significant Impact," the plan can then be implemented, depending on funding and staffing. (A "Finding of No Significant Impact" does not guarantee funds and staff for implementing the approved plan.)

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INTRODUCTION

BRIEF DESCRIPTION OF THE AREA

Cape Lookout National Seashore is in Carteret County, North Carolina, about 3 miles off the mainland coast (see figure 1). The national seashore occupies more than 28,000 acres of land and water extending from Ocracoke Inlet on the northeast to Beaufort Inlet on the southwest. The national seashore consists of four main barrier islands (North Core Banks, Middle Core Banks, South Core Banks, and Shackleford Banks). These narrow barrier islands are characterized by wide, bare sand beaches with low dunes covered by scattered grasses; flat grasslands bordered by dense vegetation; and large expanses of salt marsh alongside the sound. There are no bridges or causeways linking the islands to each other or the mainland, and visitors reach the islands by ferry or private boat.

Various historic maritime activities have occurred within the national seashore, and the islands attract visitors seeking a diverse range of recreational opportunities. The current project area is the Cape Lookout Village Historic District, which is near the southern end of South Core Banks (see figure 2). The district has historically served as a site of maritime navigation and life-saving services, commercial fishing, and private residential and recreational use. The harsh environment and relative isolation of the islands have served to limit human settlement other than at Cape Lookout Village and Portsmouth Village (at the northern end of the national seashore). Consequently, the natural environment and ecosystems remain largely intact and undisturbed throughout the national seashore.

PURPOSE OF THE ACTION

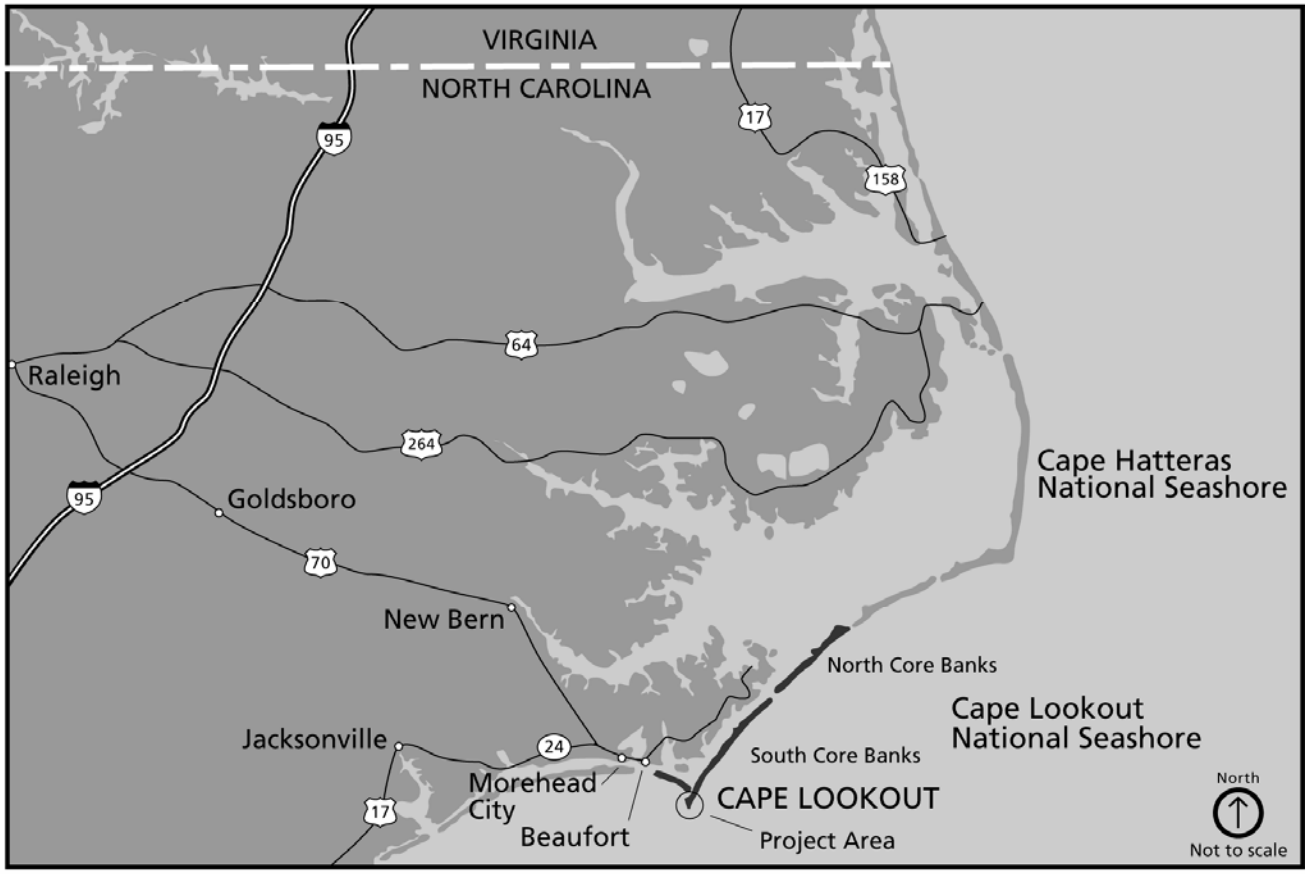
The National Park Service (NPS) proposes to evaluate a range of alternative uses for buildings within the Cape Lookout Village Historic District. Many of the buildings were formerly occupied by private leaseholders as seasonal fishing cottages or used for other purposes. In accordance with NPS policy and the national seashore's purpose and mission goals, the National Park Service intends to rehabilitate and adaptively use selected buildings as feasible to preserve the integrity of the historic district and fulfill operational objectives.

NEED FOR THE ACTION

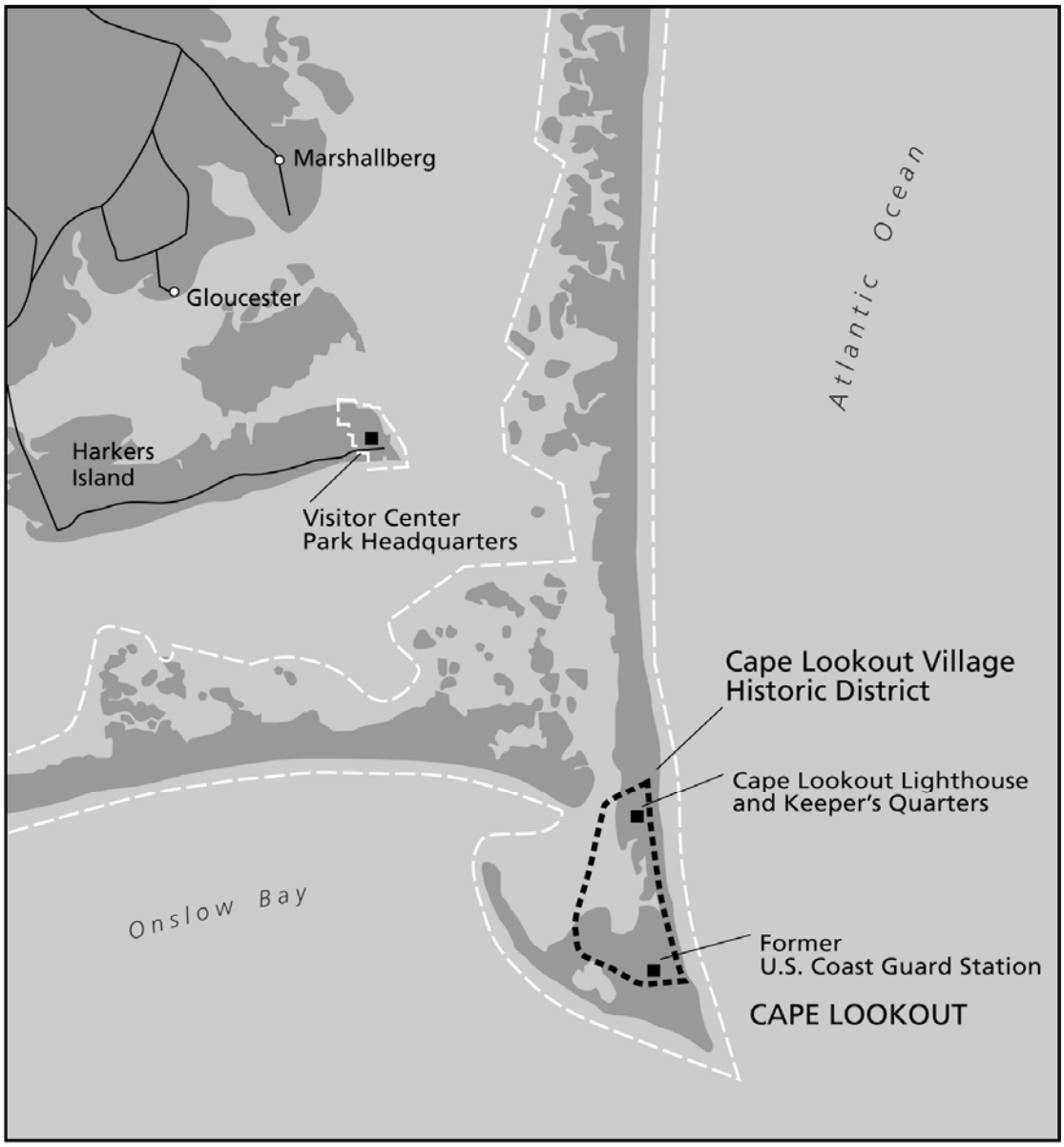
This action is needed because the buildings within the historic district have sustained varying degrees of deterioration. If left unchecked, the historical integrity of the district could be compromised. The alternatives presented and evaluated in this plan represent options for preserving and enhancing the integrity of the historic district's buildings and cultural landscape while fulfilling visitor use and interpretive objectives.

A court order issued in 2002[1] requires the national seashore "to conduct a public planning process to formulate a policy for the uses of the subject structures and other similar structures within the national seashore. During this process, the National Park Service will consider a range of uses of the structures including, but not limited to, leasing, employee housing, administrative purposes, or demolition, in accordance with applicable laws, regulations and policies."

[1] Warren J. Davis, et. al., Plaintiff, v. United States of America, et. al., Defendants. Case No. 4:01-CV-117-H(3). September 4, 2002.



Regional Map of Cape Lookout National Seashore, North Carolina



Project Area, Cape Lookout Village Historic District

PURPOSE, SIGNIFICANCE, AND MISSION STATEMENTS

Purpose

Cape Lookout National Seashore was established by Public Law 89-366 (March 10, 1966) "to preserve for public use and enjoyment an area in the State of North Carolina possessing outstanding natural and recreational values . . . ." From this enabling legislation, the national seashore's purpose has been further broadened: to conserve and preserve for public use and enjoyment the outstanding natural, cultural, and recreational values of a dynamic coastal barrier island environment for future generations. The national seashore also serves as both a refuge for wildlife and a recreational area for the public, including developed visitor amenities.

Significance

- The national seashore's 56 mile-long coastal barrier islands are among the most dynamic in the United States. The combined natural forces of wind, waves, and tidal currents continually reshape the low-lying islands.
- The national seashore has been designated a unit of the Carolinian – South Atlantic Biosphere Reserve by the United Nation's Educational, Scientific and Cultural Organization (UNESCO). It is also designated a North Carolina Natural Heritage Area.
- The barrier islands provide refuge and critical habitat for threatened and endangered species such as the loggerhead sea turtle, piping plover, and seabeach amaranth (a plant species). Critical habitat is also provided for other unique wildlife including the protected wild horses of Shackleford Banks. More than 275 bird species use the national seashore for resting, nesting, and feeding, and as a migratory stopover point. The national seashore is designated a Globally Important Bird Area by the American Bird Conservancy.
- The national seashore's significant cultural resources reflect the rich maritime history of the Outer Banks. The Cape Lookout Village Historic District and the Portsmouth Village Historic District are distinguished by listing on the National Register of Historic Places. A diverse array of structures dot the cultural landscapes of these districts — the Cape Lookout Lighthouse and keeper's quarters, fishing cottages, U.S. Life-Saving Service and Coast Guard facilities, and various community buildings (Portsmouth's church, school, and post office / general store).
- The national seashore provides outstanding visitor recreational opportunities to fish, hunt, beachcomb, hike, swim and camp in a remote coastal environment.

Mission Statements

The mission of Cape Lookout National Seashore is to

- conserve and preserve for the future the outstanding natural resources of a dynamic coastal barrier island system;
- protect and interpret the significant cultural resources of past and contemporary maritime history;
- provide for public education and enrichment through proactive interpretation and scientific study; and
- provide for sustainable use of recreation resources and opportunities.

PROJECT HISTORY AND BACKGROUND

The national seashore 's 1966 enabling legislation (PL 89-366) provided rights of occupancy leases of 25-year duration, and life estates to those persons "who on January 1, 1966 owned property which on July 1, 1963

was developed and used for non-commercial residential purposes" (NPS, 1982). Most of the leased properties and life estates are located at Cape Lookout Village and Portsmouth Village, although a few private inholdings are dispersed between the two locations along the Core Banks. Most of the leases have expired and the properties have returned to NPS management. Ten private leases in the Cape Lookout Village area expired between 2001 and 2002, three leases expired in 2003, and the last lease will expire in 2007.

Several of the former leaseholders in the Cape Lookout Village owned the residences for many years prior to establishment of the national seashore and retain strong personal connections to the properties and the history of the cape. The Cape Lookout Village Historic Preservation Committee, formed by former leaseholders, was instrumental in nominating the historic district to the national register in efforts to preserve the cape's fishing and life-saving heritage. Two of the building complexes in the village area have been adapted for use by nonprofit organizations for natural history and environmental education. The North Carolina Maritime Museum, headquartered in Beaufort, uses the former Coast Guard Station as a field school. The Cape Lookout Environmental Education Center operates its educational programs from the former house, store, and cabins built by Les and Sally Moore in the 1950s and 1960s.

This document focuses on alternative management strategies for 16 residences in the Cape Lookout Village Historic District. Three of these buildings (the Setzer-Dawsey House, Fishing Cottage No. 1, and the Moore House and Store) are noncontributing structures in the national register significance of the historic district. The remainder, although exhibiting various degrees of structural deterioration, are identified as contributing to the district's national register significance. Three of the contributing historic government buildings were moved from their original locations to the central village area: the Life-Saving Station (1887), the Life-Saving Station Boat House (1924), and the Lighthouse Keeper's Quarters (1907).

Essential utility systems would be required for any alternative proposal for reuse of the buildings. A recently drilled well near the lighthouse is anticipated to provide potable water in quantities sufficient to serve all the properties in the historic district. Electricity is presently provided to the lighthouse from Harkers Island (the location of NPS headquarters). Electrical service could be extended throughout the district, perhaps supplemented by photovoltaic panels and generators. Most of the existing buildings have individual septic systems that are presently inoperative, or do not meet state and county regulations. A critical component of the reuse plan would be provision of a wastewater system that adequately addresses environmental requirements (e.g. protection of the fresh water aquifer), and does not intrude on the historic district or the cultural landscape. The suitability of a central wastewater system serving all the properties in the district would be investigated and implemented as required.

RELATIONSHIP TO OTHER PROJECTS AND PLANS

The following plans, policies, and actions could affect the alternatives being considered in this environmental assessment. These plans and policies were also considered in the analyses of cumulative impacts.

***General Management Plan / Development Concept Plan* (1982)** —This 1982 plan established the underlying NPS management philosophy and long-range planning direction for the national seashore. The following are among the management objectives identified in the 1982 plan:

- *Resources management*: The seashore will be maintained in a natural condition, with primary resource management consideration of the dynamic natural processes that shape its exposed, maritime setting and environment. Native wildlife (particularly threatened and endangered species) and historic resources will be preserved and protected.
- *Visitor use and interpretation*: Seashore resources and recreational pursuits will be made available and accessible to visitors in a manner that minimizes environmental impacts. The interpretive emphasis will focus primarily on the effects of the sea on the barrier islands.
- *Development*: Facilities will only be developed on the barrier islands that are essential to visitor use, safety, and resource management. Major facilities (visitor contact, administration, maintenance) will be developed at the mainland site on Harkers Island.

General Management Plan Amendment / Environmental Assessment (2001) — The *General Management Plan Amendment* addressed improvements to overnight accommodations and transportation services to North and South Core Banks. The plan called for a reduction in the number of parking spaces located near the 1873 lighthouse keeper's quarters.

Cape Lookout Village Historic District — The historic district (listed on the National Register of Historic Places in June 2000) encompasses former privately leased fishing cottages, the Cape Lookout Lighthouse Station, and the U.S. Coast Guard Station. The district's period of significance extends from 1857 to approximately 1950.

Court Order (September 2002) — This court order requires the National Park Service to develop a reuse plan for structures within the Cape Lookout Village Historic District.

"Cape Lookout Village Cultural Landscape Report" (draft 2005) — The cultural landscape report provides detailed cultural landscape descriptions, analyses, and treatment recommendations for the historic district. The cultural landscape is identified as a contributing component of the district's national register significance, furthering the district's overall integrity of setting, feeling, and association.

Cape Lookout Visitor Orientation Area Development Concept Plan / Environmental Assessment (November 2005) — The plan analyzed alternatives for improved visitor use facilities near the Cape Lookout Lighthouse. The selected alternative consisted of constructing a new comfort station and visitor contact station on a previously disturbed site outside the boundary (to the north) of the historic district. Additional project actions included the placement of new water line, construction of a 75-car public parking area, and construction of new sections of boardwalk.

Economic Feasibility Study of Potential Commercial Services at Cape Lookout Village (October 2005) — The consulting firm of Dornbusch Associates prepared this study to analyze the feasibility and necessary conditions for a prospective concessions operator to provide visitor services (e.g., lodging, food and beverage, and merchandise sales) using rehabilitated buildings at Cape Lookout Village. The study concluded that a single concessions operator could profitably lease at least eight village properties for visitor lodging if the concessions operation was combined with other fishing camp units in the South Core Banks.

Shoreline Protection Project (Spring 2006) — This project was completed to protect the Cape Lookout Lighthouse and associated structures from shoreline erosion occurring on the western (sound) side of the cape. The shoreline between the lighthouse area and the sound has substantially eroded since the mid-

20th century, and was heavily impacted by Hurricane Isabel in 2003 and subsequent storm surges. Sand dredged from a shoal northeast of Shackleford Banks was used to renourish the beach north and south of the lighthouse dock.

Interim Protected Species Management Plan / Environmental Assessment (March 2006) — This plan was prepared to evaluate and implement strategies to avoid adversely impacting protected species while allowing for appropriate recreational use. The plan (in conformance with the national seashore s enabling legislation, NPS policies, the Endangered Species Act, the Migratory Bird Treaty Act, and other relevant laws and mandates) will provide interim guidance pending the development of an off-road vehicle (ORV) plan and environmental impact statement.

Commercial Services Plan / Environmental Assessment (in progress) — The national seashore is preparing a commercial services plan that will identify and analyze alternatives for managing necessary and appropriate commercial services during the next 10 years. The plan is required to address the nature of concessions operations, the level of required services, and other issues that have arisen since the 2001 *General Management Plan Amendment*. The plan will assist the national seashore in achieving its objectives for desired visitor experiences, while minimizing resource impacts associated with commercial service activities.

PROJECT-RELATED ISSUES AND CONSIDERATIONS

The primary issues and considerations associated with the actions presented in this plan and environmental assessment are as follows:

- preserving and protecting historic properties contributing to the significance of the Cape Lookout Village Historic District — All proposed actions and treatments must be in accordance with approved standards to ensure preservation of distinctive features of the district's contributing buildings and cultural landscape.
- establishing the appropriate types and levels of uses for the buildings to effectively fulfill the national seashore's long-range objectives for preservation, interpretation, and visitor use — The buildings could potentially be used by the National Park Service, private leaseholders, and concessions operators.
- providing reasonable opportunities for potential concessioners to profitably operate commercial services from NPS-selected and rehabilitated structures
- protecting natural resources (e.g., critical habitat, groundwater, and wetlands) in accordance with NPS policies and standards
- providing adequate and appropriate utility systems (potable water, electricity, septic / wastewater) to support reuse of the structures with minimal environmental impact
- suitability, safety, and special use requirements for sustainable construction and occupancy within the 100-year floodplain and barrier island environment
- engineering and structural feasibility of relocating three historic structures back to their original site locations to help reestablish the district's historic spatial arrangement and integrity

DERIVATION OF IMPACT TOPICS

Impact topics are the resources or subjects of concern that could be affected by actions discussed in the range of alternatives. These impact topics were identified based on federal laws, regulations, project issues, and NPS knowledge of limited or easily impacted resources. A brief rationale for the selection of each impact topic is provided below, as well as

the rationale for dismissing specific impact topics from further consideration.

IMPACT TOPICS ANALYZED IN THIS DOCUMENT

Cultural Resources

The 1966 National Historic Preservation Act (16 USC 470 *et seq*.), the 1916 NPS Organic Act, NPS Director's Order 28 ("Cultural Resource Management Guideline"), and other NPS planning and cultural resource policies and guidelines call for the consideration and protection of historic properties in development proposals. The evaluation of potential impacts of proposed actions on significant historic properties is required by the National Historic Preservation Act and the National Environmental Policy Act, as is attention to the provisions of the Native American Graves Protection and Repatriation Act for sites where human remains or burials may be present.

Historic District — Structures, Buildings, and Cultural Landscape. The structures and buildings considered under this reuse implementation plan are identified as both contributing and noncontributing resources of the Cape Lookout Village Historic District, which was listed on the National Register of Historic Places in June 2000 (see Historic District Structures map). Proposed alternatives for the use and treatment of these properties, including removal of noncontributing properties, could affect historic building fabric and other character-defining features that contribute to the district's significance. Therefore, the impacts on the district, inclusive of historic structures and buildings, are evaluated and analyzed in this environmental assessment.

The cultural landscape of the project area is identified as a resource that contributes to the overall significance of the Cape Lookout Village Historic District. According to the National Park Service'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.

Proposed project actions could affect aspects of the cultural landscape. This could occur, for example, if vegetation thinning is undertaken to provide a sense of the former openness and visual connection among historic buildings. Reestablishing or altering patterns of circulation would also affect the cultural landscape in this area. Relocation of three buildings to their original locations (contingent on the outcome of environmental and structural feasibility studies) would also affect the district's visual character and spatial arrangement. Therefore, the impacts on the cultural landscape by actions proposed under the various alternatives are evaluated and analyzed in this environmental assessment.

Archeological Resources. The dynamic geomorphology of the barrier islands is not considered conducive to the in-situ preservation of archeological resources, and no significant archeological resources have been identified in the project area. However, there is a possibility that resources may be present in the area associated with prehistoric or historic period occupation (in particular, cultural materials associated with the development of the Cape Lookout Village Historic District). Because buried archeological resources could be inadvertently disturbed by construction activities associated

Cape Lookout Village Historic District

National Seashore Boundary

Cape Lookout Village Historic District Boundary

Historic Structure

Parking Lot

Lighthouse

1 Lewis-Davis House (Carrie Arendell Davis)
2 Gaskill-Guthrie House
3 Guthrie-Ogilvie House (Luther Guthrie)
4 Setzer-Dawsey House
5 Life Saving Station Boathouse
6 O'Boyle-Bryant House (Bryant)
7 Fishing Cottage #1
8 Fishing Cottage #2
9 Life Saving Station
10 Gordon Willis House
11 Jetty Workers House #2
12 Jetty Workers House #1
13 1907 Keepers Quarters
14 Baker-Holderness House (Casablanca)
15 Seifert-Davis House (Coca-Cola House)
16 Les & Sally Moore House & Store

with the project, archeological resources are included as an impact topic.

Natural Resources

Vegetation. Vegetation communities arise in response to a combination of locally present conditions such as elevation, aspect, available water, and the exposure to saltwater and wind. The presence and absence of vegetation can affect the dynamics of depositional processes on the island. Vegetation also provides important habitat for wildlife, particularly for birds. Actions proposed in this plan would affect vegetation in the historic district. These impacts are related to creating defensible space around the historic structures in the village historic district, partially restoring historic views within the district, and removing some vegetation that post-dates the district's period of significance. For these reasons, the impacts on vegetation from actions proposed in this plan are analyzed in this document.

Water Quality. Changes in marine and fresh water quality can affect wildlife populations and visitors. The water resources in the national seashore are protected and managed under the Federal Water Pollution Control Act Amendments of 1972, the Clean Water Act of 1977, and the Safe Drinking Water Act as amended. NPS *Management Policies 2006* also require the protection and conservation of water resources and water quality. Actions related to wastewater treatment proposed under this plan could affect water quality. From a water quality perspective, the primary concerns are the concentration of nitrogen in the wastewater effluent as well as influx of fresh water into the environment, which could affect terrestrial, estuarine, and marine habitats. For this reason, the impacts on water quality from proposed actions are analyzed in this document.

National Seashore Operations

The alternatives proposed in this plan could affect NPS operations and facilities in the national seashore. All proposals for rehabilitating and adaptively using the structures in the historic district would require a considerable initial investment for construction appropriate to maintaining the district's historic integrity, while also bringing the structures into compliance with the regulatory code requirements for occupancy. New utility systems for wastewater treatment, electrical service, and potable water would also contribute to project costs and ongoing demands on the national seashore's facility management staff to construct and maintain these systems. Because these actions would have implications for facility management staffing and budget allocations, the impacts on national seashore operations are analyzed in this plan.

Visitor Use and Experience

Providing for visitor interpretation and quality visitor experiences are among the fundamental purposes of the National Park Service. To varying degrees, the alternatives in this plan would affect interpretation of the Cape Lookout Village historic district and other visitor use and recreational opportunities in the area. The anticipated impacts on visitor use are therefore analyzed in this plan.

IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

Cultural Resources

Ethnographic Resources. Ethnographic resources are "a 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 (DO-28: Appendix A, 181). No known ethnographic resources are

identified within the Cape Lookout area. There are no federally recognized Native American tribal groups with cultural affiliation to the national seashore. Therefore, ethnographic resources are dismissed as an impact topic in this environmental assessment.

Museum Collections. Museum collections can include a diverse range of items such as prehistoric and historic objects, artifacts, works of art, archival documents, and natural history specimens. Cape Lookout National Seashore's museum collections include approximately 4,000 objects including archeological artifacts, historical objects, archival materials, and historic furnishings. As part of the long-range planning effort for management of the historic residences in the Cape Lookout Village Historic District, the National Park Service envisions that historic furnishings and other decorative/utilitarian items representative of the district's period of significance (ca. 1857 to 1950) would be placed within selected buildings to assist in interpreting the lifeways and living arrangements of former cape residents.

Further collections management studies and exhibit planning may be required to guide these efforts. Although some of these items exist within the buildings, others are anticipated to be acquired from various donors and sources. No sensitive items are anticipated to be placed within the buildings that would require special security measures or environmental control systems. Because no specific or detailed treatment actions are proposed in this document that address historic furnishings and museum collections, and additional implementation planning may be required to guide interior exhibits, museum collections is dismissed as an impact topic in this environmental assessment.

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

There are no Indian trust resources in Cape Lookout National Seashore. The lands comprising the national seashore are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian trust resources is dismissed as an impact topic in this environmental assessment.

Natural Resources

Air Quality. The national seashore has been designated a class II airshed for the prevention of significant deterioration of air quality. Even though it appears that most air pollutants are dispersed by the maritime winds, the National Park Service believes that industrial pollutants are lowering pH values of freshwater bodies in the southeastern United States. The effects of acid rain on freshwater ponds, vegetation, and historic resources at the national seashore are unknown and are not being monitored. Commercial tour, ferry, and private boats and motorized ground transportation vehicles are the most likely sources of localized air pollutants at Cape Lookout. The number of boats and other vehicles are not expected to substantially increase as a result of implementation of this plan. There could be adverse construction-related impacts on air quality during the period of construction emanating from construction vehicle emissions and dust, but these impacts would be negligible and of short duration. Because only negligible long-term changes in air quality at the national seashore are anticipated as a result of this plan, air quality has been dismissed as an impact topic.

Floodplains. Floodplains in national park system units are protected and managed in accordance with Executive Order 11988 ("Floodplain Management"), NPS Director's Order 77-2 ("Floodplain Management"), and NPS *Management Policies 2006* (4.6.4). This guidance requires the National Park Service to protect, preserve, and restore floodplain values; minimize risk to life or property by design or modification of actions in floodplains; and examine impacts on floodplains. It is NPS policy to avoid affecting floodplains and to minimize impacts when they are unavoidable. Except for the tops of the tallest dunes at Cape Lookout Point, all of Core Banks is in the 100-year floodplain and is a coastal high-hazard area. Because the location of the historic buildings is integral to their significance, it would not be practicable to locate development outside the floodplain.

Natural floodplain values, as defined in the procedural manual for Director's Order 77-2, are the attributes of the floodplain that contribute to ecosystem quality, including soils, vegetation, wildlife habitat, dissipation of flood energy, sedimentation processes, and ground water recharge. Periodic disturbance of natural floodplain soils and geomorphic and vegetation attributes by floods also contributes to ecosystem quality. The attributes that could be affected by implementation of this plan include soils, vegetation, wildlife habitat, dissipation of flood energy, and sedimentation processes, including erosion. The impacts on soils, vegetation, and wildlife habitat are analyzed separately in this document. The floodplain values that are considered here are the ability of the floodplain to convey flood waters as well as changes to sedimentation processes that occur on the island.

The structures in the historic village were sited at their current locations to minimize their exposure and vulnerability to storms. The shape of the southern end of South Core Banks has evolved over time such that the village is now located near the widest section of the island. If flooding occurred within the historic district, the structures would cause localized changes in water flow around the structures. The changes in water flow could result in either scouring or deposition around the structures, but would be unlikely to result in changes over a wider area. The structures would not act as a barrier to water flow, change the ability of the floodplain to convey water across the island, or add to the height of floodwaters. The proposed alternatives would neither change the relationship of the structures to the floodplain nor alter the floodplain. Therefore, the adverse impacts on the floodplain from proposed undertakings would be negligible.

DO 77-2 requires the preparation of a Statement of Findings (SOF) that describes how the potential impacts on natural floodplain processes would be mitigated during the implementation of a development plan. These requirements do not apply to historic structures whose location is integral to their significance. Under some alternatives, there would be additional development, such as a wastewater treatment system, that does not fall within the exemption. When site-specific plans are developed related to the proposed actions in this plan, environmental compliance would be completed and a statement of finding would be prepared as necessary.

Geologic Resources. Consideration of geologic resources is required by NPS *Management Policies 2006* (Section 4.8.1). In general, the National Park Service will allow geologic processes to continue unimpeded. Specifically, with respect to shorelines and barrier islands, the Park Service will also allow natural shoreline processes (e.g., erosion, deposition, dune formation, overwash, inlet formation, and shoreline migration) to continue without interference (NPS *Management Policies 2006*, 4.8.1.1).

Like the rest of the Outer Banks, Core Banks was formed by sand deposition. Cape Lookout is underlain entirely by sand and unconsolidated materials deposited by wind

and water. The forces that modify the island topography include wind, water, and storms. The overwash from storms and hurricanes brings sand from the ocean-side beach across to the sound side of the island. Over time, the wetland soils from the sound side become part of the beach on the ocean side. Because of this constant movement, geologic strata do not form and conditions are not conducive to the formation and preservation of a fossil record. The actions proposed in this plan would occur away from the shoreline within the historic district, an area that has already been heavily disturbed. Consequently, stabilization and rehabilitation of the historic structures would have a negligible impact on shoreline accretion and erosion on the island. Any disturbances associated with implementation of these actions would be localized, and would not likely exceed the level of disturbance normally experienced on the island as a result of wind, wave, or storm action. For these reasons, geologic resources were dismissed as an impact topic for this plan.

Hazardous Materials. NPS public health and hazardous materials specialists conducted an environmental audit of the historic district (BHATE Environmental Engineers and Scientists, 2004). During the investigation, it was discovered that fuel or oil had leaked into the ground within one of the detached garages / sheds in the central village area. The source of the contamination may have been from a former parked vehicle or from a leaking fuel / oil container. Measures are in progress to remove or otherwise mitigate the contaminated soils. Impacts from the leak or spill would be long-term, adverse, and negligible to minor.

The historic district's residences may be found to contain lead paint and asbestos shingles or siding that could, in some circumstances, pose potential health risks. However, the national seashore staff would ensure that all historic properties proposed for occupancy, adaptive use and interpretation are free of hazardous materials and meet accepted health and safety standards. Because the national seashore staff would implement appropriate mitigation measures in the event of a future fuel or oil spill, and would ensure that all potentially hazardous building materials are removed during rehabilitation of historic structures, the impacts from this topic have been dismissed for this plan.

Lightscape Management. In accordance with NPS *Management Policies 2006* (4.10), the national seashore strives to preserve natural ambient lightscapes, which are natural resources and values that exist in the absence of human-caused light. The lighthouse is a source of unnatural light on the island that cannot be shielded because of its function as an aid to navigation. Although the Cape Lookout Lighthouse does impact the darkness of the night sky, these impacts are not related to the actions of this plan.

Sources of artificial light within the historic village could include lights shining outwards from within the structures as well as a limited number of outside lights. Under this plan the seashore would limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements, and would ensure that all sources of artificial light are shielded to the maximum extent practicable. The additional light from within the historic village could have an indirect impact on wildlife at the seashore, such as nesting sea turtles. Visitors would also receive information on responsible use of artificial lights to minimize environmental impacts. With implementation of the mitigation measures described above, the impacts on the natural lightscape would be negligible. Because artificial light use in the village would be managed to limit impacts, this topic is not be evaluated further in this plan.

Prime and Unique Farmland. Prime farmlands are lands that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and are also available for these uses. Prime farmlands have

the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

Unique farmlands are other farmland than prime farmland used for the production of specific high-value food and fiber crops. They have the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods.

The 1981 Farmland Protection Policy Act (PL 97-98) was passed to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. Provisions of the act also ensure that federal programs are administered in a manner that (to the extent practicable) is compatible with the farmland protection programs and policies of state and local governments and private entities.

The National Park Service consulted with the Department of Agriculture's Natural Resource Conservation Service, the agency responsible for implementation of the policy. The Natural Resource Conservation Service stated that there are no prime or unique farmlands within the Cape Lookout National Seashore or within the historic district. Therefore, prime and unique farmland was dismissed as an impact topic.

Soils. Soil resources are managed according to NPS *Management Policies 2006* (4.8.2.4). Soils for the entire national seashore are mapped and discussed in detail in the "Soil Survey of the Outer Banks, North Carolina" (USDA, SCS, 1977). The soils are characterized as having poor load-bearing capacity, instability due to wind and water activity, and high water tables. Soils on the island could have severe limitations for development. The proposed actions related to the stabilization and rehabilitation of the historic structures would have a negligible impact on soils because these actions would occur in areas that have been previously disturbed.

Two different approaches to wastewater treatment are proposed in this plan. The no-action alternative and alternative A propose the use of septic systems while alternatives B through E propose development of a centralized treatment facility. In either case, some soil disturbance would occur. The degree of soil disturbance cannot be quantitatively or qualitatively evaluated at this time because the type and location of either system has not yet been determined. Developing the infrastructure for a centralized facility would likely disturb more soil than the septic systems. However, since much of the disturbance would likely occur within the historic district, the difference between the two approaches may not be substantially different. Before developing either type of treatment facility, site-specific planning and additional compliance activities would be completed as necessary. For this reason the impacts on soils are not further analyzed in this document.

Soundscape Management. NPS *Management Policies 2006* (4.9) and Director's Order 47 ("Soundscape Preservation and Noise Management") recognize the importance of natural soundscapes as park resources. The natural soundscape is defined as the natural sounds in a park that exist in the absence of any human-produced or associated sounds. The policies and director's order call for the National Park Service to preserve, to the

greatest extent possible, the natural soundscapes of parks, to restore degraded soundscapes to natural conditions whenever possible, and to protect natural soundscapes from degradation due to noise. "Noise" is defined as unwanted sound that interferes with an activity or disturbs the person hearing them. All human sound could be considered "noise" when compared to the natural soundscape. This does not, however, imply that all human sounds are inappropriate or unacceptable. The range of acceptable human-caused sounds is variable, and what is acceptable in the vicinity of a visitor center may be unacceptable in a campground or a backcountry area.

The natural soundscape of Cape Lookout National Seashore includes all of the naturally occurring sounds such as calling birds and the surf, as well as the quiet associated with still nights. As with all NPS resources, the opportunity to experience natural soundscapes is part of the visitor experience. The natural soundscape of the national seashore contributes to a positive visitor experience and is a direct or indirect component of why many people visit the national seashore.

Under the action alternatives, the structures in the historic district would be rehabilitated for occupancy. Rehabilitating the structures would introduce construction-related noise to the natural soundscape. These adverse impacts on the natural soundscape would be limited both in terms of duration and geographic area. During the period of structural rehabilitation few visitors would be present in the historic village, and the existing vegetation and topography would absorb much of the sounds of construction. Construction-related sounds would end once the rehabilitation work was complete. The overall adverse impacts on the natural soundscape from construction activities would be negligible and short term.

The actions proposed under alternatives B through E would increase human-caused sounds within the historic district once rehabilitation was completed. Visitors to the historic district would likely hear the voices and sounds of other visitors engaging in day-use tours of the district or staying overnight in rental structures. The presence of these human-caused sounds would be consistent with conditions existing during the district's period of significance and would have negligible adverse impacts on the visitor experience. Vegetation and topography would help to absorb human-caused sounds in the village.

Implementation of this plan would have negligible impacts on the natural soundscape. The anticipated sounds of human activities within the historic district associated with short-term construction and long-term visitor use would be in keeping with the district's historical use and would not affect the soundscape of other areas of the national seashore. For this reason soundscape management has been dismissed as an impact topic for this plan.

Wetlands. All wetlands in national park system units are protected and managed in accordance with Executive Order 11990 ("Protection of Wetlands"), NPS Director's Order 77-1 and its accompanying procedural handbook, and NPS *Management Policies 2006* (4.6.5). This guidance requires the National Park Service to protect and enhance natural wetland values and requires the examination of impacts on wetlands. It is NPS policy to avoid affecting wetlands and to minimize impacts when they are unavoidable.

There are two types of marsh areas on South Core Banks, and both occur on the sound side. High salt marshes are flooded in spring and during storm tides. The dominant vegetation type is black needlerush *(Juncus roemerianus)* and saltmeadow cordgrass *(Spartina patens)*. Low salt marshes are flooded daily at mean low tide. Typically, the predominant vegetation is composed of dense stands of salt marsh cordgrass *(Spartina*

alternaflora). Spike grass *(Salicornia, Distichlis spicata)* and sea lavender (*Limonium caroliniamum)* are also present. Salt marshes depend on cyclic inundation to accumulate peat, sediments and nutrients. Tidal action also prevents the invasion of upland species and therefore maintains monotypic stands of cordgrass.

In March 2005 the U.S. Army Corps of Engineers delineated wetland areas on the southern end of South Core Banks between the Baker-Holderness House (Casablanca) and the 1907 Lighthouse Keeper's Quarters. Four structures are currently located in or near designated wetlands on the island: the Baker-Holderness House (Casablanca), Jetty Worker Houses No. 1 and No. 2, and the 1907 Keeper's Quarters. The keeper's quarters, if determined to be structurally sound, would be moved back to its original location south of the lighthouse and out of the designated wetland. The Baker-Holderness House is built on higher ground, and use of the house as part of a concession operation could have some impact on the surrounding landscape. The type and level of impacts would differ based on the proposed future use of the structure.

Jetty Worker House No. 1 is within a designated wetland, and Jetty Worker House No. 2 is partially within the wetland. Because the two Jetty Worker houses are historic and their locations are integral to their significance, moving the houses to a different location to avoid wetlands would diminish their historical integrity. If the Jetty Worker houses were rehabilitated for occupancy, the wetlands could be affected during the rehabilitation process and installation of the utility infrastructure, including pipelines for the centralized wastewater treatment system. NPS Procedural Manual 77-1 ("Wetlands Protection") describes NPS policies and procedures for protection of wetlands in park units. It is NPS policy to prepare a statement of findings when a proposed action has the potential to adversely affect wetlands.

Some actions, however, do not require a statement of findings. As noted previously, the locations of Jetty Worker Houses No. 1 and No. 2 are integral to their historical significance. Section 5.6 of the procedural manual allows structures to remain in their current locations if relocation to a site less damaging to wetlands is not practicable. Because the locations of the structures are integral to their historical significance, relocating the structures is not practicable. Other acceptable actions that do not require preparation of a statement of findings include development of trails and boardwalks where the primary purpose is public education, interpretation, or enjoyment of wetland resources. Maintenance, repair, or renovation of an existing structure also do not require preparation of a statement of findings [see Procedural Manual 77-1, sections 4.2 (A)(1)(a) and (A)(1)(f)]. If the structures are used solely for interpretation, then it is likely that a boardwalk would be constructed to enable visitors to reach the structures. If the structures are rehabilitated for occupancy, then a minor deviation from the existing footprint (total of 0.1 acre or less) is allowed under section4.2 (A)(1)(f) to allow for changes in construction codes or safety standards. Consequently, preparation of a statement of findings is not required at this time. Before implementation of this plan, additional compliance would be completed as necessary. Although a statement of findings is not required, the National Park Service would comply with other requirements of Procedural Manual 77-1 as necessary.

Wilderness. There is no federally designated wilderness on the Core Banks or at Cape Lookout, although nearby Shackleford Banks is identified as proposed wilderness. The project area at Cape Lookout does not fit the characteristics of wilderness as defined by NPS *Management Policies 2006* (section 6.2.1.1). Therefore, wilderness is dismissed as an impact topic for this plan.

Wildlife. A wide variety of species are supported by the diverse habitats at Cape Lookout National Seashore. Birds are the most numerous inhabitants with more than 275 identified species that use the national seashore for resting, nesting, and feeding, and as a wintering or migratory rest stop. The national seashore has been designated a Globally Important Bird Area by the American Bird Conservancy. As development along the Atlantic coastline has increased and fragmented habitat in other areas, Cape Lookout, as part of the Atlantic Flyway, has become an important stopover point for migrating birds. There are no large mammals on the barrier islands, but smaller native species such as the least shrew and the northern short tail shrew are present. Nonnative mammal species include the nutria, house cat, house mouse, and the Norway rat. Other resident species include amphibians and reptiles — tree frogs, toads, turtles, and snakes, as well as mosquitoes and other insect pests in the wet areas of the dunes, grasslands, and marshes. Ring-necked pheasant, an introduced species, can be found in some shrub thickets.

The primary wildlife concern for this project would be habitat disturbance. The action alternatives require localized removal of vegetation from around the historic structures to reduce the hazards from fire and storms as well as to enhance historic views. These actions would primarily affect nonnative shade trees and shrubs, and would be guided by the recommendations of the "Cape Lookout Village Cultural Landscape Report (draft)." The recommendations in that report recognize the value of conserving wildlife habitat in the national seashore, and suggest approaches for limiting the impacts on wildlife habitat that could potentially result from modification to vegetation within the historic district. The extent of any vegetation removal would be limited, and management efforts would focus first on removal of aged and diseased plant material. The vegetation would be removed in phases, and the minimum amount of vegetation would be removed to recreate the historic views. No vegetation type would be completely removed from the project area.

It is possible that some individuals from the local bird, mammal, or reptile populations could be lost during project implementation. The loss of these limited numbers of individuals would have negligible effects on the local population of any resident species on the island, and would not likely adversely affect ecosystem functions or biodiversity. Therefore, impacts on wildlife have been dismissed as an impact topic for this plan.

Threatened and Endangered Species. The Endangered Species Act requires federal agencies to ensure that their activities do not jeopardize the existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. Consultation with the U.S. Fish and Wildlife Service (USFWS) and North Carolina Department of Natural Resources identified a number of threatened or endangered species, or state species of concern.

Cape Lookout is one of the southernmost habitats of the piping plover (*Charadrius melodius*). The plover nests on the beach north of the historic district from May through the end of August. NPS monitoring and protection efforts include locating all nests, erecting predator barricades around the nests, and attempting to determine factors that affect productivity. NPS staff continues to address USFWS guidelines for protecting piping plover by closing nesting and foraging areas for chicks to both visitors and vehicles.

Cape Lookout is part of the northernmost nesting range for the loggerhead sea turtle (*Caretta caretta*), a threatened species. The sea turtles nest at night on the berms of wide, sloping beaches in or near the base of the dunes. Sea turtles have nested within the boundaries of the historic district at Cape

Lookout. In 1994 NPS staff documented the nests of both a leatherback sea turtle (*Dermochelys coriacea*) and a green sea turtle (*Chelonis mydas*), both endangered species. The national seashore adopted the U.S. Fish and Wildlife Service's Beach Index Program, which requires NPS staff to monitor the beach daily from June 1 through August 15. The Beach Index Program covers all species of turtles that nest on the barrier islands. Nests and hatchlings are protected from both vehicles and visitors through education and beach closures.

The seabeach amaranth (*Amaranthus pumilus*) is the only threatened plant species at Cape Lookout National Seashore. This plant grows in the dunes, and the annual population varies greatly from year to year depending on storms. NPS staff conduct an annual survey of the seabeach amaranth to determine the size of the population. At present, the staff does not anticipate that additional protection efforts would be necessary to maintain the population.

There are several state species of concern that inhabit, nest, feed, or rest in Cape Lookout National Seashore. These include the little blue heron (*Egretta caerulea*), snowy egret (*Egretta thula*), glossy ibis (*Plegadis falcinellus*), and tricolored heron (*Egretta tricolor*) which are residents of marsh areas. Gull-billed terns (*Sterna nilotica*), the common tern (*Sterna hirundo*), and the least tern (*Sterna antillarum*) nest in colonies on the beach/berm among scattered low dunes. The black skimmer (*Ryncops niger*) also nests in colonies on the beach among scattered low dunes. Loggerhead shrikes (*Lanius ludovicanus ludovicanus*) are occasional visitors found inland on the islands. Brown pelicans (*Pelecanus occidentalis*) feed offshore but do not nest in the national seashore. The peregrine falcon (*Falco peregrinus*) was recently delisted under the Endangered Species Act but is still a state species of concern. The peregrine falcon uses the marshes, tidal flats, and dunes in the national seashore for feeding and resting, primarily during the fall migration. The Outer Banks king snake (*Lampropeltis getula*) may be found in shrub thickets behind the dunes, and the Carolina diamondback terrapin (*Malaclemys sipedon williamengelsi*) resides in the salt marsh.

NPS staff indicated that no species of state concern are known to feed, nest, or rest in the historic district. After consultation with the U.S. Fish and Wildlife Service in July, 2006, it was determined that none of the federally listed threatened or endangered species that inhabit, nest, feed, or rest on the island would be directly impacted by the actions proposed under this plan because none of the proposed actions would occur in areas where threatened or endangered species nest, feed, or rest on the island. Specifically, no actions are proposed for the beach or berm environments where piping plovers and sea turtles would nest. Some of the actions proposed under this plan could have an indirect effect on the sea turtle and piping plover nesting sites. Under this plan there could be an increase in artificial nighttime light in the historic village. In addition, increased food sources and trash for scavenging in the historic district could increase the number of potential predators in and around the nesting area for both species. As discussed in the section on lightscape management, the NPS staff would limit the use of artificial outdoor lighting to minimal levels necessary for basic safety requirements, and would ensure that all outdoor lighting is shielded to the maximum extent practicable. In addition, measures would be implemented to limit the availability of food sources for scavengers. These measures could include but would not be limited to frequent collection of refuse and installation of animal-proof receptacles. NPS staff would continue to implement measures to protect piping plover and turtle nests from predation.

With mitigation, the proposed actions are not likely to have an adverse affect on threatened and endangered species. None of the

proposed actions would have greater impacts on threatened and endangered species than the actions currently being proposed under the *Interim Protected Species Management Plan / Environmental Assessment* (March 2006). This plan, currently undergoing Section 7 review by U. S. Fish and Wildlife Service, would direct management of threatened and endangered species at Cape Lookout. None of the actions proposed under the alternatives in this document would change the way protected species are managed. For this reason, threatened and endangered species are not analyzed further in this environmental assessment.

Environmental Justice

Executive Order 12898, "Federal 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 disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

For the purpose of fulfilling Executive Order 12898 in the context of the National Environmental Policy Act, the alternatives addressed in this plan were assessed during the planning process. It was determined that none of these alternatives would result in disproportionately high direct or indirect adverse effects on any minority or low-income population or community. The following information contributed to this conclusion:

- The developments and actions in the alternatives would not result in any identifiable human health effects. Therefore, there would be no direct or indirect effects on human health within any minority or low-income population or community.
- The impacts on the natural and physical environment that would occur due to any of the alternatives would not disproportionately adversely affect any minority or low-income population or community, or be specific to such populations or communities.
- The alternatives would not result in any identified effects that would be specific to any minority or low-income community.

Impacts on the socioeconomic factors because of the implementation of actions proposed in the alternatives would be short term, negligible, and beneficial and would occur mostly in the geographic area near the national seashore. Such impacts would not be expected to substantially alter the physical and social structure of nearby communities. Therefore environmental justice was dismissed as an impact topic.

Socioeconomic Environment

Under this plan, Cape Lookout National Seashore is evaluating approaches to reusing structures in the historic district. The historic structures would be stabilized under all alternatives. The principal difference between the alternatives would be the type of use and the number of structures that would be adaptively reused. The proposed approaches range from rehabilitating a small number of structures for use by NPS staff and volunteers, to rehabilitation of nearly all structures to also allow visitor use under a concessions contract or a historic leasing program. Given the current budget constraints, implementation of the plan would necessarily be phased over time. The structures would continue to be stabilized as the necessary resources become available. Because of the intermittent nature of the funding, the stabilization work would continue sporadically. Rehabilitation of the structures (including installation of the utility infrastructure and wastewater treatment system) would also likely be phased. The national seashore would purchase local

materials to the extent practicable and would also use some day labor.

There is a high degree of construction and development occurring in Carteret County and the tidewater region of coastal North Carolina. The limited work that would occur in the national seashore under the current plan would have a modest impact on the local economy. If the structures not used by NPS staff and volunteers become part of a concession contract, the impact on the local economy would be greater than if the structures were part of a historic leasing program. This is because a concessions operation would likely attract more people from outside the region than a historic leasing program. It is likely that stabilization, rehabilitation for adaptive use, and occupancy of the structures would have a beneficial impact on the local economy. Because implementation of the plan would be phased over time, it is not possible to quantitatively assess the impact of the plan at this time. Given the current rate of growth in the region, the limited scale of this project, while beneficial, would likely have negligible impacts on the local and regional economy. Consequently, socioeconomics was dismissed as an impact topic for this plan.

THE ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

NO-ACTION ALTERNATIVE

Under the no-action alternative, the national seashore would stabilize 13 historic structures in the village area (four of which have already been stabilized due to emergency conditions — the Lewis-Davis House, the Guthrie-Ogilvie House, Fishing Cottage No. 2, and the Seifert-Davis House). Two additional structures would be removed — the Setzer-Dawsey House (determined noncontributing to the district's historical significance) and Fishing Cottage No. 1 (determined noncontributing and also condemned for occupancy). Selected noncontributing outbuildings in the district would also be removed. The noncontributing Les and Sally Moore House / Store would continue to be used by the nonprofit Cape Lookout Environmental Education Center, and the main U.S. Coast Guard Station building at the south end of the district would also continue to be used by the nonprofit North Carolina Maritime Museum. Space for two NPS staff / volunteers would be developed in the 1873 Lighthouse Keeper's Quarters at the lighthouse complex.

None of the stabilized village structures would be further rehabilitated for occupancy or use by the National Park Service, concessions operators, or private leaseholders. The structures would not be connected to potable water systems, although they would be connected to electrical service. Electricity is currently delivered from the mainland at Harkers Island and is available in the lighthouse area. The electrical system would be extended to the village area, and would likely require upgrading or replacement to meet the additional operational needs of the village. Two new septic systems would also be constructed. The locations for these have not been selected. Limited interpretation of the structures' exteriors would be provided, although visitors would not be able to enter the structures. No structures would be relocated. Limited vegetation clearing would be carried out near the structures primarily to reduce the risk from fire and hazard tree limbs.

ALTERNATIVE A

In common with all alternatives, the national seashore would stabilize 13 historic structures in the village area (four of which have already been stabilized due to emergency conditions — the Lewis-Davis House, the Guthrie-Ogilvie House, Fishing Cottage No. 2, and the Seifert-Davis House). Two additional structures would be removed — the Setzer-Dawsey House (determined noncontributing to the district's historical significance) and Fishing Cottage No. 1 (determined noncontributing and also condemned for occupancy). Selected noncontributing outbuildings in the district would also be removed. The noncontributing Les and Sally Moore House / Store would continue to be used by the nonprofit Cape Lookout Environmental Education Center and possibly other nonprofit organizations. The main U.S. Coast Guard Station building at the south end of the district would continue to be used by the nonprofit North Carolina Maritime Museum and possibly other nonprofit organizations. Space for two NPS staff / volunteers would be developed in the 1873 Lighthouse Keeper's Quarters at the lighthouse complex.

Three of the village structures would be rehabilitated for NPS use and occupancy, and three would be renovated for interpretation to the public. (Individual buildings might be used for more than one purpose, i.e., public interpretation and NPS administrative use, so this does not mean six structures would be rehabilitated/renovated.) Rehabilitation would conform with the Architectural Barriers Act Accessibility Standards (May 2006). None of the structures would be used

by concession operators or private leaseholders. The structures would be connected to potable water piped from an existing well near the lighthouse. Electricity is currently delivered from the mainland at Harkers Island and is available in the lighthouse area. The electrical system would be extended to the village area and would likely require upgrading or replacement to meet the additional operational needs of the village. Three new septic systems would be constructed. The locations for these have not been selected.

In accordance with the recommendations of the "Draft Cultural Landscape Report" (Wiss, Janney, Elstner Associates, Inc. and John Milner Associates, Inc., 2005), selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

ALTERNATIVE B

In common with all alternatives, the national seashore would stabilize 13 historic structures in the village area (four of which have already been stabilized due to emergency conditions — the Lewis-Davis House, the Guthrie-Ogilvie House, Fishing Cottage No. 2, and the Seifert-Davis House). Two additional structures would be removed — the Setzer-Dawsey House (determined noncontributing to the district's historical significance) and Fishing Cottage No. 1 (determined noncontributing and also condemned for occupancy). Selected noncontributing outbuildings in the district would also be removed. The noncontributing Les and Sally Moore House / Store would continue to be used by the nonprofit Cape Lookout Environmental Education Center and possibly other nonprofit organizations. The main U.S. Coast Guard Station building at the south end of the district would continue to be used by the nonprofit North Carolina Maritime Museum and possibly other nonprofit organizations. Space for two NPS staff / volunteers would be developed in the 1873 Lighthouse Keeper's Quarters at the lighthouse complex.

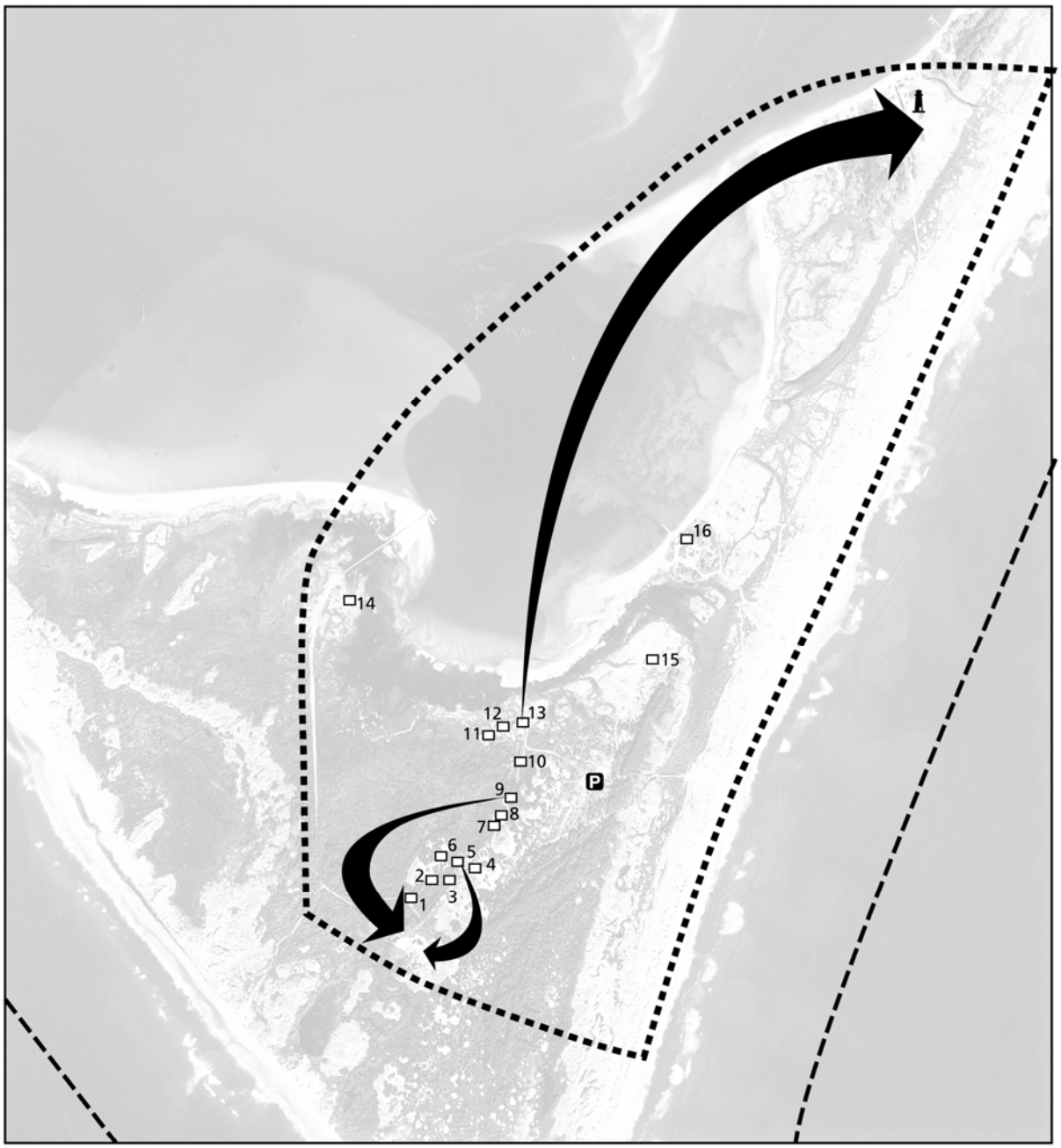
Four of the village structures would be rehabilitated for NPS use and occupancy, and seven would be renovated for interpretation to the public. (Individual buildings might be used for more than one purpose, i.e., public interpretation and NPS administrative use, so this does not mean 11 structures would be rehabilitated/renovated.) Rehabilitation would conform with the Architectural Barriers Act Accessibility Standards (May 2006). None of the structures would be used by concessions operators or private leaseholders. The structures would be connected to potable water piped from an existing well in the lighthouse area. Electricity is currently delivered from the mainland at Harkers Island and is available in the lighthouse area. The electrical system would be extended to the village area and would likely require upgrading or replacement to meet the additional operational needs of the village. A new central wastewater treatment system would be constructed. The location of the system has not been selected.

As shown on the Structures to be Relocated, Alternatives B, C, D, and E map, three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations (contingent on the outcome of environmental and structural feasibility studies).

In accordance with the recommendations of the "Draft Cultural Landscape Report" (Wiss, Janney, Elstner Associates, Inc. and John Milner Associates, Inc., 2005), selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

Cape Lookout Village Historic District

Structures to Be Relocated – Alternatives B, C, D, and E



National Seashore Boundary

Cape Lookout Village Historic District Boundary

Historic Structure

Parking Lot

Lighthouse

1 Lewis-Davis House (Carrie Arendell Davis)
2 Gaskill-Guthrie House
3 Guthrie-Ogilvie House (Luther Guthrie)
4 Setzer-Dawsey House
5 Life Saving Station Boathouse*
6 O'Boyle-Bryant House (Bryant)
7 Fishing Cottage #1
8 Fishing Cottage #2
9 Life Saving Station*
10 Gordon Willis House
11 Jetty Workers House #2
12 Jetty Workers House #1
13 1907 Keepers Quarters*
14 Baker-Holderness House (Casablanca)
15 Seifert-Davis House (Coca-Cola House)
16 Les & Sally Moore House & Store

*Possible Relocation

ALTERNATIVE C

In common with all alternatives, the national seashore would stabilize 13 historic structures in the village area (four of which have already been stabilized due to emergency conditions — the Lewis-Davis House, the Guthrie-Ogilvie House, Fishing Cottage No. 2, and the Seifert-Davis House). Two additional structures would be removed — the Setzer-Dawsey House (determined noncontributing to the district's historical significance) and Fishing Cottage No. 1 (determined noncontributing and also condemned for occupancy). Selected noncontributing outbuildings in the district would also be removed. The noncontributing Les and Sally Moore House / Store would continue to be used by the nonprofit Cape Lookout Environmental Education Center and possibly other nonprofit organizations. The main U.S. Coast Guard Station building at the south end of the district would continue to be used by the nonprofit North Carolina Maritime Museum and possibly other nonprofit organizations. Space for two NPS staff / volunteers would be developed in the 1873 Lighthouse Keeper's Quarters at the lighthouse complex.

Four of the village structures would be rehabilitated for NPS use and occupancy, and eight would be renovated for interpretation to the public. Three structures would be rehabilitated for use by private leaseholders. (Individual buildings might be used for more than one purpose, i.e., public interpretation, leaseholders, and NPS administrative use, so this does not mean 15 structures would be rehabilitated/renovated.) Rehabilitation would conform with the Architectural Barriers Act Accessibility Standards (May 2006). The structures would be connected to potable water piped from an existing well in the lighthouse area. Electricity is currently delivered from the mainland at Harkers Island and is available in the lighthouse area. The electrical system would be extended to the village area and would likely require upgrading or replacement to meet the additional operational needs of the village. A new central wastewater treatment system would be constructed. The location of the system has not been selected.

As shown on the Structures to be Relocated, Alternatives B, C, D, and E map, three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations (contingent on the outcome of environmental and structural feasibility studies).

In accordance with the recommendations of the "Draft Cultural Landscape Report" (Wiss, Janney, Elstner Associates, Inc. and John Milner Associates, Inc., 2005), selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

ALTERNATIVE D (PREFERRED)

In common with all alternatives, the national seashore would stabilize 13 historic structures in the village area (four of which have already been stabilized due to emergency conditions — the Lewis-Davis House, the Guthrie-Ogilvie House, Fishing Cottage No. 2, and the Seifert-Davis House). Two additional structures would be removed — the Setzer-Dawsey House (determined noncontributing to the district's historical significance) and Fishing Cottage No. 1 (determined noncontributing and also condemned for occupancy). Selected noncontributing outbuildings in the district would also be removed. The noncontributing Les and Sally Moore House / Store would continue to be used by the nonprofit Cape Lookout Environmental Education Center and possibly other nonprofit organizations. The main U.S. Coast Guard Station building at the south end of the district would continue to be used by the nonprofit North Carolina Maritime Museum and possibly other nonprofit organizations. Space for two NPS

staff / volunteers would be developed in the 1873 Lighthouse Keeper's Quarters at the lighthouse complex.

Up to four of the village structures would be rehabilitated for NPS use and occupancy, and eight would be renovated for interpretation to the public. At a minimum, eight structures would be rehabilitated for use by a concessions operator. (Individual buildings might be used for more than one purpose, i.e., public interpretation and NPS administrative use, so this does not mean 20 structures would be rehabilitated/ renovated.) Rehabilitation would conform with the Architectural Barriers Act Accessibility Standards (May 2006). The structures would be connected to potable water piped from an existing well in the lighthouse area. Electricity is currently delivered from the mainland at Harkers Island and is available in the lighthouse area. The electrical system would be extended to the village area and would likely require upgrading or replacement to meet the additional operational needs of the village. A new central wastewater treatment system would be constructed. The location of the system has not been selected.

As shown on the Structures to be Relocated, Alternatives B, C, D, and E map, three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations (contingent on the outcome of environmental and structural feasibility studies).

In accordance with the recommendations of the "Draft Cultural Landscape Report" (Wiss, Janney, Elstner Associates, Inc. and John Milner Associates, Inc., 2005), selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

ALTERNATIVE E

In common with all alternatives, the national seashore would stabilize 13 historic structures in the village area (four of which have already been stabilized due to emergency conditions — the Lewis-Davis House, the Guthrie-Ogilvie House, Fishing Cottage No. 2, and the Seifert-Davis House). Two additional structures would be removed — the Setzer-Dawsey House (determined noncontributing to the district's historical significance) and Fishing Cottage No. 1 (determined noncontributing and also condemned for occupancy). Selected noncontributing outbuildings in the district would also be removed. The noncontributing Les and Sally Moore House / Store would continue to be used by the nonprofit Cape Lookout Environmental Education Center and possibly other nonprofit organizations. The main U.S. Coast Guard Station building at the south end of the district would continue to be used by the nonprofit North Carolina Maritime Museum and possibly other nonprofit organizations. Space for two NPS staff / volunteers would be developed in the 1873 Lighthouse Keeper's Quarters at the lighthouse complex.

Up to four of the village structures would be rehabilitated for NPS use and occupancy, and eight would be renovated for interpretation to the public. At a minimum, eight structures would be rehabilitated for use by either a concessions operator or private leaseholders. (Individual buildings might be used for more than one purpose, i.e., public interpretation, leaseholders, and NPS administrative use, so this does not mean 20 structures would be rehabilitated/renovated.) Rehabilitation would conform with the Architectural Barriers Act Accessibility Standards (May 2006). The structures would be connected to potable water piped from an existing well in the lighthouse area. Electricity is currently delivered from the mainland at Harkers Island and is available in the lighthouse area. The electrical system would be extended to the village area and would likely require

upgrading or replacement to meet the additional operational needs of the village. A new central wastewater treatment system would be constructed. The location of the system has not been selected.

As shown on the Structures to be Relocated, Alternatives B, C, D and E map, three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations (contingent on the outcome of environmental and structural feasibility studies).

In accordance with the recommendations of the "Draft Cultural Landscape Report" (Wiss, Janney, Elstner Associates, Inc. and John Milner Associates, Inc., 2005), selective vegetation clearing would be undertaken to provide a semblance of the more open views that existed during the district's period of significance.

MITIGATIVE MEASURES

Mitigative measures are analyzed as part of the alternatives. These have been developed to lessen the potential adverse impacts of the proposed actions and/or to present measures the National Park Service would follow in the event of unexpected occurrences during the course of construction.

- Should construction unearth previously undiscovered archeological resources, work would be stopped in the area of the discovery, and the national seashore staff would consult with the state historic preservation officer and the Advisory Council on Historic Preservation, as necessary, according to 36 CFR 800.13, *Post Review Discoveries*. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed.

- All sensitive cultural resources not specifically identified for structural rehabilitation would be clearly marked for avoidance to protect them from construction disturbance. All workers would be informed of the penalties for illegally collecting artifacts or intentionally damaging cultural resources. Workers would also be informed of the correct procedures to follow in the event previously unknown resources are uncovered during construction.

- Before any construction activity, construction zones would be clearly delineated with stakes or by other means to confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications, and workers would be instructed to avoid conducting activities beyond the construction zone.

- Visitors would be informed in advance of proposed construction and directed away from construction areas to avoid safety hazards and minimize visitor use conflicts.

- Actions to rehabilitate the cultural landscape in the village historic district would be phased over time to minimize the impact on vegetation. National seashore managers would consult with natural and cultural resource specialists before any decision to thin or clear vegetation to ensure adequate protection of natural and cultural resources, sensitive habitat, and ecological processes.

- An engineering feasibility assessment would precede relocation of three historic structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) to their original site locations to ensure that relocation would not result in structural damage or pose unacceptable risks to the historic integrity of the structures. All necessary measures would be taken to adequately protect and stabilize the structures during transit. Relocation would be monitored by cultural resource specialists and/or other specialists (e.g., structural engineers) to further ensure that damage does not occur during transit and that appropriate protection measures are undertaken as necessary.

- Best management practices would be used during construction to minimize soil disturbance and the potential for erosion in the project area. Erosion control methods could include (but not be limited to) filter cloth and silt fencing.

- To avoid introduction of exotic plant species, no hay bales or other organic material would be used in erosion control measures. Standard measures that involve

only inorganic materials (e.g., silt fences and/or sand bags) would be used.

- The national seashore would ensure that all historic properties proposed for occupancy, adaptive use, and interpretation are free of hazardous materials and meet accepted health and safety standards before use or occupation.

- Fueling of all machinery would be conducted only in approved equipment staging areas away from sensitive water bodies. Any spills of hazardous materials, fuel, etc., would be cleaned up immediately to prevent contamination or discharge into groundwater aquifers, wetland areas, or other water bodies.

- The national seashore would comply with applicable state and local regulations to minimize the impacts on water quality associated with wastewater management in the Cape Lookout Village Historic District. Best available technologies would be used to minimize nitrogen levels in treated effluent and limit the introduction of treated freshwater into the estuarine environment in efforts to minimize localized changes in water chemistry.

- The seashore staff would limit the use of artificial outdoor lighting to that necessary for basic safety requirements, and the staff would also ensure that all sources of artificial light are shielded to the maximum extent practicable. Visitors would also receive information on responsible use of artificial lights to minimize environmental impacts.

- The national seashore staff would collect refuse regularly and install animal-proof collection devices to prevent wildlife from eating the refuse.

- Plant materials used for revegetation efforts would be native to the national seashore.

IDENTIFICATION OF THE PREFERRED ALTERNATIVE

Alternative D was selected as the preferred alternative.

All alternatives were evaluated using a process called "Choosing by Advantages" (CBA). This process evaluated alternatives by identifying and comparing the relative advantages of each according to a set of criteria.

The CBA process determines which alternative provides the greatest advantage. To ensure a logical and trackable process, the criteria used to evaluate the alternatives were derived from the primary issues and impact topics.

Alternatives were evaluated to see how well they would:

- Maximize protection of cultural and natural resources (e.g., the Cape Lookout Village Historic District, wetlands, and vegetation).
- Provide for quality visitor experiences (comfort, convenience, interpretation, and understanding of resources, etc.)
- Provide for public health and safety.

Alternative D achieved the highest score of the six alternatives evaluated, and it is the NPS preferred alternative. The alternatives were rated on attributes relating to each of the above-listed factors and the advantages of the attributes were compared.

The costs of implementing the alternatives were also evaluated. For the purposes of cost estimating, general assumptions were made regarding the extent of the work to be undertaken. These assumptions are carried across all alternatives so that comparable costs can be considered for each alternative. Costs identified in this document are not intended to replace more detailed consideration of operational needs and final construction estimates. They should not be used as a basis for funding requests or budgeting. Cost information is summarized in table 1 (below). These costs relate only to NPS funding and do not include costs by other public or private entities for items of work that support the alternatives.

TABLE 1: SUMMARY OF COMPARATIVE COSTS (FISCAL YEAR 06 DOLLARS)

	No Action	Alternative A	Alternative B	Alternative C	Alternative D (Preferred)	Alternative E
Capital Costs	$2,090,942	$3,213,942	$6,607,942	$7,264,242	$7,264,242	$7,264,242
Operational Costs	$15,000	$15,000	$24,000	$48,000	$48,000	$48,000
Staffing	$50,000	$50,000	$110,000	$154,000	$154,000	$154,000

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is defined by the Council on Environmental Quality as the alternative that best meets the following criteria or objectives, as set out in the National Environmental Policy Act (sec. 101):

1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
2) Ensure for all Americans a safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
3) Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
4) Preserve important historic, cultural, and natural aspects of our national heritage and maintain, whenever possible, an environment that supports diversity and variety of individual choice.
5) Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

All the alternatives equivalently address criteria 1, 2, and 6 by providing for the preservation of historic district structures and cultural landscape features in a safe, healthful, and environmentally responsible and sustainable manner. The no-action alternative best meets criterion 3 because it does not call for rehabilitation and occupancy of structures in the historic district, and consequently would not require the increased level of supporting utility systems and associated environmental impacts entailed by the construction and operation of these systems as required by the action alternatives.

All the alternatives provide for stabilization of contributing buildings in the historic district. However, alternatives D and E best fulfill criterion 4 by further proposing that rehabilitation be carried out for the largest number of buildings (up to four for NPS use and eight, at a minimum, for a concessions operator or private leaseholders). Whereas stabilization would remove safety hazards, and provide the buildings initial short-term protection by means of structural reinforcement and measures to make them weather-resistant, rehabilitation accompanied by adaptive use and occupancy would more effectively ensure the long-term preservation of these properties.

Alternatives C, D, and E each provide for the greatest number of structures in the historic district that would be interpreted to the public (eight structures), and alternatives D and E also maximize the number of structures (minimum of eight) that would be available for public use and occupancy. Alternative D, however, best meets criterion 5 by calling for a concessions operator to manage the leased properties, thereby making them available to a wider segment of the visiting population than would otherwise be expected if some were privately leased.

As evaluated in this document, the preferred alternative (D) is the environmentally preferred alternative. The preferred alternative best meets the six criteria presented in the National Environmental Policy Act (section 101).

ALTERNATIVES CONSIDERED AND DISMISSED FROM FURTHER ANALYSIS

There were no additional alternatives for the reuse of structures in the Cape Lookout Village Historic District that were subsequently dismissed from further evaluation.

TABLE 2. SUMMARY OF ALTERNATIVES AND IMPACTS

	NO-ACTION	*ALTERNATIVE A*	*ALTERNATIVE B*	*ALTERNATIVE C*	*ALTERNATIVE D — PREFERRED*	*ALTERNATIVE E*
	Thirteen historic structures would be stabilized, and two noncontributing structures (along with selected noncontributing outbuildings) would be removed. The Cape Lookout Environmental Education Center and the North Carolina Maritime Museum would continue to use existing buildings. Space for NPS staff / volunteers would be provided in the 1873 lighthouse keeper's quarters.	Same as no-action alternative.	Same as no-action alternative.	Same as no-action alternative.	Same as no-action alternative.	Same as no-action alternative.
	Village structures would not be rehabilitated for overnight occupancy or connected to potable water lines, but would be connected to electrical service and two new septic systems. Limited exterior interpretation of the structures would be provided. No structures would be relocated. Limited vegetation clearing would be implemented to reduce risk from fire and hazard tree limbs.	Three village structures would be rehabilitated for NPS use, and three would be renovated for public interpretation (some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and three new septic systems. No structures would be relocated.	Four village structures would be rehabilitated for NPS use, and seven would be renovated for public interpretation (some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and a central wastewater treatment system.	Four village structures would be rehabilitated for NPS use, and eight would be renovated for public interpretation. Three structures would be rehabilitated for use by private leaseholders. (Some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and a central wastewater treatment system.	Four village structures would be rehabilitated for NPS use, and eight would be renovated for public interpretation. At a minimum, eight structures would be rehabilitated for use by a concessions operator. (Some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and a central wastewater treatment system.	Up to four village structures would be rehabilitated for NPS use, and eight would be renovated for public interpretation. At a minimum, eight structures would be rehabilitated for use by either a concessions operator or private lease holders. (Some structures could be used for more than one purpose). Structures would be connected to potable water and electrical systems, and a central wastewater treatment system.
			Three historic structures would be relocated to original site locations.	Three historic structures would be relocated to original site locations.	Three historic structures would be relocated to original site locations.	Three historic structures would be relocated to original site locations.
		Selective vegetation clearing would be carried out to partially restore historic views.	Selective vegetation clearing would be carried out to partially restore historic views.	Selective vegetation clearing would be carried out to partially restore historic views.	Selective vegetation clearing would be carried out to partially restore historic views.	Selective vegetation clearing would be carried out to partially restore historic views.
			IMPACT TOPICS			
Cultural Resources	*Structures and Cultural Landscape* — Long-term beneficial impacts on the historic district's contributing buildings and cultural landscape would be expected from structural stabilization. Long-term minor adverse impacts on the district would result from not relocating three historic buildings to original site locations and carrying out only limited vegetation clearing. Long-term beneficial cumulative impacts would be anticipated.	*Structures and Cultural Landscape* — Long-term beneficial impacts on the historic district's contributing buildings and cultural landscape would be expected from stabilization and rehabilitation undertakings and vegetation clearing to enhance historic views. Long-term minor adverse impacts on the district would result from not relocating three historic buildings to original site locations. Long-term beneficial cumulative impacts would be anticipated.	*Structures and Cultural Landscape* — Long-term beneficial impacts on the historic district's contributing buildings and cultural landscape would be expected from stabilization and rehabilitation undertakings, vegetation clearing to enhance historic views, and relocation of three historic buildings to original site locations. Long-term beneficial cumulative impacts would be anticipated.	*Structures and Cultural Landscape* — Long-term beneficial impacts on the historic district's contributing buildings and cultural landscape would be expected from stabilization and rehabilitation undertakings, vegetation clearing to enhance historic views, and relocation of three historic buildings to original site locations. Long-term beneficial cumulative impacts would be anticipated.	*Structures and Cultural Landscape* — Long-term beneficial impacts on the historic district's contributing buildings and cultural landscape would be expected from stabilization and rehabilitation undertakings, vegetation clearing to enhance historic views, and relocation of three historic buildings to original site locations. Long-term beneficial cumulative impacts would be anticipated.	*Structures and Cultural Landscape* — Long-term beneficial impacts on the historic district's contributing buildings and cultural landscape would be expected from stabilization and rehabilitation undertakings, vegetation clearing to enhance historic views, and relocation of three historic buildings to original site locations. Long-term beneficial cumulative impacts would be anticipated.

	NO-ACTION	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D — PREFERRED	ALTERNATIVE E
Cultural Resources (cont.)	*Archeological resources* — Archeological surveys would precede any ground-disturbing activities. In the unlikely event that significant archeological resources are identified that could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Potential long-term minor to moderate adverse impacts would occur to archeological resources that could not be avoided, and potential minor to moderate adverse cumulative impacts would also be anticipated.	*Archeological resources* — Archeological surveys would precede any ground-disturbing activities. In the unlikely event that significant archeological resources are identified that could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Potential long-term minor to moderate adverse impacts would occur to archeological resources that could not be avoided, and potential minor to moderate adverse cumulative impacts would also be anticipated.	*Archeological resources* — Archeological surveys would precede any ground-disturbing activities. In the unlikely event that significant archeological resources are identified that could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Potential long-term minor to moderate adverse impacts would occur to archeological resources that could not be avoided, and potential minor to moderate adverse cumulative impacts would also be anticipated.	*Archeological resources* — Archeological surveys would precede any ground-disturbing activities. In the unlikely event that significant archeological resources are identified that could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Potential long-term minor to moderate adverse impacts would occur to archeological resources that could not be avoided, and potential minor to moderate adverse cumulative impacts would also be anticipated.	*Archeological resources* — Archeological surveys would precede any ground-disturbing activities. In the unlikely event that significant archeological resources are identified that could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Potential long-term minor to moderate adverse impacts would occur to archeological resources that could not be avoided, and potential minor to moderate adverse cumulative impacts would also be anticipated.	*Archeological resources* — Archeological surveys would precede any ground-disturbing activities. In the unlikely event that significant archeological resources are identified that could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Potential long-term minor to moderate adverse impacts would occur to archeological resources that could not be avoided, and potential minor to moderate adverse cumulative impacts would also be anticipated.
Natural Resources	*Vegetation* — Short-term negligible adverse impacts on vegetation would result from removing some vegetation to create defensible space around the historic structures. The long-term impacts of removing and/or thinning aged, diseased, or invasive vegetation materials would be beneficial for remaining vegetation, and negligibly adverse for vegetation completely removed. Installation of electrical lines would have long-term negligible adverse impacts on vegetation. There would be no cumulative impacts on vegetation.	*Vegetation* — Short-term negligible adverse impacts on vegetation would result from removing some vegetation to create defensible space around the historic structures and to enhance historic views. The long-term impacts of removing and/or thinning aged, diseased, or invasive vegetation materials would be beneficial for remaining vegetation, and negligibly adverse for vegetation completely removed. Installation of electrical and potable water lines would have long-term negligible adverse impacts on vegetation. There would be no cumulative impacts on vegetation.	*Vegetation* — Short-term negligible adverse impacts on vegetation would result from removing some vegetation to create defensible space around the historic structures and to enhance historic views. The long-term impacts of removing and/or thinning aged, diseased, or invasive vegetation materials would be beneficial for remaining vegetation, and negligibly adverse for vegetation completely removed. Installation of electrical and potable water lines and a wastewater treatment system would locally remove or disturb some vegetation, resulting in long-term negligible adverse impacts on vegetation. There would be no cumulative impacts on vegetation.	*Vegetation* — Short-term negligible adverse impacts on vegetation would result from removing some vegetation to create defensible space around the historic structures and to enhance historic views. The long-term impacts of removing and/or thinning aged, diseased, or invasive vegetation materials would be beneficial for remaining vegetation, and negligibly adverse for vegetation completely removed. Installation of electrical and potable water lines and a wastewater treatment system would locally remove or disturb some vegetation, resulting in long-term negligible to minor adverse impacts on vegetation. There would be no cumulative impacts on vegetation.	*Vegetation* — Short-term negligible adverse impacts on vegetation would result from removing some vegetation to create defensible space around the historic structures and to enhance historic views. The long-term impacts of removing and/or thinning aged, diseased, or invasive vegetation materials would be beneficial for remaining vegetation, and negligibly adverse for vegetation completely removed. Installation of electrical and potable water lines and a wastewater treatment system would locally remove or disturb some vegetation, resulting in long-term negligible to minor adverse impacts on vegetation. There would be no cumulative impacts on vegetation.	*Vegetation* — Short-term negligible adverse impacts on vegetation would result from removing some vegetation to create defensible space around the historic structures and to enhance historic views. The long-term impacts of removing and/or thinning aged, diseased, or invasive vegetation materials would be beneficial for remaining vegetation, and negligibly adverse for vegetation completely removed. Installation of electrical and potable water lines and a wastewater treatment system would locally remove or disturb some vegetation, resulting in long-term negligible to minor adverse impacts on vegetation. There would be no cumulative impacts on vegetation.

	NO-ACTION	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D — PREFERRED	ALTERNATIVE E
Natural Resources (cont.)	*Water Quality* — The long-term adverse impacts on water quality from use of two septic systems would be negligible. There would be no cumulative impacts on water quality.	*Water Quality* —- The long-term adverse impacts on water quality would be negligible to minor because the septic systems would be designed to minimize the concentration of nitrogen in the effluent. The long-term adverse impacts of the freshwater effluent would be negligible because the volume generated would not be expected to adversely affect seashore habitats. There would be no cumulative impacts on water quality.	*Water Quality* — The long-term adverse impacts on water quality from the increased number of NPS staff and volunteers that could be accommodated in the village would be negligible. There would be a beneficial impact on terrestrial systems from the effluent discharged into the surficial aquifer. The long-term adverse impact on the freshwater / saltwater interface and the estuarine or marine systems would be negligible. There would be no cumulative impacts on water quality.	*Water Quality* — The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible. In the long term, the volume of effluent discharged into the aquifer would have a beneficial impact on terrestrial systems by increasing the availability of freshwater available to vegetation on the island and potentially through the freshwater wetlands. The long-term adverse impact on the freshwater / saltwater interface and the estuarine or marine systems would be negligible. There would be no cumulative impacts on water quality.	*Water Quality* — The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible. In the long term, the volume of effluent discharged into the aquifer could have both beneficial and adverse impacts on seashore habitats. The impact on terrestrial systems would be beneficial because of the increase in fresh water available to vegetation and potentially to wildlife. If the volume of effluent discharged exceeded the assimilative capacity of the aquifer, there could be a long-term adverse impact on estuarine and marine systems. Because the effect would be localized, the adverse impacts would be negligible to minor. There would be no cumulative impacts on water quality.	*Water Quality* — The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible. In the long term, the volume of effluent discharged into the aquifer could have both a beneficial and adverse impact on habitats at the seashore. The impact on terrestrial systems would be beneficial because of the increase in fresh water available to vegetation and potentially to wildlife. If the volume of effluent discharged exceeded the assimilative capacity of the aquifer, there could be a long-term adverse impact on estuarine and marine systems. Because the affect would be localized the adverse impacts would be negligible to minor. There would be no cumulative impacts on water quality.
National Seashore Operations	Long-term minor to moderate adverse impacts on national seashore operations would be expected from the increased requirements for facilities management staff to implement and oversee preservation undertakings in the historic district. Elevated costs associated with the actions would have implications for budgetary allocations for operations and staffing requirements. Long-term minor to moderate adverse cumulative impacts would be anticipated.	Long-term minor to moderate adverse impacts on national seashore operations would be expected from the increased requirements for facilities management staff to implement and oversee preservation undertakings in the historic district. Elevated costs associated with the actions would have implications for budgetary allocations for operations and staffing requirements. Long-term minor to moderate adverse cumulative impacts would be anticipated.	Long-term moderate adverse impacts on national seashore operations would be expected from the increased requirements for facilities management staff to implement and oversee preservation undertakings in the historic district. Elevated costs associated with the actions would have implications for budgetary allocations for operations and staffing requirements. Long-term minor to moderate adverse cumulative impacts would be anticipated.	Long-term moderate adverse impacts on national seashore operations would be expected from the increased requirements for facilities management staff to implement and oversee preservation undertakings in the historic district. Elevated costs associated with the actions would have implications for budgetary allocations for operations and staffing requirements. Long-term minor to moderate adverse cumulative impacts would be anticipated.	Long-term moderate adverse impacts on national seashore operations would be expected from the increased requirements for facilities management staff to implement and oversee preservation undertakings in the historic district. Elevated costs associated with the actions would have implications for budgetary allocations for operations and staffing requirements. Long-term minor to moderate adverse cumulative impacts would be anticipated.	Long-term moderate adverse impacts on national seashore operations would be expected from the increased requirements for facilities management staff to implement and oversee preservation undertakings in the historic district. Elevated costs associated with the actions would have implications for budgetary allocations for operations and staffing requirements. Long-term minor to moderate adverse cumulative impacts would be anticipated.
Visitor Use and Experience	Long-term beneficial impacts would occur to visitor use and experience due to opportunities to see stabilized historic structures. Short-term minor to moderate adverse impacts would result from construction-related noise and disruption in the district. Overall beneficial cumulative impacts would be anticipated	Long-term beneficial impacts would occur to visitor use and experience due to improved interpretive opportunities and selective vegetation clearing to enhance views. Short-term minor to moderate adverse impacts would result from construction-related noise and disruption in the district. Overall beneficial cumulative impacts would be anticipated.	Long-term beneficial impacts would occur to visitor use and experience due to substantially improved interpretive opportunities and selective vegetation clearing to enhance views. Short-term minor to moderate adverse impacts would result from construction-related noise and disruption in the district. Overall beneficial cumulative impacts would be anticipated.	Long-term beneficial impacts would occur to visitor use and experience due to substantially improved interpretive opportunities, selective vegetation clearing to enhance views, and the limited availability of historic structures to private lease-holders for overnight or extended-stay occupancy. Short-term minor to moderate adverse impacts would result from construction-related noise and disruption in the district. Overall beneficial cumulative impacts would be anticipated.	Long-term beneficial impacts would occur to visitor use and experience due to substantially enhanced interpretive opportunities, selective vegetation clearing to enhance views, and the greater availability of historic structures to visitors under a concessions operation for overnight or extended-stay occupancy. Short-term minor to moderate adverse impacts would result from construction-related noise and disruption in the district. Overall beneficial cumulative impacts would be anticipated.	Long-term beneficial impacts would occur to visitor use and experience due to substantially enhanced inter-pretive opportunities, selective vege-tation clearing to enhance views, and the availability of historic struc-tures to private leaseholders or to other visitors under a concessions operation for extended-stay or overnight occupancy. Short-term minor to moderate adverse impacts would result from construction-related noise and disruption in the district. Overall beneficial cumulative impacts would be anticipated.

AFFECTED ENVIRONMENT

INTRODUCTION

The following discussion highlights resources that could be affected by the planning and design that is specific to the alternatives and is specific to alternatives analyzed for this project.

HISTORIC DISTRICT

Structures and Buildings

The Cape Lookout Village Historic District (see Historic District Structures map) consists of 27 contributing resources and was listed on the National Register of Historic Places in June 2000. Ten of these contributing resources were previously listed on the national register as part of separate nominations for the historic Cape Lookout Lighthouse Station (listed in 1972) and U.S. Coast Guard Station (listed in 1989). The district's significance derives from being "a unique Outer Banks community that flourished as a fishing village and life-saving station from the 1870s to about 1920, and then endured as a resort for hardy vacationers until becoming part of the Cape Lookout National Seashore in 1966" (National Register nomination, 2000, Section 8, p.19).

For the most part, the district's former private houses retain integrity of location, design, setting, feeling, and association. This has occurred despite the cape's harsh environment, which required repeated building maintenance and a legacy of buildings undergoing adaptation for different functions. The condition of the buildings ranges from poor to good, with varying degrees of deterioration exhibited as a result of weathering and lack of regular repairs and maintenance over an extended period. Although most of these houses have had exterior sheathing replaced (commonly with asbestos shingles or plywood), and some of the original porches have been enlarged and/or partially enclosed and screened, the overall form of the houses remains intact. In 1958, in keeping with the long tradition of cape structures being moved to meet changing functional needs and shifting shorelines, three government buildings (the 1887 Life-Saving Station, the 1907 Lighthouse Keeper's Quarters, and the 1924 Life-Saving Station Boat House) were relocated to their current sites near the central part of the district. Of the latter three buildings, the lighthouse keeper's quarters retains the greatest degree of interior and exterior integrity.

In 2004 the National Park Service (Historical Architecture, Cultural Resources Division, Southeast Regional Office) prepared historic structure reports for nine of the historic buildings within the district: the Life-Saving Station, the Life-Saving Station Boat House, the 1907 Lighthouse Keeper's Quarters, and six of the former private residences. In accordance with NPS policy requirements, such reports are intended to provide primary guidance for the treatment and use of historic buildings and structures. The reports include detailed developmental histories, treatment and use recommendations, and records of treatment to ensure that character-defining features and materials are preserved to the greatest extent possible during project planning and implementation. In general, the report recommendations for the district support restoration of building exteriors and rehabilitation of interiors to accommodate continued residential use and visitor interpretive objectives.

As identified in the national register nomination, the district's period of significance spans the years from 1857, when construction began on the lighthouse, to approximately 1950 when private home construction on the cape ceased following the state of North Carolina's acquisition of land for a proposed state park. All of the historic resources within the district are owned by the National Park Service. The following historic properties are identified as contributing resources in the national register nomination:

Lighthouse Station Complex.

Cape Lookout Lighthouse (1857–1859) — The 163-foot-tall lighthouse is a conical brick structure painted in a distinctive pattern of alternating black and white diagonal diamonds. An iron stair constructed in 1867 spirals to the top of the lighthouse. The original first-order Fresnel lens displayed a fixed light that could be seen up to 18 miles offshore in good weather. The current light (first automated in 1950) consists of two rotating beacons and is operated and maintained by the U.S. Coast Guard. Ownership of the light was transferred to the National Park Service in 2003. As the most prominent structure within the district, the lighthouse has long been viewed as an icon reflective of the cape's colorful history and continues to serve as a vital navigational aid.

Keeper's Quarters (1873) — This building is a brick two-story, side-gable, five-bay dwelling located near the lighthouse. Reproduction one-story shed roof porches extend along the front and rear sides of the building. The interior has been modified with an altered floor plan, and replacement stairs and woodwork. The Park Service has rehabilitated the building as a visitor center with interpretive exhibits and public restrooms.

Oil House (1890s) — This is a small flat-roofed concrete building near the lighthouse that was used to store oil for the light until about 1950.

Cisterns (late 19th and early 20th century) — There are three brick water storage cisterns near the lighthouse keeper's quarters that were once filled by drains extending from the quarters. These are no longer used.

Former Private Dwellings. (These buildings are vernacular, utilitarian wood-frame houses collectively significant as a type adapted to the Outer Banks environment.)

Seifert-Davis House (Coca-Cola House) (ca. 1928) — This building is a one-story frame house with a low pyramidal hipped roof and shed porch along the front and west sides. The house rests on cast concrete piers. The interior is defined by a large open public space, with low partition walls separating the four corner bedrooms. The house was originally built for the C.A. Seifert family, owners of a Coca-Cola distributorship in New Bern, N.C. It was later owned (in the 1950s) by Harry Davis, renowned North Carolina geologist, naturalist, and conservation proponent.

Jetty Worker's House No. 1 (ca. 1915) — This is a one-story frame, side-gable house (five bays-wide) built on pilings with front and rear engaged porches. Plywood sheathing covers the original board-and-batten exterior walls. A shed-roofed two-room addition was constructed to form an ell extending from one end of the screened porch. The house was originally built to house workers constructing the rock jetty at the west end of the cape.

Jetty Worker's House No. 2 (ca. 1915) — This one-story frame, five bay-wide house built on pilings with engaged front and rear porches, is nearly identical to the Jetty Worker's House No. 1. A shed-roofed two-bedroom addition was constructed to the rear about 1940. The house was also originally built to house workers constructing the rock jetty.

Baker-Holderness House (Casablanca) (ca. 1930) — This structure is a two-story frame, three-bay-wide house with a low-pitched roof and a large one-story west wing. The house rests on pilings, has white painted weatherboard siding, a large brick chimney at the east end, and a

one-story screened shed porch wrapped around three sides. As the largest private house on the cape, it occupies a prominent location on the southern shore of the inlet. The house was built as a summer cottage by a Mr. Baker about 1930, with subsequent shared ownership acquired by George Holderness and other families. A front-gable outbuilding (ca. 1930) with weatherboard walls and casement windows is identified as a contributing resource.

Gordon Willis House (ca. 1950) — This structure is a one-story frame, front-gable house set on pilings. The house was built in a "modest Craftsman style," with German exterior siding. A screened front porch may be a later addition. Gordon Willis built the house on the site of his childhood home.

Fishing Cottage No. 2 (ca. 1950) — This structure is a small one-story, side-gable frame building with German exterior siding. The house is set on pilings and has no porch. A rear shed addition partially serves as a garage.

Guthrie–Ogilvie House (Luther Guthrie House) (ca. 1924) — This structure is a one-story side-gable frame house with engaged front porch. The house rests on pilings with asbestos wall shingles. A rear kitchen and bedroom are later additions. The house was originally built by Luther Guthrie (who worked at the Life Saving Station) for his daughter. Guthrie sold the house in 1928 to H.J. and R.S. Ogilvie who enlarged the house and used it as a summer cottage during the 1930s and 1940s.

O'Boyle-Bryant House (1939) — This is a one-story side-gable frame house, set on pilings, with a front engaged porch. Exterior walls are covered by asbestos siding over vertical sheathing. The house contains a combination living room and kitchen and two small bedrooms. Constructed by Earl O'Boyle, an employee at the Navy's signal station on the cape, it was later acquired by Ralph Bryant (North Carolina State University forestry professor) and his wife in the 1950s as a vacation cottage.

Gaskill-Guthrie House (ca. 1915) — This is a one-story side-gable frame house, built on pilings, with an engaged porch at the front and rear. Asbestos siding, apparently original, covers the exterior walls. Construction of the house is attributed to Clem Gaskill, a Coast Guardsman at the Cape Lookout station. The house was later acquired by the Cape Lookout Development Company, who in turn sold it to Odell Guthrie (also a Coast Guardsman) in 1922.

Lewis-Davis House (ca. 1920) — This is a one-story side-gable frame house with engaged front porch. The house rests on pilings with asbestos shingles on most of the exterior walls. The front porch was extended and screened, and a small flat-roofed addition extends to the rear and south sides. The house was built by Coast Guardsman James C. Lewis, by evidently combining two old Cape "fish houses." Subsequent owner, Carrie Arendell Davis, kept boarders at the house and operated a dance hall/store (that is no longer in existence) near the shore during the 1930s and 1940s.

U.S. Coast Guard Station Complex.

Main Station (1916-1917) — The station is a rectangular two-story frame building that served as living quarters and office space for the Coast Guard crew. The building retains Georgian Revival design elements, with a five-bay front façade, steep gable-on-hip roof crowned by a cupola, overhanging boxed eaves, and clapboard exterior siding. A one-story, hipped front porch shelters three

entrances. The building rests on a full poured concrete foundation and basement that provides space for coal storage and a boiler room. A tall brick chimney is attached to one side of the cupola; another chimney has been removed.

Galley (1917) — This one-story, side-gabled frame building has wide overhanging boxed eaves along the front and rear, flush eaves at the gable ends, and clapboard siding. A chimney at the north end was removed, as well as most of a shed porch that was added in 1982.

Equipment Building (1940) — This Colonial Revival style building has a four-bay, side-gable garage set on a concrete slab foundation, wood shake-shingle exterior walls, original sash windows, and gabled dormers on the front and rear elevations. The building housed rescue equipment and other vehicles.

Cistern (late 19th century) — This tall rectangular poured concrete structure was adapted as a flammable liquids storage shed, with the addition of two doors and two roof ventilators.

Relocated Government Buildings.

Lighthouse Keeper's Quarters (1907) — The six-room, two-story house was built as a second lighthouse keeper's quarters for the 1859 Cape Lookout light station. It was originally located immediately south of the brick 1873 keeper's quarters. It housed the keeper and his family until the 1930s. Military troops occupied the building during World War II. Dr. and Mrs. Graham Barden purchased the house in 1958 from the U.S. Coast Guard, who had deemed it surplus property. The Bardens moved the house about 1 mile southwest of its original site and used it as a summer cottage.

The wood-frame house rests on a high concrete block foundation. The main block of the house is three bays wide and one bay deep, with a side-gable roof. A central two-story ell with gable roof is at the rear. Although all original exterior trim remains, original clapboard walls have been replaced by unpainted cedar clapboards. The roof has wide overhanging eaves, and decorative ridgeboards project from each gable end. Sash windows, side door, front porch, and ell porch are all original features. A tall stuccoed chimney projects from the roof. Interior features and finishes are also intact (e.g. wooden floors, beadboarded walls and ceilings, raised panel doors, and turned stair balusters).

Life-Saving Station (1887) — This building originally stood beside the former Coast Guard Station. It is one of only two surviving examples of 1880s life-saving stations in North Carolina (six were constructed during the decade). Most of the first floor originally served as the boat room for the station, with the remainder used as living area for the crew. Rooms for the crew and storage were on the second floor. The building was relocated to its current site in 1958 and adapted for private residential use. Despite some loss of integrity due to alteration of the front façade and relocation, it retains integrity of materials, craftsmanship, feeling and association, and a setting similar to its original site.

The building is two stories, of rectangular frame construction (two bays wide and three bays deep), and rests on a stone block foundation. The building is a simplified but significant example of Stick Style architecture (popular from the 1860s to about 1890) with Queen Anne-style architectural elements such as a gable roof, cross-gables, and hipped-roof dormers on the side elevations. Kingpost trusses are decorative features below the

gables. The exterior walls of the first floor front porch elevation are clad in German siding (possibly original). Asbestos shingles cover the remainder of the first floor walls, with wood shakes over board and batten on the second story walls. The front of the building has a one-story porch with plain posts and a shed-roofed balcony on the upper level. A large double-door to accommodate life-saving boats was formerly at the front façade, and a lookout tower (also removed) was positioned at the top of the roof near the front of the building.

Life-Saving Station Boat House (1924) — This three-bay-wide structure is a small one-story frame rectangular building that has a hipped roof. The building rests on pilings. Exterior walls are covered in wood shake shingles. Several original sash windows are visible behind plywood shutters. The boat house is identified as the most altered of the relocated government buildings. However, it retains most of its historic features, including the large boat-room doors that are concealed within the walls. The building is identified as the last of at least five boat houses built at the life-saving station. In 1958, David Yeomans, a long-time cape resident, bought and relocated the building from its original site 500 feet north and remodeled it as a cottage. Yeomans added the front shed porch.

Circulation Network *(late 19th century to the present).* The loosely connected system of dirt and concrete roads linking the lighthouse complex, cluster of dwellings, and former Coast Guard Station is identified collectively as a contributing structure. Most of the roadways are of packed dirt and range from wide sandy paths to well-graded roadbeds. The road network is dynamic; some roads have become obscured or obliterated in response to shifting sands, severe weather, and altered use patterns. The only paved road is the approximately 20-foot-wide concrete road that connects the former Coast Guard Station to the dock at the west hook of the cape. It was constructed during World War II as part of the temporary harbor defenses of Beaufort Inlet. The narrow dirt lane leading from the Coast Guard Station through the concentration of dwellings and on to Cape Lookout Bight is known as the "Main Road." The "Back Road" (considered the oldest on the cape) extends the length of the cape behind the primary dunes. Several shorter access roads branch off from these primary roads to residences and other sites.

Coast Guard Dock *(ca. 1950).* This former Coast Guard dock, about 1,000 feet long, is constructed of creosote-treated wood pilings supporting heavy board decking. Some of the original pilings have been replaced with concrete pilings, and concrete has replaced (or been applied over) a portion of the decking at the outer end of the dock where the wood decking has deteriorated.

Noncontributing Buildings and Structures. (Altogether, the Cape Lookout Village Historic District national register nomination identifies 26 buildings and 4 structures as having lost historical integrity, and/or to have been constructed too recently to fall within the period of significance)

Les and Sally Moore House and Store (ca. 1951) — This one-story frame building, five bays wide, is set on pilings and has vertical board sheathing and a low-hipped roof. The Moores lived in the south half and operated a store in the north half. Rear additions were completed about 1960. The building is currently used for operations of the Cape Lookout Environmental Education Center.

Fishing Cottage No. 1 (1950s) — This structure, clad in narrow vertical sheathing and plywood, is a frame fishing cottage (four bays wide) set on pilings

with low side-gabled roof and front screened porch.

Setzer-Dawsey House (ca. 1940) — This one-story, side-gable house is set on pilings and has board-and-batten siding and sash windows covered with plywood shutters. The house has been expanded and remodeled, with a large brick chimney on the north gable end, an addition on the south end, and a wide engaged screened porch on the front.

Miscellaneous Outbuildings — Several of the outbuildings and minor structures within the district are noncontributing to the district's national register significance. At the lighthouse station, these include the coal house (destroyed by Hurricane Isabel in 2003) and the summer kitchen, which has lost integrity. Various small-scale garages, sheds, rental cabins, docks, and other minor structures associated with the primary buildings are also noncontributing.

Machine Gun Nest Site (1942) — This site is a circular depression ringed by granite rocks at the top of a tall sand dune and is all that remains of a machine gun position constructed by the Coast Guard Artillery Corps as part of the World War II harbor defenses of Beaufort Inlet.

Cultural Landscape

The cultural landscape of the Cape Lookout Village Historic District is identified as a contributing component of the district's national register significance, furthering the district's overall integrity of setting, feeling, and association. The coastal environment of the Outer Banks has been dramatically shaped by prevailing winds, storms, tides, and the littoral drift of sand along the shorelines. These dynamic natural processes have strongly influenced patterns of cultural adaptation and settlement on the cape, which is reflected in the design, materials, and spatial organization of historic buildings and structures.

The *Draft Cultural Landscape Report for the Cape Lookout Village* (Wiss, Janney, Elstner Associates, Inc. and John Milner Associates, Inc., 2005) provides detailed cultural landscape descriptions, analyses, and treatment recommendations. In describing the cultural response to the cape's natural resources and environment, the report notes that the Coast Guard Station (on the site of the original 1887 Life-Saving Station) and most of the houses within the Cape Lookout Village were sited to take advantage of the protection afforded by sand dunes and ridges, and the presence of an unconfined, shallow, freshwater aquifer. The 1859 lighthouse and its nearby 1812 predecessor (no longer extant) were sited on a prominent ridge to command the widest possible view for sailing vessels seeking safe passage around the cape's hazardous shoals. Also, the road circulation system linking the Coast Guard Station on the south, clustered central village, and Lighthouse Station on the north, developed in large measure in response to the linear orientation of dunes and ridges.

Human activities at Cape Lookout during the period of historical significance consisted primarily of navigation and maritime services, commercial fishing, and private residential and recreational use. The first permanent structure on the cape was the 1812 lighthouse, which was replaced in 1859 by the current lighthouse. The Cape Lookout Life-Saving Station was established in 1887 to provide aid and rescue service for mariners in distress. Between about 1870 and 1910, the commercial viability of mullet fishing drew fishermen to the Core and Shackleford Banks during the summer and fall. By about 1900, many fishermen who formerly resided on nearby Shackleford Banks began to settle on Cape Lookout and established a village that at one time numbered about 80 people. The

subsistence of the village community was supplemented by livestock grazing.

With the advent of motorboats, fishermen began to resettle on the mainland or at Harkers Island, and the Cape Lookout Village was nearly abandoned by 1920. About 30 or 40 houses were moved from Cape Lookout to Harkers Island at this time. However, seasonal recreational use of the cape subsequently gained popularity, and several of the remaining cottages were reused by recreational fishermen and other vacationers. Cape Lookout was used as part of the United States' coastal defenses during World Wars I and II. Following the establishment of the national seashore in 1966, NPS objectives for preserving and enhancing resource conditions and providing for compatible recreational activities have influenced patterns of cultural use and the landscape of the cape. While fishing continues primarily as a recreational pursuit, livestock grazing no longer occurs, and the Coast Guard Station was decommissioned in 1982.

Other than the surviving features of the built environment, the overall landscape bears little overt evidence of human manipulation. However, some cultural activities have had a marked impact. Regular dredging of navigational channels through Barden Inlet following the original opening of the inlet by a hurricane in 1933 and the construction of jetties on the western (sound) side of the cape (ca. 1914 and 1945) have both altered and contributed to the natural shoreline dynamics of sand deposition and erosion. The shoreline between the lighthouse and the bight has substantially eroded since the mid-20th century. The recent shoreline stabilization and beach renourishment project was undertaken to protect the lighthouse and its associated resources from erosion.

The east side of the district consists of broad, low sandy beaches fronting the Atlantic Ocean. The beaches are bordered by frontal dunes that give way to sparsely vegetated back dunes that are frequently overwashed by storm surges. Further inland the terrain becomes gently undulating with low clumps of native grasses, evergreen shrubs, live oaks, myrtles, and cedars. The densest concentrations of woody vegetation are found near the lighthouse, around the Les and Sally Moore house (much of which is planted shade trees and ornamentals), and on higher wind-deposited sand ridges in the central part of the cape. Stands of loblolly pine exist near the lighthouse and east of the village, some initially planted by the Boy Scouts in the late 1960s. Salt marshes fringe low lying areas on the bay side of the cape.

Based on historic photos and other evidence, vegetation within the village residential area was considerably more open during the period of significance. A sense of this open landscape is still evident around the 1907 Keeper's Quarters, Baker-Holderness House (Casablanca), and the Seifert-Davis House (Coca-Cola House). Within about the last 25 years, unimpeded growth of pines, myrtle, cedars, and other small trees and shrubs have obscured more open vistas and reduced the visual connection between most of the district's buildings and structures. The dense vegetation also presents an elevated fire hazard. Historical evidence suggests that the open character of the landscape during the late 19th and first part of the 20th century may itself be largely the result of unrestricted livestock grazing and clearing, because large stands of trees are known to have once existed on the Outer Banks (Wiss, Janney, Elstner Associates, Inc. and John Milner Associates, Inc. 2005, Chapter 4, pgs.8-9).

The *Draft Cultural Landscape Report* (Wiss, Janney, Elstner Associates, Inc. and John Milner Associates, Inc. 2005) presents several treatment recommendations regarding appropriate management of the Cape Lookout cultural landscape. Many of the recommendations for the historic district are provided in response to specific issues such as restricting vehicle traffic within the village,

removing nonhistoric vegetation, relocating selected historic buildings, stabilizing the shoreline in the lighthouse vicinity, and treating pine stands. The recommendations are based on the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, including the *Guidelines for the Treatment of Cultural Landscapes*. The report proposes a mixed approach of restoration of historic buildings and structures within the primary built areas, and rehabilitation in the remainder of the district. The report acknowledges that restoration may not be feasible in all instances, and that visitor use requirements may entail adaptive use or alterations to selected buildings and landscape features (Chapter 5, pg. 8).

To reestablish a semblance of the former open character of the landscape in the vicinity of the village, the cultural landscape report recommends a cautious approach of staged and selective removal (focused initially on aged, diseased, and invasive plants and trees) while retaining some vegetation to provide shade and stabilize landforms. Natural resource specialists would be consulted before any decision to thin or clear vegetation to ensure adequate protection of natural resources, sensitive habitat, and critical ecological processes. A cape-wide vegetation management plan is also recommended to provide comprehensive long-term treatment and maintenance approaches. Although many of the treatment recommendations are included in the proposed actions and mitigation measures presented in this environmental assessment, other recommendations (e.g., constructing low walls or foundation outlines to mark the locations of missing buildings, reestablishing historic road alignments, and possibly removing the 1945 jetty to facilitate erosion control in the lighthouse vicinity) are not proposed at the current time but may be considered pending additional studies and funding.

Archeological Resources

The Outer Banks region is thought to have been first occupied at least 3,000 years ago by small groups of semi-nomadic people who subsisted by hunting, fishing, and gathering. Little is known of these early inhabitants, and archeological evidence of their occupation has been largely lost or disturbed as a result of storms and the dynamic nature of the barrier islands. These factors have substantially compromised the stratigraphy of identified sites, and have likely destroyed other sites. NPS archeological investigations conducted at the national seashore in the mid-1970s identified 10 prehistoric sites, typically found eroding from sand dunes, beach wash, or along the edges of salt marshes. Light to moderate accumulations of cultural material were identified, for the most part consisting of the remnants of shell middens, nondiagnostic ceramics, and tool fragments. All of the sites were evaluated as lacking scientific and cultural significance and were therefore ineligible for inclusion in the national register.

Two of these ineligible prehistoric sites were found within the general area of the current project; a site near the lighthouse consisted of a buried shell midden strata with fragments of sand-tempered pottery, and another site west of the Coast Guard Station dock consisted of a "Halifax-type" projectile point and a ground stone tool fragment. Both sites had lost integrity due to natural erosion and weathering and/or subsequent construction disturbance (NPS 1976). The North Carolina state historic preservation office has noted that Halifax projectile points are diagnostic of sites dating between about 4,000 BC to 3,000 BC Therefore, the project area may have seen human occupation at least 5,000 to 6,000 years ago (SHPO letter, July 18, 2005).

Historic archeological resources have also been identified (and/or may potentially exist) in the national seashore associated with the limited occupation of the Outer Banks during the colonial period; use of Cape Lookout

Bight as a protected harbor for ships seeking refuge during storms; fishing and whaling settlements; military operations associated with the Revolutionary War, the War of 1812, the Civil War, and World Wars I and II; and the development of the Cape Lookout lighthouse and life-saving stations. These resources (e.g., former building sites and foundations, refuse dumps, and gun emplacements) have also been damaged by storms, the movement of the barrier island landforms, and human activities and disturbance.

No historic archeological resources considered eligible for the national register are identified within the current project area.

Before ground-disturbance associated with project activities (placement of utility lines and waste water treatment systems, relocation of selected historic structures, vegetation clearing, etc.) the National Park Service would carry out any necessary archeological assessments and surveys in consultation with the North Carolina state historic preservation officer to ensure that archeological resources are adequately protected and avoided. Should archeological resources be discovered during the course of the project, the National Park Service would ensure that measures are taken to evaluate resource significance and undertake site avoidance or data recovery measures (see the "Mitigative Measures" section of this document).

NATURAL RESOURCES

The barrier islands comprising Cape Lookout National Seashore extend from Okracoke Inlet to Beaufort Inlet. They are southwest of the islands of Cape Hatteras National Seashore on the northeast and Bogue Banks on the southeast. All of these barrier islands are known as the Outer Banks of North Carolina. Of the 308 miles of barrier island ocean shoreline in North Carolina, Cape Lookout National Seashore represents 87% of the miles in public ownership that are roadless. Cape Lookout is on the southern end of South Core Banks, one of the few barrier islands that does not have a bridge connecting it to the mainland. The width of the islands ranges from 600 feet to 1.75 miles. Except for the highest dunes at Cape Lookout Point, all of the barrier islands in the national seashore are within the 100-year floodplain and the coastal high hazard area.

Barrier islands are highly ephemeral in nature. The ocean is the dominant force of change on these islands, and the forces of wind and wave action are constantly altering the landscape. The landscape on Cape Lookout is composed of low sand dunes that generally do not exceed 10 feet in height. Strips of grasslands grow behind dunes. Shrub thickets and a few hammocks are scattered along the length of the islands. There is an extensive area of salt marsh on the sound side of the island. Sand movement changes the appearance of the island and shoreline, sometimes by accretion but more often by erosion. The predominantly southwest littoral (along-the-shore) currents, daily wave action, high waves, and wind during storms are constantly moving the sand.

Over time, South Core Banks has moved in a southerly direction toward the mainland. South Core Banks and Cape Lookout have migrated more than 4 miles landward in the last 7,000 years. Landward migration is primarily driven by winds, tidal currents through inlets, and storm overwash. During storm surges waves remove sand from the ocean beach and deposit it on the sound side in fan-shaped deltas. This process is known as overwash. The effect is compounded if there is an unusually high tide. Small islands such as South Core Banks are subject to frequent overwash. Wind transport is only indirectly responsible for island migration, but the direction of the prevailing winds does affect dune formation. The winds at Cape Lookout run parallel to the shoreline and produce low dune fields that are more easily penetrated by overwash.

Overwash of the foredunes caused by storm surges transports a large amount of sand. The sand deposited on the sound side of the island creates overwash fans or terraces. Sometimes the waves and their deposits extend across the island to the sound side. This sand movement plays an important role in marsh formation.

VEGETATION

Vegetation communities arise in response to a combination of locally present conditions such as elevation, aspect, available water, and exposure to saltwater and wind. A slight change in elevation or localized protection from oceanic overwash can directly affect vegetative composition. Vegetation on the island is divided into a series of distinct ecological zones defined by elevation and degree of exposure to the wind and water. The 10 ecological zones are: beaches, berms, tidal flats, dunes, open grasslands, closed grasslands, woodlands, high salt marshes, low salt marshes, and subtidal marine vegetation. The vegetation types grade into one another and often share common species.

The presence of vegetation can also affect the dynamics of depositional processes. For example, the cordgrass in the marsh area traps

and holds fine particles of sand. Over time, this contributes to marsh formation. The roots of the grasses and other plants also help to hold sand particles in place. The grasses are particularly important in stabilizing the dunes. Cultural management of vegetation has also affected topography on the cape. The loblolly pine forests planted near the lighthouse have likely diminished the movement of sand deposits due to wind.

The vegetation patterns in the historic district are generally consistent with the vegetation patterns across the island. No vegetation grows on the beach because of the constant surf. A berm develops between the beach and the dune system. The size of the berm environment and vegetation is determined by the frequency and severity of storms. A common species is sea oats (*Uniola paniculata*), which along with other plants traps sand at the drift line to form small dunes. These dunes are knocked down or buried during storms. Annuals such as the sea beach amaranth (*Amaranthus pumilus*) also inhabit the berms. The vegetation helps to create low, scattered dunes in overwash areas. In addition to the sea oats, other species include saltmeadow cordgrass (*Spartina patens*) and sand-grass (*Triplasis purpuria*).

Open grasslands occur in areas subject to the oceanic overwash and are only sparsely vegetated. Barrier flats and dune slacks are considered open grasslands. On the barrier flats, the saltmeadow cordgrass and penny-wort (*Hydrocotyle bonariensis*) predominate. In a dune slack the wind has scoured out the trough between the dunes down to the water table. In these areas flat-bottomed marshes can form. Various types of rushes, sedges, and grasses grow in these freshwater marshes. In the historic district, open grasslands are primarily behind the primary dunes and low areas subject to overwash. The open grasslands grade into closed grasslands on lower terraces that are older, have lower salt content, and are closer to the water table. The vegetation in the closed grasslands includes sea oats, love grass (*Eragrostis pilosa*), and sea-pink (*Sabitia stellaris*). In the project area the closed grasslands are concentrated in the middle of the island, adjacent to the woodlands, and between the open grasslands and salt marshes.

Woodlands form in areas protected from flooding, salt spray, and overwash. Woodland types include shrub thickets and maritime forest. In the shrub-thicket, species include wax-myrtle (*Myrica conifera*), red cedar (*Juniperous virginiana*), marsh elder (*Iva frutescens*), and live oak (*Quercus virginiana*). Shrublands will succeed to maritime forest if conditions are favorable, but frequently remain in this seral stage because salt spray, occasional flooding, and other factors prevent the community from shifting to a forest environment. This may be the case in much of the historic district. The Siefert-Davis (Coca Cola) House is in an open grassland. The village itself is primarily shrub thicket with some areas of shrub savanna and two small areas of maritime forest.

High and low salt marshes are found on the sound side of the historic district. The marsh is flooded by tides from the sound and shifts very gradually into the maritime grassland. High salt marshes are flooded during the spring and during storm tides. The dominant vegetation is saltmeadow cordgrass and black needlerush (*Juncus roemerianus*). Low salt marshes are flooded at mean low tide. The dominant vegetation is typically salt marsh cordgrass (*Spartina alternifolia*).

In the project area, the woody species that would ordinarily comprise the maritime forest are concentrated around the lighthouse complex, the Les and Sally Moore complex, and on high ground to east and west of the village. Near the lighthouse the maritime forest is primarily stands of loblolly pines. The vegetation to the east and west of the village includes both woody growth shrub thickets and some loblolly pine. The shrub thickets include wax myrtle and bayberry. Although

loblolly pine naturally occurs in the maritime forest of barrier islands, the trees at Cape Lookout were purposefully planted. Vegetation around the Les and Sally Moore complex consists primarily of shade trees and ornamentals. This vegetation is not native but could date from the period of significance. The loblolly pine stands postdate the period of significance.

Over time, woody vegetation has grown close to the historic structures in the village. This vegetation poses a fire hazard and increases the potential for storm damage to the structures. In some locations within the historic district, the spread of woody vegetation has also obscured scenic vistas that existed during the period of significance.

WATER QUALITY

There are three aquifers on the island. The shallowest of the aquifers is an unconfined, surficial aquifer located just below the surface of the dunes. Given its proximity to the surface, water quality in the aquifer is low and unsuitable for drinking. The aquifer is affected by overwash from storm surges, which further temporarily degrades water quality. Changes in the water table in this aquifer could cause a change in the saltwater / freshwater interface. Raising the water table could change the volume of freshwater flow into the estuarine and marine environment. Lowering the water table could cause salt water intrusion into the aquifer, which could impact the availability of freshwater for vegetation and wildlife. Actions proposed under this plan could impact water quality in this aquifer.

Beneath the unconfined aquifer are two confined aquifers. The depth to ground water for the upper confined aquifer is 90 to 150 feet and is known to contain freshwater only at New Drum Inlet. None of the actions proposed in this plan would impact this aquifer. The depth to groundwater of the lower confined aquifer (the Castle Hayne aquifer) is 150 to 500 feet. In 2004 a new well was drilled into this aquifer, and the well was screened at 330 feet. Water from the new well meets federal and state drinking water standards. At current visitation levels, this source of drinking water is considered more than adequate to meet the needs of the national seashore. Because the aquifer is confined, saltwater intrusion into this aquifer is not considered an issue at this time.

NATIONAL SEASHORE OPERATIONS

There are two full-time maintenance employees at the national seashore and an additional four permanent part-time employees. The national seashore hires day labor crews to complete project work under NPS supervision. The staff is challenged to maintain a large number of historic buildings at Portsmouth Village and Cape Lookout Village, located 56 miles apart at the extreme north and south ends of the national seashore. They also have primary maintenance responsibility for seasonal-use cottages at the Great Island and Long Point fishing camps and for visitor use locations on Shackleford Banks. All materials and equipment must be transported by boat. The harsh maritime climate of the Outer Banks and frequent storm damage place further demands on the maintenance division to carry out structural repairs and keep utility systems operational.

In all alternatives, stabilization work will be done on 13 historic structures in the Cape Lookout Village area; however, because of emergency conditions, stabilization has been completed for the Lewis-Davis House, the Guthrie-Ogilvie House, Fishing Cottage No. 2, and the Seifert-Davis House. In accordance with NPS policy, the national seashore carries out preservation treatment of historic structures in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. State and county building code requirements must also be addressed to bring selected properties into compliance with occupancy standards.

The maintenance division is responsible for the construction and maintenance of the national seashore's utility system. Most of the existing septic systems for individual residences have failed or do not meet approved standards. Any replacement wastewater system must meet all regulatory requirements for public heath, safety, and environmental protection. Potable water is available for the district from a well that was recently drilled near the lighthouse. The water is chlorinated and treated to comply with safe drinking water standards. Electrical service to the project area is provided from the mainland and is available in the lighthouse area. The electrical system would need to be extended to the village area and upgraded to adequately meet the projected additional demands of NPS staff and visitors if structures are rehabilitated/ reused for occupancy. The maintenance division also is responsible for vegetation management, which could include selective vegetation clearing in the historic district, depending on which alternative is selected, for fire protection and to provide more open views.

VISITOR USE AND EXPERIENCE

The NPS Public Use Statistics Office reported 692,857 recreational visitors at Cape Lookout National Seashore in 2005, down from 720,216 in 2004. Monthly visitor use has been documented from 1976 to the present. The visitation statistics may be somewhat misleading, because many visitors are local residents who use the picnic area adjacent to NPS headquarters on Harkers Island and do not necessarily travel to the outer islands. Although the national seashore is open year-round, the highest day-use visitation occurs during June to August and is concentrated in the lighthouse area at the southern end of South Core Banks. Recreational fishing, characterized by overnight camping stays, accounts for heavy visitor use during the spring and fall (April to May and September to November). Many fishermen drive four-wheel-drive or all-terrain vehicles south from the Great Island area to fish along the coast near the lighthouse and historic district. They frequently camp near the district or return at night to cabins at the Great Island camp. Seasonal waterfowl hunting is also permitted in designated areas at the national seashore.

According to NPS staff observations, most visitors are from the North Carolina region, including Charlotte and Raleigh-Durham. Most travel from Beaufort, Morehead City, or Harkers Island on passenger ferries that arrive and depart between 8 a.m. and 5 p.m. and use the public dock north of the lighthouse. The capacity of the tour boats is increasing, with the largest allowing up to 200 visitors to arrive at one time. A significant number of visitors travel to the cape on private boats, including kayaks and canoes.

Although there are no developed roads, vehicles may be driven on the open ocean-side beach or on marked sand trails. Vehicle ferry service is provided to South Core Banks at Great Island by a concessions operator in Davis, North Carolina. Designated areas along the beach are subject to seasonal closure for protection of turtle and shorebird nesting locations and to address other environmental protection and recovery efforts as needed. Private vehicles are not permitted in the lighthouse area, although visitors may take commercially operated vehicle tours from the visitor orientation area to other parts of the historic district.

There are no stores or restaurants on the islands, and visitors are advised to transport their own food, water, and supplies. Primitive tent camping is allowed, and some designated campsites are available north of the lighthouse.

ENVIRONMENTAL CONSEQUENCES

METHODOLOGY FOR ASSESSING IMPACTS

Potential impacts (direct, indirect, and cumulative effects) are described in terms of type (are the effects beneficial or adverse?), context (are the effects site-specific, local, or even regional?), duration (are the effects short-term, i.e. occurring during the period of construction or lasting less than one year; long-term, i.e. lasting longer than one year; or permanent?), and intensity (is the degree or severity of effects negligible, minor, moderate, or major). Because definitions of intensity (negligible, minor, moderate, or major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this environmental assessment/assessment of effect.

CUMULATIVE IMPACTS

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 USC 4321 *et seq*.), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as

> the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7).

Cumulative impacts are considered for all alternatives, including the no-action alternative.

Cumulative impacts were determined by combining the impacts of the alternatives with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Cape Lookout National Seashore and, if applicable, the surrounding region. These projects include the following:

- the ongoing structural rehabilitation of the lighthouse and planned opening of the structure for daily visitation within the next year
- shoreline stabilization and beach renourishment (completed in the spring of 2006)
- Some recommendations from the "Draft Cultural Landscape Report" are included in the actions presented in the current reuse implementation plan — selective vegetation clearing, restoration and rehabilitation of historic buildings, and relocation of selected historic buildings to original site locations. Other actions and treatments recommended in the report are not included in this present plan but may be considered in the future — such as reestablishing historic road alignments and patterns of circulation, constructing new pathways and boardwalks, and replacing missing structures in the lighthouse and coast guard areas.
- Visitor use improvements are in progress in the lighthouse vicinity as described in the *Cape Lookout Visitor Orientation Area Development Concept Plan / Environmental Assessment* (November, 2005) — a new comfort station and visitor contact station, the placement of new water line, construction of a 75-car public parking area, and construction of new sections of boardwalk.
- development of the *Commercial Services Plan* to guide the management of commercial services at the national seashore (in process)
- management of threatened and endangered species through the *Interim Protected Species Management Plan*.

IMPACTS ON CULTURAL RESOURCES AND SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

In this environmental assessment, impacts on cultural resources are described in terms of type, context, duration, and intensity, which is consistent with the regulations of the Council on Environmental Quality (CEQ) that implement the National Environmental Policy Act (NEPA). These impact analyses are intended, however, to comply with the requirements of both the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA). In accordance with the Advisory Council on Historic Preservation's regulations implementing Section106 of the National Historic Preservation Act (36 CFR Part 800, *Protection of Historic Properties*), impacts on cultural resources were also identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected national-register-eligible or -listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations a determination of either *adverse effect* or *no adverse effect* must also be made for affected national register-listed or eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the national register, e.g., diminishing the integrity (or the extent to which a resource retains its historic appearance) of its location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the national register.

CEQ regulations and the National Park Service's *Conservation Planning, Environmental Impact Analysis and Decision Making* (Director's Order #12) also call for a discussion of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g., reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under the National Environmental Policy Act only. It does not suggest that the level of effect as defined by Section106 is similarly reduced. Cultural resources are nonrenewable resources, and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss in the integrity of the resource that can never be recovered. Therefore, although actions determined to have an adverse effect under Section106 may be mitigated, the effect remains adverse.

A Section106 summary is included in the impact analysis sections. The Section106 summary is an assessment of the effect of the undertaking (implementation of the alternative) on national-register-eligible or -listed cultural resources only, based upon the criterion of effect and criteria of adverse effect found in the Advisory Council's regulations.

HISTORIC DISTRICT (STRUCTURES, BUILDINGS, AND CULTURAL LANDSCAPE)

Definitions of Intensity Levels

Negligible: Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for Section106 would be *no adverse effect*.

Minor: Adverse impact — alteration of a feature(s) or landscape pattern(s) would not diminish the overall integrity of the resource (structure, building, or landscape). The determination of effect for Section106 would be *no adverse effect*.

Moderate: Adverse impact — alteration of a feature(s) or landscape pattern(s) would diminish the overall integrity of the resource (structure, building, or landscape). The determination of effect for Section 106 would be *adverse effect*. A memorandum of agreement (MOA) is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation 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 the National Environmental Policy Act from major to moderate.

Major: Adverse impact — alteration of a feature(s) or landscape pattern(s) would diminish the overall integrity of the resource (structure, building, or landscape). The determination of effect for Section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).

No-Action Alternative

Analysis. Under the no-action alternative, the National Park Service would stabilize 13 of the former residential buildings contributing to the significance of the Cape Lookout Village Historic District. (As stated previously, four of these buildings have been stabilized because of emergency conditions.) The National Park Service would undertake measures to preserve the existing form, features, and architectural detailing of these buildings in accordance with historic structure reports and the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. With particular regard to the standards and guidelines for preservation, stabilization measures would include structural reinforcement, weatherization, and actions required to correct unsafe conditions. Two noncontributing buildings (the Setzer-Dawsey House and Fishing Cottage No. 1) would be demolished and removed to enhance the setting of the historic district. Other noncontributing outbuildings would also be removed. The above actions would result in long-term beneficial impacts on the contributing buildings and structures of the Cape Lookout Village Historic District.

Three buildings (the 1907 Lighthouse Keeper's Quarters, the 1887 Life-Saving Station, and the 1924 Life-Saving Station Boat House) would remain at their current locations near the central village portion of the historic district and would not be relocated to their original building sites at the lighthouse station and U.S. Coast Guard areas. Consequently, the current spatial arrangement of contributing buildings would not accurately reflect the arrangement that existed during the period of historical significance. Although some limited vegetation thinning would be

undertaken (primarily to reduce the threat from fire and hazard tree limbs on the historic buildings), dense vegetation would remain throughout most of the district, obscuring formerly open views and the visual orientation and connection among the buildings. Continuation of these current conditions would result in long-term minor adverse impacts on the setting of the historic district and contributing features of the cultural landscape. However, the overall integrity of the district would remain largely intact, and the qualities contributing to the district's national register significance would not be diminished.

Installation of the two septic systems and underground utilities would negligibly affect the cultural landscape, including the scale and visual relationships among landscape features. Any aboveground appurtenances associated with the septic systems (e.g., air vents or manhole covers) would be painted a flat, non-reflective color. Selective plantings of native vegetation as visual screening would further permit such appurtenances to blend into the natural landscape. After underground utility lines are installed, the trenches would be backfilled and the disturbed ground returned to its pre-construction contour and condition. The topography, vegetation, circulation features, and land use patterns of the landscape would remain unaltered by such actions.

Construction activities associated with implementation of the no-action alternative would introduce short-term visual and atmospheric intrusions into the setting of the historic district, which could affect views, vistas, and the quality of the visitor experience. However, such intrusions would be localized and last only as long as construction.

Cumulative Impacts. The structures and buildings within the historic district are particularly vulnerable to natural weathering and the severe climatic conditions associated with the Outer Banks, although they are protected to a limited degree from winds and storm surges by the dune system that parallels the shoreline along the Atlantic side of Cape Lookout. Although the overall form of the buildings remains relatively intact, natural weathering and deterioration threatens the long-term integrity of many of the buildings, a situation accentuated in recent years by a lack of regular maintenance. Instances of collapsed roofs and other structural problems require stabilization. Structural deterioration resulting from these factors has resulted in long-term minor to moderate adverse effects on the historic district's contributing properties.

Several actions, while not included in this reuse plan, could contribute cumulative beneficial impacts to historic properties within the historic district. Among these, ongoing rehabilitation of the lighthouse would continue, with the objective of opening the structure to the public for interpretive purposes on a daily basis (public access is limited to selected open house dates under a reservation system). Shoreline stabilization and beach renourishment measures that will control erosion that formerly threatened the stability of the lighthouse and nearby structures have been completed. Recent visitor use improvements in the lighthouse area will also enhance visitor orientation, appreciation, and protection of the historic district. Also, the treatment recommendations presented in the "Draft Cultural Landscape Report" for the historic district would further enhance and preserve the district's historic setting and built environment. Implementing the above actions would have long-term beneficial impacts on the historic buildings, structures, and cultural landscape features contributing to the historic district.

The impacts associated with implementing the no-action alternative would result in possible long-term minor adverse impacts on the historic district as a result of not relocating three historic buildings to their original locations, and the retention of dense vegetation that obscures historic views. However, all preservation and stabilization measures

currently underway or planned for the district's contributing buildings would be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, and are therefore expected to result in overall long-term beneficial impacts on historic buildings, structures, and cultural landscape features. Consequently, the impacts of the other actions described above, in combination with the impacts of the no-action alternative, would result in overall long-term beneficial cumulative impacts. The no-action alternative would contribute a comparatively small component of adverse impacts to the long-term minor to moderate beneficial and adverse cumulative impacts of other past, present, and reasonably foreseeable actions in the historic district.

Conclusion. Long-term beneficial impacts on the Cape Lookout Village Historic District would occur from stabilizing 13 contributing buildings and removal of selected noncontributing buildings. Potential long-term minor adverse impacts would occur to the district as a consequence of not relocating three structures to their original site locations and carrying out only limited protective vegetation clearing. However, these adverse impacts would not diminish the overall character-defining features and significance of the district, including features of the cultural landscape. Overall cumulative impacts would be long term and beneficial. This alternative would contribute a small component of adverse impacts to the minor to moderate beneficial and adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Alternative A

Analysis. Under alternative A, the National Park Service would stabilize 13 of the former residential buildings contributing to the significance of the Cape Lookout Village Historic District. (As stated previously, four of these buildings have been stabilized because of emergency conditions.) The Park Service would undertake measures to preserve the existing form, features, and architectural detailing of these buildings in accordance with historic structure reports and the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. With particular regard to the standards and guidelines for preservation, stabilization measures would include structural reinforcement, weatherization, and actions required to correct unsafe conditions. Also in keeping with the historic structure reports and the *Secretary's Standards,* more extensive rehabilitation measures would be undertaken for three buildings to bring them into compliance with the residential occupancy requirements for NPS staff and volunteers. Three buildings would be renovated for interpretation purposes. Two noncontributing buildings, the Setzer-Dawsey House and Fishing Cottage No. 1, would be demolished and removed to enhance the setting of the historic district. Other noncontributing outbuildings would also be removed. The above actions would result in long-term beneficial impacts on the contributing buildings and structures of the Cape Lookout Village Historic District.

Three buildings (the 1907 Lighthouse Keeper's Quarters, the 1887 Life-Saving Station, and the 1924 Life-Saving Station Boat House) would remain at their current locations near the central village portion of the historic district and would not be relocated to their original building sites at the lighthouse station and U.S. Coast Guard areas.

Consequently, the spatial arrangement of contributing buildings would not accurately reflect the arrangement that existed during the period of historical significance. Continuation of these current conditions would result in long-term minor adverse impacts on the setting of the historic district. Vegetation thinning would be undertaken in approved areas to reduce the threat of fire near buildings selected for occupancy and enhance views and the visual orientation and connection that historically existed among the buildings and structures. The overall integrity of the district would remain largely intact, and the qualities contributing to the district's national register significance would not be diminished.

Installation of the three septic systems and underground utilities would negligibly impact the cultural landscape, including the scale and visual relationships among landscape features. Any aboveground appurtenances associated with the septic systems (e.g., air vents or manhole covers) would be painted a flat, non-reflective color. Selective plantings of native vegetation as visual screening would further permit such appurtenances to blend into the landscape. After underground utility lines are installed, the trenches would be backfilled and the disturbed ground returned to its pre-construction contour and condition. The topography, vegetation, circulation features, and land use patterns would remain unaltered by such actions.

Construction activities associated with implementing alternative A would introduce short-term visual and atmospheric intrusions into the setting of the historic district, which could affect views, vistas, and the quality of the visitor experience. However, such intrusions would be localized and last only as long as construction.

Cumulative Impacts. The structures and buildings within the historic district are particularly vulnerable to natural weathering and the severe climatic conditions associated with the Outer Banks, although they are protected to a limited degree from winds and storm surges by the dune system that parallels the shoreline along the Atlantic side of Cape Lookout. Although the overall form of the buildings remains relatively intact, natural weathering and deterioration threatens the long-term integrity of many of the buildings, a situation accentuated in recent years by a lack of regular maintenance. Instances of collapsed roofs and other structural problems require stabilization. Structural deterioration resulting from these factors has resulted in long-term minor to moderate adverse effects on the historic district's contributing properties.

Several actions, while not included in this reuse plan, could contribute cumulative beneficial impacts to historic properties within the historic district. Ongoing rehabilitation of the lighthouse would continue, with the objective of opening the structure to the public for interpretive purposes on a daily basis (public access is limited to selected open house dates under a reservation system). Shoreline stabilization and beach renourishment measures that will control erosion that formerly threatened the stability of the lighthouse and nearby structures have been completed. Recent visitor use improvements in the lighthouse area will also enhance visitor orientation, appreciation, and protection of the historic district. Additionally, the treatment recommendations presented in the "Draft Cultural Landscape Report" for the historic district will enhance and preserve the district's historic setting and built environment. Implementing the above actions would have long-term beneficial impacts on the historic buildings, structures, and cultural landscape features contributing to the historic district.

Implementing alternative A would result in possible long-term minor adverse impacts on the historic district as a result of not relocating three historic buildings to their original locations. However, all stabilization and rehabilitation measures currently underway or

planned for the district's contributing buildings would be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, and are therefore expected to result in overall long-term beneficial impacts on historic buildings, structures, and cultural landscape features. Consequently, the impacts of the other actions described above, in combination with the impacts of alternative A, would result in overall long-term beneficial cumulative impacts. Alternative A would contribute a comparatively small component of adverse impacts to the long-term minor to moderate beneficial and adverse cumulative impacts of other past, present, and reasonably foreseeable actions in the historic district.

Conclusion. Although minor adverse impacts to the setting of the historic district would occur as a result of not relocating three buildings to their original locations, the overall impacts to the district under alternative A would be long term and beneficial. The character-defining features and qualities contributing to the district's significance would be enhanced. Proposed stabilization and rehabilitation measures would help ensure the long-term preservation of the district's contributing properties, and selective vegetation removal would improve historic views. Overall cumulative impacts would be long term and beneficial. This alternative would contribute a small component of adverse impacts to the minor to moderate beneficial and adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementation of alternative A would result in no adverse effect on buildings, structures, and cultural landscape features contributing to the significance of the Cape Lookout Village Historic District.

Alternative B

Analysis. Under alternative B, the National Park Service would stabilize 13 of the former residential buildings contributing to the significance of the Cape Lookout Village Historic District. (As stated previously, four of these buildings have been stabilized because of emergency conditions.) The Park Service would undertake measures to preserve the existing form, features, and architectural detailing of these buildings in accordance with historic structure reports and the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. With particular regard to the standards and guidelines for preservation, stabilization measures would include structural reinforcement, weatherization, and actions required to correct unsafe conditions. Also in keeping with the historic structure reports and the *Secretary's Standards,* more extensive rehabilitation measures would be undertaken for four buildings to bring them into compliance with the residential occupancy requirements for NPS staff and volunteers. Seven buildings would be renovated for interpretation to the public. Two noncontributing buildings, the Setzer-Dawsey House and Fishing Cottage No. 1, would be demolished and removed to enhance the setting of the historic district. Other noncontributing outbuildings would also be removed. The above actions would result in long-term beneficial impacts on the contributing buildings and structures of the Cape Lookout Village Historic District.

In addition, three buildings (the 1907 Lighthouse Keeper's Quarters, the 1887 Life-Saving Station, and the 1924 Life-Saving Station Boat House) would be relocated from the central village portion of the historic district to their original building sites at the lighthouse station and U.S. Coast Guard areas. Relocation of these buildings (contingent on the outcome of environmental and structural feasibility studies) would enhance the spatial arrangement of contributing properties to more accurately reflect the historical context and clustered configuration that existed during the district's period of significance. Vegetation thinning would be undertaken in approved areas to reduce the threat of fire near buildings selected for occupancy and to enhance views and the visual orientation and connection that historically existed among the buildings and structures. These undertakings would result in long-term beneficial impacts on the setting of the historic district and contributing features of the cultural landscape. The overall integrity of the district would be enhanced, and the qualities contributing to the district's national register significance would not be diminished.

Sensitive design would ensure that the construction of the central wastewater treatment system would minimally affect the scale and visual relationships among landscape features, as well as contributing circulation features and land use patterns. Although a specific location for the system is not yet identified, it would be sited and designed to avoid or minimize long-term adverse visual intrusions on the district. This could be accomplished by incorporating a low-profile structural design that would be a contemporary but compatible addition to the historic district — similar in massing and scale yet distinctive in building type and finish.

Construction activities associated with implementing alternative B would introduce short-term visual and atmospheric intrusions into the setting of the historic district, which could affect views, vistas, and the quality of the visitor experience. However, such intrusions would be localized and last only as long as construction.

Cumulative Impacts. The structures and buildings within the historic district are particularly vulnerable to natural weathering and the severe climatic conditions associated with the Outer Banks, although they are protected to a limited degree from winds and storm surges by the dune system that parallels the shoreline along the Atlantic side of Cape Lookout. Although the overall form of the buildings remains relatively intact, natural weathering and deterioration threatens the long-term integrity of many of the buildings, a situation accentuated in recent years by a lack of regular maintenance. Instances of collapsed roofs and other structural problems require stabilization. Structural deterioration resulting from these factors has resulted in long-term minor to moderate adverse effects on the historic district's contributing properties.

Several actions, while not included in this reuse plan, could contribute cumulative beneficial impacts on historic properties in the historic district. Ongoing rehabilitation of the lighthouse would continue, with the objective of opening the structure to the public for interpretive purposes on a daily basis (public access is limited to selected open house dates under a reservation system). Shoreline stabilization and beach renourishment measures that will control erosion that formerly threatened the stability of the lighthouse and nearby structures have been completed. Recent visitor use improvements in the lighthouse area will also enhance visitor orientation, appreciation and protection of the historic district. Additionally, the treatment recommendations in the "Draft Cultural Landscape Report" for the historic district would enhance and preserve the district's historic setting and built environment. Implementing the above actions would have long-term beneficial impacts on the historic buildings, structures, and cultural landscape features contributing to the historic district.

The impacts associated with implementing alternative B would result in long-term beneficial impacts on the historic district as a result of relocating three government buildings to their original sites, selective vegetation clearing to improve views, and the stabilization and rehabilitation of contributing buildings. Consequently, the impacts of the other actions described above, in combination with the impacts of alternative B, would result in overall long-term beneficial cumulative impacts. Alternative B would contribute a comparatively large component of beneficial impacts to the long-term minor to moderate beneficial and adverse cumulative impacts of other past, present, and reasonably foreseeable actions in the historic district.

Conclusion. The overall impacts to the historic district under alternative B would be long term and beneficial. The character-defining features and qualities contributing to the district's significance would be enhanced. Proposed stabilization, rehabilitation, and relocation of selected structures would help ensure the long-term preservation and spatial orientation of the district's contributing properties. Selective vegetation removal would improve historic views. Overall cumulative impacts would be long term and beneficial. This alternative would contribute a large component of beneficial impacts to the minor to moderate beneficial and adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementing alternative B would result in no adverse effect on buildings, structures, and cultural landscape features contributing to the significance of the Cape Lookout Village Historic District.

Alternative C

Analysis. Under alternative C, the National Park Service would stabilize 13 of the former residential buildings contributing to the significance of the Cape Lookout Village Historic District. (As stated previously, four of these buildings have been stabilized because of emergency conditions.) The Park Service would undertake measures to preserve the existing form, features, and architectural detailing of these buildings in accordance with historic structure reports and the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. With particular regard to the standards and guidelines for preservation, stabilization measures would include structural reinforcement, weatherization, and actions required to correct unsafe conditions. Also in keeping with the historic structure reports and the *Secretary's Standards,* more extensive rehabilitation measures would be undertaken for four buildings intended for NPS staff and volunteer use and three buildings for use by private leaseholders to bring the buildings into compliance with residential occupancy requirements. Eight buildings would be renovated for interpretation to the public. Two noncontributing buildings, the Setzer-Dawsey House and Fishing Cottage No. 1, would be demolished and removed to enhance the setting of the historic district. Other noncontributing outbuildings would also be removed. The above actions would result in long-term beneficial impacts on the contributing

buildings and structures of the Cape Lookout Village Historic District.

In addition, three buildings (the 1907 Lighthouse Keeper's Quarters, the 1887 Life-Saving Station, and the 1924 Life-Saving Station Boat House) would be relocated from the central village portion of the historic district to their original building sites at the lighthouse station and U.S. Coast Guard areas. Relocation of these buildings (contingent on the outcome of environmental and structural feasibility studies) would enhance the spatial arrangement of contributing properties to more accurately reflect the historical context and clustered configuration that existed during the district's period of significance. Vegetation thinning would be undertaken in approved areas to reduce the threat of fire near buildings selected for occupancy and enhance views and the visual orientation and connection that historically existed among the buildings and structures. These undertakings would result in long-term beneficial impacts on the setting of the historic district and contributing features of the cultural landscape. The overall integrity of the district would be enhanced, and the qualities contributing to the district's national register significance would not be diminished.

Sensitive design would ensure that the construction of the central wastewater treatment system would minimally affect the scale and visual relationships among landscape features, as well as contributing circulation features and land use patterns. Although a specific location for the system is not yet identified, it would be sited and designed to avoid or minimize long-term adverse visual intrusions on the district. This could be accomplished by incorporating a low-profile structural design that would be a contemporary but compatible addition to the historic district — similar in massing and scale yet distinctive in building type and finish.

Construction activities associated with implementing alternative C would introduce short-term visual and atmospheric intrusions into the setting of the historic district, which could affect views, vistas, and the quality of the visitor experience during the period of construction. However, such intrusions would be localized and last only as long as construction.

Cumulative Impacts. The structures and buildings within the historic district are particularly vulnerable to natural weathering and the severe climatic conditions associated with the Outer Banks, although they are protected to a limited degree from winds and storm surges by the dune system that parallels the shoreline along the Atlantic side of Cape Lookout. Although the overall form of the buildings remains relatively intact, natural weathering and deterioration threatens the long-term integrity of many of the buildings, a situation accentuated in recent years by a lack of regular maintenance. Instances of collapsed roofs and other structural problems require stabilization. Structural deterioration resulting from these factors has resulted in long-term minor to moderate adverse effects on the historic district's contributing properties.

Several actions, while not included in this reuse plan, could contribute cumulative beneficial impacts to historic properties within the historic district. Among these, ongoing rehabilitation of the lighthouse would continue, with the objective of opening the structure to the public for interpretive purposes on a daily basis (public access is presently limited to selected open house dates under a reservation system). Shoreline stabilization and beach renourishment measures that will control erosion that formerly threatened the stability of the lighthouse and nearby structures have been completed. Recent visitor use improvements in the lighthouse area would also serve to enhance visitor orientation, appreciation, and protection of the historic district. Also, the treatment recommendations presented in the "Draft Cultural Landscape Report" for the historic district would enhance and preserve

the district's historic setting and built environment. Implementing the above actions would have long-term beneficial impacts on the historic buildings, structures, and cultural landscape features contributing to the historic district.

The impacts associated with implementing alternative C would result in long-term beneficial impacts on the historic district as a result of relocation of three government buildings to their original sites, selective vegetation clearing to improve views, and the stabilization and rehabilitation of contributing buildings. Consequently, the impacts of the other actions described above, in combination with the impacts of alternative C, would result in overall long-term beneficial cumulative impacts. Alternative C would contribute a comparatively large component of beneficial impacts to the long-term minor to moderate beneficial and adverse cumulative impacts of other past, present, and reasonably foreseeable actions in the historic district.

Conclusion. The overall impacts to the historic district under alternative C would be long-term and beneficial as a result of the proposed preservation undertakings. The character-defining features and qualities contributing to the district's significance would be enhanced. Proposed stabilization, rehabilitation, and relocation of selected structures would help ensure the long-term preservation and spatial orientation of the district's contributing properties. Selective vegetation removal would improve historic viewsheds. Overall cumulative impacts would be long term and beneficial. This alternative would contribute a large component of beneficial impacts to the minor to moderate beneficial and adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementation of alternative C would result in no adverse effect on buildings, structures, and cultural landscape features contributing to the significance of the Cape Lookout Village Historic District.

Alternative D

Analysis. Under alternative D, the National Park Service would stabilize 13 of the former residential buildings contributing to the significance of the Cape Lookout Village Historic District. (As stated previously, four of these buildings have been stabilized because of emergency conditions.) The Park Service would undertake measures to preserve the existing form, features, and architectural detailing of these buildings in accordance with historic structure reports and the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. With particular regard to the standards and guidelines for preservation, stabilization measures would include structural reinforcement, weatherization, and actions required to correct unsafe conditions. Also in keeping with the historic structure reports and the *Secretary's Standards,* more extensive rehabilitation measures would be undertaken for up to four buildings intended for NPS staff and volunteer use and a minimum of eight buildings for use by a concessions operator to bring the buildings into compliance with residential occupancy requirements. Eight buildings would be renovated for interpretation to the public. Two noncontributing buildings, the Setzer-

Dawsey House and Fishing Cottage No. 1, would be demolished and removed to enhance the setting of the historic district. Other noncontributing outbuildings would also be removed. The above actions would result in long-term beneficial impacts on the contributing buildings and structures of the Cape Lookout Village Historic District.

In addition, three buildings (the 1907 Lighthouse Keeper's Quarters, the 1887 Life-Saving Station, and the 1924 Life-Saving Station Boat House) would be relocated from the central village portion of the historic district to their original building sites at the lighthouse station and U.S. Coast Guard areas. Relocation of these buildings (contingent on the outcome of environmental and structural feasibility studies) would enhance the spatial arrangement of contributing properties to more accurately reflect the historical context and clustered configuration that existed during the district's period of significance. Vegetation thinning would be undertaken in approved areas to reduce the threat of fire near buildings selected for occupancy and enhance views and the visual orientation and connection that historically existed among the buildings and structures. These undertakings would result in long-term beneficial impacts on the setting of the historic district and contributing features of the cultural landscape. The overall integrity of the district would be enhanced, and the qualities contributing to the district's national register significance would not be diminished.

Sensitive design would ensure that the construction of the central wastewater treatment system would minimally affect the scale and visual relationships among landscape features, as well as contributing circulation features and land use patterns. Although a specific location for the system is not yet identified, it would be sited and designed to avoid or minimize long-term adverse visual intrusions on the district. This could be accomplished by incorporating a low-profile structural design that would be a contemporary but compatible addition to the historic district — similar in massing and scale yet distinctive in building type and finish.

Construction activities associated with implementing alternative D would introduce short-term visual and atmospheric intrusions into the setting of the historic district, which could affect views, vistas, and the quality of the visitor experience. However, such intrusions would be localized and last only as long as construction.

Cumulative Impacts. The structures and buildings within the historic district are particularly vulnerable to natural weathering and the severe climatic conditions associated with the Outer Banks, although they are protected to a limited degree from winds and storm surges by the dune system that parallels the shoreline along the Atlantic side of Cape Lookout. Although the overall form of the buildings remains relatively intact, natural weathering and deterioration threatens the long-term integrity of many of the buildings, a situation accentuated in recent years by a lack of regular maintenance. Instances of collapsed roofs and other structural problems require stabilization. Structural deterioration resulting from these factors has resulted in long-term minor to moderate adverse effects on the historic district's contributing properties.

Several actions, while not included in this reuse plan, could contribute cumulative beneficial impacts to historic properties within the historic district. Ongoing rehabilitation of the lighthouse would continue, with the objective of opening the structure to the public for interpretive purposes on a daily basis (public access is presently limited to selected open house dates under a reservation system). Shoreline stabilization and beach renourishment measures that will control erosion that formerly threatened the stability of the lighthouse and nearby structures have been completed. Recent visitor use improvements in the lighthouse area would also enhance visitor orientation, appreciation, and

protection of the historic district. Also, the treatment recommendations presented in the "Draft Cultural Landscape Report" for the historic district would further enhance and preserve the district's historic setting and built environment. Implementing the above actions would have long-term beneficial impacts on the historic buildings, structures, and cultural landscape features contributing to the historic district.

The impacts associated with implementation of alternative D would result in long-term beneficial impacts to the historic district as a result of relocating three government buildings to their original sites, selective vegetation clearing to improve views, and the stabilization and rehabilitation of contributing buildings. Consequently, the impacts of the other actions described above, in combination with the impacts of alternative D, would result in overall long-term beneficial cumulative impacts. Alternative D would contribute a comparatively large component of beneficial impacts to the long-term minor to moderate beneficial and adverse cumulative impacts of other past, present, and reasonably foreseeable actions in the historic district.

Conclusion. The overall impacts on the historic district under alternative D would be long term and beneficial as a result of the proposed preservation undertakings. The character-defining features and qualities contributing to the district's significance would be enhanced. Proposed stabilization, rehabilitation, and relocation of selected structures would help ensure the long-term preservation and spatial orientation of the district's contributing properties. Selective vegetation removal would improve historic views. Overall cumulative impacts would be long term and beneficial. This alternative would contribute a large component of beneficial impacts to the minor to moderate beneficial and adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementation of alternative D would result in no adverse effect on buildings, structures, and cultural landscape features contributing to the significance of the Cape Lookout Village Historic District.

Alternative E

Analysis. Under alternative E, the National Park Service would stabilize 13 of the former residential buildings contributing to the significance of the Cape Lookout Village Historic District. (As stated previously, four of these buildings have been stabilized because of emergency conditions.) The Park Service would undertake measures to preserve the existing form, features, and architectural detailing of these buildings in accordance with historic structure reports and the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. With particular regard to the standards and guidelines for preservation, stabilization measures would include structural reinforcement, weatherization, and actions required to correct unsafe conditions. Also in keeping with the historic structure reports and the *Secretary's Standards,* more extensive rehabilitation measures would be undertaken for up to four buildings intended for NPS staff and volunteer use and a minimum of eight buildings for use by a concessions operator or private leaseholders to bring

the buildings into compliance with residential occupancy requirements. Eight buildings would be renovated for interpretation to the public. Two noncontributing buildings, the Setzer-Dawsey House and Fishing Cottage No. 1, would be demolished and removed to enhance the setting of the historic district. Other noncontributing outbuildings would also be removed. The above actions would result in long-term beneficial impacts on the contributing buildings and structures of the Cape Lookout Village Historic District.

In addition, three buildings (the 1907 Lighthouse Keeper's Quarters, the 1887 Life-Saving Station, and the 1924 Life-Saving Station Boat House) would be relocated from the central village portion of the historic district to their original building sites at the lighthouse station and U.S. Coast Guard areas. Relocation of these buildings (contingent on the outcome of environmental and structural feasibility studies) would enhance the spatial arrangement of contributing properties to more accurately reflect the historical context and clustered configuration that existed during the district's period of significance. Vegetation thinning would be undertaken in approved areas to reduce the threat of fire near buildings selected for occupancy and enhance views and the visual orientation and connection that historically existed among the buildings and structures. These undertakings would result in long-term beneficial impacts on the setting of the historic district and contributing features of the cultural landscape. The overall integrity of the district would be enhanced, and the qualities contributing to the district's national register significance would not be diminished.

Sensitive design would ensure that the construction of the central wastewater treatment system would minimally affect the scale and visual relationships among landscape features, as well as contributing circulation features and land use patterns. Although a specific location for the system is not yet identified, it would be sited and designed to avoid or minimize long-term adverse visual intrusions on the district. This could be accomplished by incorporating a low-profile structural design that would be a contemporary but compatible addition to the historic district — similar in massing and scale yet distinctive in building type and finish.

Construction activities associated with implementing alternative E would introduce short-term visual and atmospheric intrusions into the setting of the historic district, which could affect views, vistas, and the quality of the visitor experience during the period of construction. However, such intrusions would be localized and last only as long as construction.

Cumulative Impacts. The structures and buildings within the historic district are particularly vulnerable to natural weathering and the severe climatic conditions associated with the Outer Banks, although they are protected to a limited degree from winds and storm surges by the dune system that parallels the shoreline along the Atlantic side of Cape Lookout. Although the overall form of the buildings remains relatively intact, natural weathering and deterioration threatens the long-term integrity of many of the buildings, a situation accentuated in recent years by a lack of regular maintenance. Instances of collapsed roofs and other structural problems require stabilization. Structural deterioration resulting from these factors has resulted in long-term minor to moderate adverse effects on the historic district's contributing properties.

Several actions, while not included in this reuse plan, could contribute cumulative beneficial impacts to historic properties within the historic district. Ongoing rehabilitation of the lighthouse would continue, with the objective of opening the structure to the public for interpretive purposes on a daily basis (public access is presently limited to selected open house dates under a reservation system). Shoreline stabilization and beach renourishment measures that will control

erosion that formerly threatened the stability of the lighthouse and nearby structures have been completed. Recent visitor use improvements in the lighthouse area would also enhance visitor orientation, appreciation, and protection of the historic district. Also, the treatment recommendations presented in the "Draft Cultural Landscape Report" for the historic district would further enhance and preserve the district's historic setting and built environment. Implementation of the above actions would have long-term beneficial impacts on the historic buildings, structures, and cultural landscape features contributing to the historic district.

The impacts associated with implementing alternative E would result in long-term minor to moderate beneficial impacts to the historic district as a result of relocating three government buildings to their original sites, selective vegetation clearing to improve views, and the stabilization and rehabilitation of contributing buildings. Consequently, the impacts of the other actions described above, in combination with the impacts of alternative E, would result in overall long-term beneficial cumulative impacts. Alternative E would contribute a comparatively large component of beneficial impacts to the long-term minor to moderate beneficial and adverse cumulative impacts of other past, present, and reasonably foreseeable actions in the historic district.

Conclusion. The overall impacts to the historic district under alternative E would be long-term and beneficial as a result of the proposed preservation undertakings. The character-defining features and qualities contributing to the district's significance would be enhanced. Proposed stabilization, rehabilitation, and relocation of selected structures would help ensure the long-term preservation and spatial orientation of the district's contributing properties. Selective vegetation removal would improve historic views. Overall cumulative impacts would be long term and beneficial. This alternative would contribute a large component of beneficial impacts to the minor to moderate beneficial and adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementation of Alternative E would result in no adverse effect on buildings, structures, and cultural landscape features contributing to the significance of the Cape Lookout Village Historic District.

ARCHEOLOGICAL RESOURCES

Definitions of Intensity Levels

Negligible: Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for Section106 would be *no adverse effect*.

Minor: Adverse impact — disturbance of a site(s) results in little, if any, loss of integrity. The determination of effect for Section 106 would be *no adverse effect*.

Moderate: Adverse impact — disturbance of a site(s) results in loss of integrity. The determination of effect for Section 106 would be *adverse effect*. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council

on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the memorandum of agreement to minimize or mitigate adverse impacts reduce the intensity of impact under the National Environmental Policy Act from major to moderate.

Major: Adverse impact — disturbance of a site(s) results in loss of integrity. The determination of effect for Section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).

No-Action Alternative

Analysis. Although no national register listed or eligible archeological resources have been identified in the project area, ground disturbance associated with project-related undertakings could impact unknown archeological resources associated with both prehistoric and historic period occupation. Archeological resources associated with the historic settlement of Cape Lookout Village may have the greatest probability for occurrence in the project area, although such resources have likely been disturbed by construction activities and the dynamic nature of the barrier islands.

As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activity (e.g., installation of electrical lines, construction of septic system(s), and vegetation clearing). In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity.

If during construction previously undiscovered archeological resources were uncovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources associated with inadvertent discoveries would be long term or permanent and minor to moderate in intensity.

Cumulative Impacts. Archeological resources in the barrier islands are particularly prone to disturbance due to the dynamic natural processes of shifting landforms and the continual reconfiguration of sand and soil strata. Although artifacts are occasionally identified, it is rare for archeological sites to have retained sufficient stratigraphy and integrity under these environmental conditions to meet the criteria of national register eligibility. Subsequent ground-disturbing development activities and operations of the national seashore have likely further contributed to the inadvertent disturbance of archeological resources. The potential minor to moderate adverse impacts associated with project undertakings would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts of other past, present, and reasonably foreseeable actions affecting archeological resources.

Conclusion. As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activities. In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to

moderate in intensity. The no-action alternative would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Alternative A

Analysis. Although no national register-listed or eligible archeological resources have been identified in the project area, ground disturbance associated with project-related undertakings could impact unknown archeological resources associated with both prehistoric and historic period occupation. Archeological resources associated with the historic settlement of Cape Lookout Village may have the greatest probability for occurrence in the project area, although such resources have likely been disturbed by subsequent construction activities and the dynamic nature of the barrier islands.

As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activity (e.g., installation of water and electrical lines, construction of septic system(s), and vegetation clearing). In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity.

If during construction previously undiscovered archeological resources were uncovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources associated with inadvertent discoveries would be long term or permanent and minor to moderate in intensity.

Cumulative Impacts. Archeological resources in the barrier islands are particularly prone to disturbance due to the dynamic natural processes of shifting landforms and the continual reconfiguration of sand and soil strata. Although artifacts are occasionally identified, it is rare for archeological sites to have retained sufficient stratigraphy and integrity under these environmental conditions to meet the criteria of national register eligibility. Subsequent ground-disturbing development activities and operations of the national seashore have likely further contributed to the inadvertent disturbance of archeological resources. The potential minor to moderate adverse impacts associated with project undertakings would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts of other past, present, and reasonably foreseeable actions affecting archeological resources.

Conclusion. As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activities. In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity. Alternative A would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementation of alternative A would result in no adverse effect on archeological resources.

Alternative B

Analysis. Although no national register-listed or eligible archeological resources have been identified in the project area, ground disturbance associated with project-related undertakings have the potential to impact yet unknown archeological resources associated with both prehistoric and historic period occupation. Archeological resources associated with the historic settlement of Cape Lookout Village may have the greatest probability for occurrence in the project area, although such resources have likely been disturbed by subsequent construction activities and the dynamic nature of the barrier islands.

As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activity (e.g., installation of water and electrical lines, construction of a central wastewater treatment system, and vegetation clearing). In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity.

Before the relocation of contributing national register-listed structures to their original site locations, a survey for archeological resources in the general vicinity of the relocation sites would be conducted. The excavation, recordation, and mapping of any significant cultural remains (if present) would be completed before relocation to ensure that important archeological data that would be lost is recovered and documented. Any impacts on archeological resources would be adverse, minor to moderate in intensity, and permanent.

If during construction previously undiscovered archeological resources were uncovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources associated with inadvertent discoveries would be long term or permanent and minor to moderate in intensity.

Cumulative Impacts. Archeological resources in the barrier islands are particularly prone to disturbance due to the dynamic natural processes of shifting landforms and the continual reconfiguration of sand and soil strata. Although artifacts are occasionally identified, it is rare for archeological sites to have retained sufficient stratigraphy and integrity under these environmental conditions to meet the criteria of national register eligibility. Subsequent ground-disturbing development activities and operations of the national seashore have likely further contributed to the inadvertent disturbance of archeological resources. The potential minor to moderate adverse impacts associated with project undertakings would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative

impacts of other past, present, and reasonably foreseeable actions affecting archeological resources.

Conclusion. As appropriate, archeological surveys and/or monitoring would precede any ground disturbing activities. In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity. Alternative B would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementing alternative B would result in no adverse effect on archeological resources.

Alternative C

Analysis. Although no national register-listed or eligible archeological resources have been identified in the project area, ground disturbance associated with project-related undertakings could impact unknown archeological resources associated with both prehistoric and historic period occupation. Archeological resources associated with the historic settlement of Cape Lookout Village may have the greatest probability for occurrence in the project area, although such resources have likely been disturbed by subsequent construction activities and the dynamic nature of the barrier islands.

As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activity (e.g., installation of water and electrical lines, construction of a central wastewater treatment system, and vegetation clearing). In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity.

Before the relocation of contributing national register-listed structures to their original site locations, a survey for archeological resources in the general vicinity of the relocation sites would be conducted. The excavation, recordation, and mapping of any significant cultural remains (if present) would be completed before relocation to ensure that important archeological data that would be lost is recovered and documented. Any impacts on archeological resources would be adverse, minor to moderate in intensity, and permanent.

If during construction previously undiscovered archeological resources were uncovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources associated with inadvertent discoveries would be long term or permanent and minor to moderate in intensity.

Cumulative Impacts. Archeological resources in the barrier islands are particularly prone to disturbance due to the dynamic natural processes of shifting landforms and the continual reconfiguration of sand and soil strata. Although artifacts are occasionally identified, it is rare for archeological sites to have retained sufficient stratigraphy and integrity under these environmental conditions to meet the criteria of national register eligibility. Subsequent ground-disturbing development activities and operations of the national seashore have likely further contributed to the inadvertent disturbance of archeological resources. The potential minor to moderate adverse impacts associated with project undertakings would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts of other past, present, and reasonably foreseeable actions affecting archeological resources.

Conclusion. As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activities. In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity. Alternative C would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementation alternative C would result in no adverse effect on archeological resources.

Alternative D

Analysis. Although no national register-listed or eligible archeological resources have been identified in the project area, ground disturbance associated with project-related undertakings could impact unknown archeological resources associated with both prehistoric and historic period occupation. Archeological resources associated with the historic settlement of Cape Lookout Village may have the greatest probability for occurrence in the project area, although such resources have likely been disturbed by subsequent construction activities and the dynamic nature of the barrier islands.

As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activity (e.g., installation of water and electrical lines, construction of a central wastewater treatment system, and vegetation clearing). In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity.

Before the relocation of contributing national register-listed structures to their original site locations, a survey for archeological resources in the general vicinity of the relocation sites would be conducted. The excavation, recordation, and mapping of any significant

cultural remains (if present) would be completed before relocation to ensure that important archeological data that would be lost is recovered and documented. Any impacts on archeological resources would be adverse, minor to moderate in intensity, and permanent.

If during construction previously undiscovered archeological resources were uncovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources associated with inadvertent discoveries would be long term or permanent and minor to moderate in intensity.

Cumulative Impacts. Archeological resources in the barrier islands are particularly prone to disturbance due to the dynamic natural processes of shifting landforms and the continual reconfiguration of sand and soil strata. Although artifacts are occasionally identified, it is rare for archeological sites to have retained sufficient stratigraphy and integrity under these environmental conditions to meet the criteria of national register eligibility. Subsequent ground-disturbing development activities and operations of the national seashore have likely further contributed to the inadvertent disturbance of archeological resources. The potential minor to moderate adverse impacts associated with project undertakings would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts of other past, present, and reasonably foreseeable actions affecting archeological resources.

Conclusion. As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activities. In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity. Alternative D would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementing alternative D would result in no adverse effect on archeological resources.

Alternative E

Analysis. Although no national register-listed or eligible archeological resources have been identified in the project area, ground disturbance associated with project-related undertakings could impact unknown archeological resources associated with both prehistoric and historic period occupation. Archeological resources associated with the historic settlement of Cape Lookout Village may have the greatest probability for occurrence in the project area, although such resources have likely been disturbed by subsequent construction activities and the dynamic nature of the barrier islands.

As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activity (e.g., installation of water and electrical lines, construction of a central wastewater treatment system, and vegetation clearing). In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity.

Before the relocation of contributing national register-listed structures to their original site locations, a survey for archeological resources in the general vicinity of the relocation sites would be conducted. The excavation, recordation, and mapping of any significant cultural remains (if present) would be completed before relocation to ensure that important archeological data that would be lost is recovered and documented. Any impacts on archeological resources would be adverse, minor to moderate in intensity, and permanent.

If during construction previously undiscovered archeological resources were uncovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources associated with inadvertent discoveries would be long term or permanent and minor to moderate in intensity.

Cumulative Impacts. Archeological resources in the barrier islands are particularly prone to disturbance due to the dynamic natural processes of shifting landforms and the continual reconfiguration of sand and soil strata. Although artifacts are occasionally identified, it is rare for archeological sites to have retained sufficient stratigraphy and integrity under these environmental conditions to meet the criteria of national register eligibility. Subsequent ground-disturbing development activities and operations of the national seashore have likely further contributed to the inadvertent disturbance of archeological resources. The potential minor to moderate adverse impacts associated with project undertakings would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts of other past, present, and reasonably foreseeable actions affecting archeological resources.

Conclusion. As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activities. In the unlikely event that national register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer. Any adverse impacts on archeological resources would be long term or permanent and minor to moderate in intensity. Alternative E would contribute a small component of adverse impacts to the overall minor to moderate adverse cumulative impacts.

Because there would be no adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Cape Lookout National Seashore, (2) key to the natural or cultural integrity of the national seashore or to opportunities for enjoyment of the national seashore, or (3) identified as a goal in the national seashore's *General Management Plan* or other relevant NPS planning documents, there would be no impairment of the national seashore's resources or values.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementing alternative E would result in no adverse effect on archeological resources.

NATURAL RESOURCES

VEGETATION

Definitions of Intensity Levels

Impacts were assessed qualitatively. Site-specific information on the historic district was gathered from general documents such as the national seashore's *Resource Management Plan*, and the "Draft Cultural Landscape Report."

Negligible: The impact on vegetation (individuals and/or communities) would not be measurable. The abundance or distribution of individuals would not be affected or would be slightly affected. Ecological processes and biological productivity would not be affected.

Minor: An action would not necessarily decrease or increase the area's overall biological productivity. An action would affect the abundance or distribution of individuals in a localized area but would not affect the viability of local or regional populations or communities.

Moderate: An action would result in a change in overall biological productivity in a small area. An action would affect a local population sufficiently to cause a change in abundance or distribution, but it would not affect the viability of the regional population or communities. Changes to ecological processes would be of limited extent.

Major: An action would result in overall biological productivity in a relatively large area. An action would affect a regional or local population of a species sufficiently to cause a change in abundance or in distribution to the extent that the population or communities would not be likely to return to its/their former level. Important ecological processes would be altered.

No-Action Alternative

Analysis. Under the no-action alternative, some vegetation would be removed from the historic district particularly around the village structures. Selected trees and shrubs would be removed to create defensible space around the structures and reduce the potential for damage from fire or storms. Best management practices would be employed during the removal process to limit soil disturbance. Creating defensible space would affect the distribution of some species within the district, but would be unlikely to adversely impact ecological processes or biological productivity. The short-term adverse impact on vegetation in the district resulting from the creation of defensible space around the historic structures would be negligible. The complete removal of vegetation near the structures might not be required in all cases, but could be limited to thinning and removal of hazard tree limbs and other aged, diseased, or invasive vegetation. These activities would have a long-term beneficial impact on the health of the remaining vegetation. Long-term negligible adverse impacts on vegetation would result in those instances requiring complete vegetation removal for defensible space.

Electrical service would be provided to all the structures for emergency and operational purposes, and two septic systems would also be installed within the district. It is unlikely that any vegetation would be disturbed during installation of the septic systems so both the short and long-term adverse impacts associated with installation of the systems would be negligible. During installation of the electrical system, some vegetation disturbance could be required. However, the extent of disturbance would be localized, and short-term adverse impacts would be negligible. Because the electrical lines would be buried, the long-term adverse impacts on vegetation from

maintenance activities would also be negligible.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact vegetation on South Core Banks.

Conclusion. Implementation of the no-action alternative would have some adverse impacts on vegetation in the historic district. Short-term negligible adverse impacts would result from limited vegetation removal to provide defensible space around the historic structures. However, the long-term impacts of removing and thinning hazard tree limbs and other aged, diseased, or invasive vegetation around the structures would be beneficial for the remaining vegetation, and negligibly adverse for vegetation completely removed. Some vegetation would also be disturbed or removed to install electric lines to each of the structures. The extent of disturbance would be localized, and the long-term adverse impacts of installing the electric lines would be negligible. These impacts would not result in impairment of national seashore resources.

Alternative A

Analysis. Under this alternative there would be greater adverse impacts on vegetation than under the no-action alterative. In common with the no-action alternative, the adverse impacts on vegetation associated with creating defensible space around the historic structures would be short-term and negligible. These activities would have a long-term beneficial impact on the health of the remaining vegetation, and negligible adverse impacts on vegetation completely removed.

Three of the historic structures would be rehabilitated for occupancy and would be provided with potable water. Installation of the water system could require disturbance or removal of some vegetation, although the Park Service would seek to remove the least amount of vegetation practicable during installation. In addition, best management practices would be used to prevent the introduction or spread of invasive species in newly disturbed areas as well as to reduce soil erosion. Although some vegetation would be disturbed or removed, it is unlikely to impact the abundance and distribution of individual species within the village vegetation community. Consequently, ecological processes or biological productivity of vegetation would not likely be adversely impacted. Both the short-term and long-term adverse impacts on vegetation from installation of the water system would be negligible. As with the no-action alternative, it is unlikely that an appreciable amount of vegetation would be disturbed during installation of the septic systems, and therefore installation would result in both short- and long-term negligible adverse impacts. Installation of the electrical system could result in some vegetation disturbance, although the extent of disturbance would similarly be minimal and the short-term adverse impacts associated with installation would be negligible. Because the electrical lines would be buried, the long-term adverse impacts on vegetation from maintenance activities would also be negligible.

Selective vegetation removal would be undertaken in the district to provide a semblance of the more open views that existed during the district's period of significance. Before removing any vegetation, NPS staff would analyze the potential adverse impacts from vegetation removal relative to storm / hurricane impacts such as storm surge, waves, and overwash as well as the impacts on wildlife habitat. Vegetation removal would be carried out in stages to support reestablishment of the historic views while potentially retaining some vegetation to provide shade in the village. During the initial stage, only aged, diseased, and invasive plant species would be removed. If additional work was required to re-create the historic views, NPS staff would consider removing tree limbs and thinning

remaining vegetation before complete removal. Preference would be given to removing foundation plantings and shrubs before shade trees, particularly in the village.

Efforts to restore historic views and the character of the district's setting would adversely impact the abundance and distribution of some species, but would have minimal impact on vegetation across the South Core Banks as a whole. The short-term adverse impacts on vegetation from efforts to restore the historic views would be negligible to minor. The long-term impacts would be both adverse and beneficial. The adverse impacts on abundance and distribution of some species would be negligible and would continue long term. The removal of aged and diseased vegetation material and thinning remaining vegetation would have a beneficial impact on the health of the remaining vegetation, and negligible adverse impacts on vegetation completely removed.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact vegetation in South Core Banks.

Conclusion. Implementation of alternative A would have greater adverse impacts on vegetation in the historic district than the no-action alternative because additional vegetation would be disturbed or removed to install potable water lines to three of the historic structures. Negligible short-term adverse impacts on vegetation would result from removal of some vegetation to provide defensible space around the historic structures and to partially restore the character and views associated with the district's period of significance. However, the long-term impacts of removing aged, diseased and hazard tree limbs and other vegetation materials, thinning remaining vegetation, and removing invasive species, would be beneficial for the remaining vegetation, and negligibly adverse for vegetation completely removed.

Some vegetation would also be disturbed or removed to install electrical lines to each of the structures. The extent of disturbance would be localized, and the long-term adverse impacts of installing the electrical lines would be negligible. Installing septic systems and potable water lines would have long-term negligible adverse impacts on vegetation in the village. Although some vegetation would be disturbed or removed, these systems are unlikely to impact the ecological processes or biological productivity of vegetation in the village. Efforts to restore historic views in the village would have long-term beneficial cumulative impacts on the remaining vegetation because the overall health of the community would be improved and native species would be encouraged in disturbed areas. These impacts would not result in impairment of national seashore resources.

Alternative B

Analysis. The adverse impacts on vegetation in the historic district would be greater under alternative B than alternative A. The greater adverse impacts would result from the installation of a central wastewater treatment system and the relocation of three of the historic structures. All other impacts would remain the same as described under alternative A.

Four of the structures would be rehabilitated for occupancy and would have potable water. The degree of disturbance would be comparable to alternative A and the same mitigation measures would be employed. Centralized wastewater treatment would be installed to treat all wastewater from the village. Development of this infrastructure would require the removal of some vegetation to accommodate the treatment system as well as the disturbance or removal of some vegetation during installation of the water lines. Although some vegetation would be disturbed or removed, it is unlikely to impact the abundance and distribution of individual species within the

village vegetation community. Consequently, the installation of the water system and the centralized wastewater treatment system are unlikely to impact the ecological processes or biological productivity of vegetation in the village. The short- and long-term adverse impacts on vegetation from water system installation would be negligible.

During installation of the electrical system, some vegetation disturbance could be required. However, the extent of disturbance would be no greater (and likely less) than the disturbance associated with creating defensible space around the historic structures. The short-term adverse impacts associated with installation of the electrical system would be negligible. Because the electrical lines would be buried, the long-term adverse impacts on vegetation from maintenance activities would also be negligible.

Under this alternative, three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations. These actions would require removal and disturbance of vegetation within the historic district. To reduce the adverse impacts of these actions, NPS staff would seek to remove the least amount of vegetation practicable during structure relocation. In addition, best management practices would be used to prevent the introduction or spread of invasive species in newly disturbed areas as well as to reduce the potential for soil erosion. Once the structures have been moved, the areas that were formerly occupied would be revegetated with native species. The short-term adverse impacts on vegetation in the historic district would be minor because the impacts would be localized and would not impact the viability of the vegetation community on South Core Banks as a whole. There would be beneficial long-term impacts because of the increase in total coverage of native vegetation in the district. There would be adverse long-term impacts on vegetation on the sites the structures would be relocated to. These impacts would be limited because the relocation sites have been previously disturbed and the vegetation consists primarily of grasses. The impacts would be negligible because the abundance and distribution of individual species, ecological processes, and biological productivity would not be appreciably affected at the site

Selective vegetation removal would be undertaken in the district to provide a semblance of the more open views that existed during the district's period of significance. Before removing any vegetation, NPS staff would analyze the potential adverse impacts from vegetation removal relative to storm / hurricane impacts such as storm surge, waves, and overwash, as well as the impacts on wildlife habitat. Vegetation removal would be carried out in stages to support reestablishment of the historic views while potentially retaining some vegetation to provide shade in the village. During the initial stage, only aged, diseased, and invasive plant species would be removed. If additional work was required to re-create the historic views, NPS staff would consider removing tree limbs and thinning remaining vegetation before complete removal. Preference would be given to removing foundation plantings and shrubs before shade trees, particularly in the village.

Under this alternative, the adverse impacts from restoring the historic views and character of the district's setting would be the same as for alternative A. There would be an impact to the abundance and distribution of some species within the district, but this would have minimal impact on the vegetation across the South Core Banks as a whole. The short-term adverse impacts on vegetation from efforts to restore the historic views would be negligible to minor. The long-term impacts would be both adverse and beneficial. The adverse impacts on abundance and distribution of some species would be negligible and would continue long term. The removal of aged and diseased vegetation material and

thinning the remaining vegetation would have a long-term beneficial impact on the health of the remaining vegetation, and negligible adverse impact on vegetation completely removed.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact vegetation in South Core Banks.

Conclusion. Implementation of alternative B would have greater adverse impacts on vegetation in the historic district than the no-action alternative because additional vegetation would be disturbed or removed to install potable water lines to four of the historic structures, install a centralized wastewater treatment system, and relocate three historic structures back to their original site locations. Negligible short-term adverse impacts on vegetation would result from removing some vegetation to provide defensible space around the historic structures and to partially restore the character and views associated with the district's period of significance. However, the long-term impacts of removing aged, diseased and hazard tree limbs and other vegetation materials, thinning remaining vegetation, and removing invasive species, would be beneficial for the remaining vegetation, and negligibly adverse for vegetation completely removed.

Vegetation would be disturbed or removed to install electrical lines, potable water lines, and the wastewater treatment system. However, the extent of disturbance would be localized, and the long-term adverse impacts of installing this infrastructure would be negligible. It would be unlikely to impact the ecological processes or biological productivity of vegetation in the village. Efforts to restore historic views in the village would have long-term beneficial cumulative impacts on the remaining vegetation because the overall health of the community would be improved and native species would be encouraged in disturbed areas. These impacts would not result in impairment of national seashore resources.

Alternative C

Analysis. The adverse impacts on vegetation in the historic district would be slightly more than the adverse impacts from alternative B. Under this alternative, 12 structures would be rehabilitated for occupancy, which would require a larger water and wastewater treatment infrastructure than would be necessary under alternative B. In addition, three of the historic structures would be relocated back to their original site locations. All other impacts would be as described under alternative B.

Seven of the structures would be rehabilitated for occupancy and would have potable water. The degree of disturbance would be greater than for alternative B because of the increased number of structures that would require water and wastewater connections. The same mitigation measures described under alternative A would be used for alternative C. Although the adverse impacts on vegetation would be concentrated in the same geographic area of the village, the degree of disturbance would be greater under this alternative. These actions could impact the abundance and distribution of individual species within the village, but would be unlikely to impact the overall viability of the village vegetation community. Short-term adverse impacts on vegetation would be negligible to minor. The long-term adverse impacts of installing the water and wastewater system would be negligible.

During installation of the electrical system, some vegetation disturbance could be required. Even though more of the structures would be occupied, the level of disturbance required to install electricity in the occupied structures would be no greater than under the no-action alternative. The short-term adverse impacts associated with installing the electrical system would be negligible. Because the electrical lines would be buried, the long-term

adverse impacts on vegetation from maintenance activities would also be negligible.

Installing a central wastewater treatment system would require the removal of some vegetation to accommodate the system as well as the disturbance or removal of some vegetation during installation of the water lines. These actions would have a localized impact on the abundance or distribution of some species, but the adverse impacts would not be so great that the viability of the vegetation community in the historic district would decrease. To reduce the adverse impacts of these actions, NPS staff would seek to remove the least amount of vegetation practicable during installation of the wastewater and water distribution systems. In addition, best management practices would be used to prevent the introduction or spread of invasive species in newly disturbed areas, as well as to reduce the potential for soil erosion. Because the area impacted would be larger than the area in alternative B, the impacts would increase (even with mitigation) such that the short-term adverse impacts would be negligible to minor.

Under this alternative, three historic structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations. The adverse impacts of relocating the historic structures on vegetation in the historic district would be the same as for alternative B. These actions would require removal and disturbance of vegetation within the historic district. To reduce the adverse impacts of these actions, NPS staff would seek to remove the least amount of vegetation practicable during structure relocation. In addition, best management practices would be used to prevent the introduction or spread of invasive species in newly disturbed areas as well as to reduce the potential for soil erosion. Once the structures have been moved, the areas that were formerly occupied would be revegetated with native species. The short-term adverse impacts on vegetation in the historic district would be minor because the impacts would still be localized and would not impact the viability of the vegetation community on South Core Banks as a whole. The long-term impacts would be beneficial because of the increase in total coverage of native vegetation in the district, and negligibly adverse at the locations where structures are relocated. There would be beneficial long-term impacts because of the increase in total coverage of native vegetation in the district. There would be adverse long-term impacts on vegetation on the sites the structures would be relocated to. These impacts would be limited because the relocation sites have been previously disturbed and the vegetation consists primarily of grasses. The impacts would be negligible because the abundance and distribution of individual species, ecological processes, and biological productivity would not be appreciably affected at the site.

Selective vegetation removal would be undertaken in the district to provide a semblance of the more open views that existed during the district's period of significance. Before removing any vegetation, NPS staff would analyze the potential adverse impacts from vegetation removal relative to storm / hurricane impacts such as storm surge, waves, and overwash as well as the impacts on wildlife habitat. Vegetation removal would be carried out in stages to support reestablishment of the historic views while potentially retaining some vegetation to provide shade in the village. During the initial stage, only aged, diseased, and invasive plant species would be removed. If additional work was required to re-create the historic views, NPS staff would consider removing tree limbs and thinning remaining vegetation before complete removal. Preference would be given to removing foundation plantings and shrubs before shade trees, particularly in the village.

Under this alternative, the adverse impacts from restoring the historic views and character of the district's setting would be the

same as for alternatives A and B. There would be an impact to the abundance and distribution of some species within the district, but this would have minimal impact on the vegetation across the South Core Banks as a whole. The short-term adverse impacts on vegetation from efforts to restore the historic viewshed would be negligible to minor. The long- term impacts would be both adverse and beneficial. The adverse impacts on abundance and distribution of some species would be negligible and would continue long term. The removal of aged and diseased vegetation material and thinning the remaining vegetation would have a long-term beneficial impact on the health of the remaining vegetation, and negligible adverse impact on vegetation completely removed.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact vegetation in South Core Banks.

Conclusion. Implementation of alternative C would have greater adverse impacts on vegetation in the historic district than the no-action alternative because additional vegetation would be disturbed or removed to install potable water lines to seven of the historic structures, install a centralized wastewater treatment system, and relocate three historic structures back to their original site locations. Negligible short-term adverse impacts to vegetation would result from removal of some vegetation to provide defensible space around the historic structures and to partially restore the character and views associated with the district's period of significance. However, the long-term impacts of removing aged, diseased and hazard tree limbs and other vegetation materials, thinning remaining vegetation, and removing invasive species would be beneficial for the remaining vegetation, and negligibly adverse for vegetation completely removed.

Some vegetation would be disturbed or removed to install electrical lines, potable water lines, and the central wastewater treatment system. The extent of disturbance for the electrical lines would be localized, and the long-term adverse impacts would be negligible. Installing the potable water lines and the infrastructure for the centralized wastewater treatment system would disturb vegetation in the village over a larger area. The long-term adverse impacts of these actions would be negligible to minor.

Efforts to restore historic views in the village would have long-term beneficial cumulative impacts on the remaining vegetation because the overall health of the community would be improved and native species would be encouraged in disturbed areas. These impacts would not result in impairment of national seashore resources.

Alternative D

Analysis. The adverse impacts on vegetation in the historic district would be the same as the adverse impacts from alternative C. The same mitigation measures described under alternative A would be used for alternative D. Twelve of the historic structures would be rehabilitated for occupancy and would have potable water. Although the adverse impacts on vegetation would be concentrated in the same geographic area of the village, the degree of disturbance would be greater under this alternative than for alternative B because the water and wastewater infrastructure necessary to support occupancy of 12 structures would be larger. These actions could impact the abundance and distribution of individual species within the village but would be unlikely to impact the overall viability of the village vegetation community. Short-term adverse impacts on vegetation would be negligible to minor. The long-term adverse impacts of installing the water and wastewater systems would be negligible.

During installation of the electrical system, some vegetation disturbance could be required. Even though more of the structures

would be occupied, the extent of disturbance required to install electricity in the occupied structures would be no greater than under the no-action alternative. The short-term adverse impacts associated with installation of the electrical system would be negligible. Because the electrical lines would be buried, the long-term adverse impacts on vegetation from maintenance activities would be negligible.

Installing a central wastewater treatment system would require the removal of some vegetation to accommodate the system as well as the disturbance or removal of some vegetation during installation of the water lines. Development of the central treatment system and installation of the water lines would have a localized impact on the abundance or distribution of some species, but the adverse impacts would not be so great that the viability of the vegetation community in the historic district would decrease. To reduce the adverse impacts of these actions, NPS staff would seek to remove the least amount of vegetation practicable during installation of the water system. In addition, best management practices would be used to prevent the introduction or spread of invasive species in newly disturbed areas as well as to reduce the potential for soil erosion. The impacts (even with mitigation) would increase such that the short-term adverse impacts would be negligible to minor.

Under this alternative, three structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations. The adverse impacts of relocating the historic structures on vegetation in the historic district would be the same as for alternative B. These actions would require removal and disturbance of vegetation within the historic district. To reduce the adverse impacts of these actions, NPS staff would seek to remove the least amount of vegetation practicable during structure relocation. In addition, best management practices would be used to prevent the introduction or spread of invasive species in newly disturbed areas as well as to reduce the potential for soil erosion. Once the structures have been moved, the areas that were formerly occupied would be revegetated with native species. The short-term adverse impacts on vegetation in the historic district would be minor because the impacts would still be localized and would not impact the viability of the vegetation community on South Core Banks as a whole. There would be beneficial long-term impacts because of the increase in total coverage of native vegetation in the district. There would be adverse long-term impacts on vegetation at the sites the structures would be relocated to. These impacts would be limited because the relocation sites have been previously disturbed and the vegetation consists primarily of grasses. The impacts would be negligible because the abundance and distribution of individual species, ecological processes, and biological productivity would not be appreciably affected at the site.

Selective vegetation removal would be undertaken in the district to provide a semblance of the more open views that existed during the district's period of significance. Before removing any vegetation, NPS staff would analyze the potential adverse impacts from vegetation removal relative to storm / hurricane impacts such as storm surge, waves, and overwash as well as the impacts on wildlife habitat. Vegetation removal would be carried out in stages to support reestablishment of the historic views while potentially retaining some vegetation to provide shade in the village. During the initial stage, only aged, diseased, and invasive plant species would be removed. If additional work is required to recreate the historic views, NPS staff would consider removing tree limbs and thinning remaining vegetation before complete removal. Preference would be given to removing foundation plantings and shrubs before shade trees, particularly in the village.

Under this alternative, the adverse impacts from restoring the historic views and the character of the district's setting would be the same as for the action alternatives. There would be an impact on the abundance and distribution of some species within the district but this would have minimal impact on the vegetation across the South Core Bank as a whole. The short-term adverse impacts on vegetation from efforts to re-create the historic views would be negligible to minor. The long-term impacts would be both adverse and beneficial. The adverse impacts on abundance and distribution of some species would be negligible and would continue long term. The removal of aged and diseased vegetation material and thinning the remaining vegetation would have a beneficial impact on the health of the remaining vegetation, and negligible adverse impacts on vegetation completely removed.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact vegetation in South Core Banks.

Conclusion. Implementation of alternative D would have greater adverse impacts on vegetation in the historic district than the no-action alternative because additional vegetation would be disturbed or removed to install potable water lines to 12 of the historic structures, install a central wastewater treatment system, and relocate three historic structures back to their original site locations.

Negligible short-term adverse impacts on vegetation would result from removing some vegetation to provide defensible space around the historic structures and to partially restore the character and views associated with the district's period of significance. However, the long-term impacts of removing aged, diseased and hazard tree limbs and other vegetation materials, thinning remaining vegetation, and removing invasive species would be beneficial for the remaining vegetation, and negligibly adverse for vegetation completely removed.

Some vegetation would be disturbed or removed to install electrical lines, potable water lines, and the wastewater treatment system. The extent of disturbance for the electric lines would be localized and the long-term adverse impacts would be negligible. Installing the potable water lines and the infrastructure for the central wastewater treatment system would disturb vegetation in the village over a larger area than alternative B. The long-term adverse impacts of these actions would be negligible to minor.

Efforts to restore historic views in the village would have long term beneficial cumulative impacts on the remaining vegetation because the overall health of the community would be improved and native species would be encouraged in disturbed areas. These impacts would not result in impairment of national seashore resources.

Alternative E

Analysis. The adverse impacts on vegetation in the historic district would be the same as those anticipated for alternative D. The same mitigation measures described under alternative A would be used for alternative E. Twelve of the historic structures would be rehabilitated for occupancy and would have potable water. Although the adverse impacts on vegetation would be concentrated in the same geographic area of the village, the degree of disturbance would be greater under this alternative than for alternative B because the water and wastewater infrastructure necessary to support occupancy of 12 structures would be larger. These actions could impact the abundance and distribution of individual species within the village, but would be unlikely to impact the overall viability of the village vegetation community. Short-term adverse impacts on vegetation would be negligible to minor. The long-term adverse impacts of installing the water and wastewater system would be negligible.

During installation of the electrical system, some vegetation disturbance could be required. Even though more of the structures would be occupied, the extent of disturbance required to install electricity in the occupied structures would be no greater than under the no-action alternative. The short-term adverse impacts associated with installing the electrical system would be negligible. Because the electrical lines would be buried, the long-term adverse impacts on vegetation from maintenance activities would also be negligible.

Installing a central wastewater treatment system would require the removal of some vegetation to accommodate the system as well as the disturbance or removal of some vegetation during installation of the water lines. Development of the central treatment system and installation of the water lines would have a localized impact on the abundance or distribution of some species, but the adverse impacts would not be so great that the viability of the vegetative community in the historic district would decrease. To reduce the adverse impacts of these actions, NPS staff would seek to remove the least amount of vegetation practicable during installation of the water system. In addition, best management practices would be used to prevent the introduction or spread of invasive species in newly disturbed areas as well as to reduce the potential for soil erosion. Because the area impacted would be larger than the area in alternative B, the adverse impacts (even with mitigation) would increase such that the short-term adverse impacts would be negligible to minor.

Under this alternative three historic structures (the 1887 Life-Saving Station, the 1924 Life-Saving Station Boat House, and the 1907 Lighthouse Keeper's Quarters) would be relocated to their original site locations. The adverse impacts of relocating the historic structures on the vegetation in the historic district would be the same as for alternative B. These actions would require removal and disturbance of vegetation within the historic district. To reduce the adverse impacts of these actions, NPS staff would seek to remove the least amount of vegetation practicable during structure relocation. In addition, best management practices would be used to prevent the introduction or spread of invasive species in newly disturbed areas as well as to reduce the potential for soil erosion. Once the structures have been moved, the areas that were formerly occupied would be revegetated with native species. The short-term adverse impacts on vegetation in the historic district would be minor because the impacts would still be localized and would not impact the viability of the vegetative community on South Core Banks as a whole. There would be beneficial long-term impacts because of the increase in total coverage of native vegetation in the district. There would be adverse long-term impacts on vegetation at the sites the structures would be relocated to. These impacts would be limited because the relocation sites have been previously disturbed and the vegetation consists primarily of grasses. The impacts would be negligible because the abundance and distribution of individual species, ecological processes, and biological productivity would not be appreciably affected at the site.

Selective vegetation removal would be undertaken in the district to provide a semblance of the more open views that existed during the district's period of significance. Before removing any vegetation, NPS staff would analyze the potential adverse impacts from vegetation removal relative to storm / hurricane impacts such as storm surge, waves, and overwash, as well as the impacts on wildlife habitat. Vegetation removal would be carried out in stages to support reestablishment of the historic views while potentially retaining some vegetation to provide shade in the village. During the initial stage, only aged, diseased, and invasive plant species would be removed. If additional work was required to re-create the historic views, NPS staff would consider removing tree limbs and thinning

remaining vegetation before complete removal. Preference would be given to removing foundation plantings and shrubs before shade trees, particularly in the village.

Under this alternative, the adverse impacts from restoring the historic views and character of the district's setting would be the same as for the action alternatives. There would be an impact to the abundance and distribution of some species within the district, but this would have minimal impact on vegetation across the South Core Banks as a whole. The short-term adverse impacts on vegetation from efforts to restore the historic views would be negligible to minor. The long-term impacts would be both adverse and beneficial. The adverse impacts on abundance and distribution of some species would continue long term. The removal of aged and diseased vegetation material and thinning the remaining vegetation would have a beneficial impact on the health of the remaining vegetation, and negligible adverse impacts on vegetation completely removed.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact vegetation in South Core Banks.

Conclusion. Implementation of alternative E would have greater adverse impacts on vegetation in the historic district than the no-action alternative because additional vegetation would be disturbed or removed to install potable water lines to 12 of the historic structures, install a central wastewater treatment system, and relocate three historic structures back to their original site locations.

Negligible short-term adverse impacts on vegetation would result from removing some vegetation to provide defensible space around the historic structures and to partially restore the character and views associated with the district's period of significance. However, the long-term impacts of removing aged, diseased and hazard tree limbs and other vegetation materials, thinning remaining vegetation, and removing invasive species would be beneficial for the remaining vegetation, and negligibly adverse for vegetation completely removed.

Some vegetation would be disturbed or removed to install electrical lines, potable water lines, and the wastewater treatment system. The extent of disturbance for the electrical lines would be localized, and the long-term adverse impacts would be negligible. Installing the potable water lines and the infrastructure for the central wastewater treatment system would disturb vegetation in the village over a larger area than alternative B. The long-term adverse impacts of these actions would be negligible to minor. Efforts to restore historic views in the village would have long-term beneficial cumulative impacts on the remaining vegetation because the overall health of the community would be improved and native species would be encouraged in disturbed areas. These impacts would not result in impairment of national seashore resources.

WATER QUALITY

Definitions of Intensity Levels

The relationship of pollution sources to existing water quality at Cape Lookout National Seashore has not been sufficiently studied and modeled to quantitatively assess impacts. In addition, potential impacts of actions comprising the alternatives for the most part cannot be defined relative to site-specific locations. Consequently, water quality impacts of the alternatives were assessed qualitatively.

Negligible: An action would have no measurable or detectable effect on water quality.

Minor: An action would have measurable effects on water quality. Water quality effects could include but would not be limited to increased or decreased concentrations of chemical or toxic

substances or pathogenic organisms. Effects could also include changes in habitat.

Moderate: An action would have clearly detectable effects on water quality and potentially would affect organisms or natural ecological processes. Alternatively, an impact would be visible to visitors.

Major: An action would have substantial effects on water quality and potentially would affect organisms or natural ecological processes. Alternatively, an impact would be easily visible to visitors.

No-Action Alternative

Analysis. Under this alternative, two new septic systems would be installed in the historic village. Because there would be no on-site interpretation related to the village, use of the septic systems would be expected to be low. The type of septic system used would be appropriate for low use conditions and would be sited to maximize the distance from the water table to the tank and the leachfield. Because the soils on the island would provide little natural attenuation of nitrogen in the effluent, the septic system would also include some form of pretreatment to minimize the final nitrogen concentration in the effluent. Nitrogen is typically in limited supply in coastal systems, so an increase in the nitrogen concentration could contribute to an increase in productivity within a localized area of the Sound. The short-term impacts on water quality from the installation of the septic systems would be negligible because of the design characteristics of the system. Because visitor use of the systems would be expected to be low, the impacts of the two septic systems on water quality in the national seashore would be adverse but negligible in the long term. Because use of the septic systems would be expected to be low, the volume of fresh water that would be introduced into the environment at the seashore would be low and so would not likely appreciably affect terrestrial, estuarine, or marine habitats. The long-term adverse impact on water quality from this volume of fresh water would be negligible.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact water resources on South Core Banks.

Conclusion. Under the no-action alternative, the long-term adverse impacts on water quality from use of two septic systems would be negligible. The impacts on water quality would be minimized through the use of systems that are designed to provide some pretreatment of effluent. The long-term impacts on habitats from changes in water quality would be negligible because so little water would be introduced into the environment. There would be no cumulative impacts on water quality from implementing this alternative. The adverse impacts from implementing this alternative would not constitute impairment of national seashore resources.

Alternative A

Analysis. Under this alternative, the impacts on water quality would be greater than in the no-action alternative because three of the structures would be rehabilitated for use by NPS staff and volunteers. With residential use, the volume of effluent from the septic systems would be greater. The long-term adverse impacts on water quality would be negligible because the systems would be designed to minimize the concentration of nitrogen in the effluent. Under this alternative, the long-term adverse impacts of the freshwater effluent would be negligible because the volume generated would not be expected to adversely affect seashore habitats. The adverse impacts from implementing this alternative would not constitute impairment of national seashore resources.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact water resources on South Core Banks.

Conclusion. Under alternative A, the long-term adverse impacts on water quality from use of two septic systems would be negligible. The impacts on water quality would be minimal because systems would be designed to provide some pretreatment of effluent. The long-term impacts on habitats from changes in water quality would be negligible because so little water would be introduced into the environment. There would be no cumulative impacts on water quality from implementing this alternative. The adverse impacts from implementing this alternative would not constitute impairment of national seashore resources.

Alternative B

Analysis. Under alternative B, four of the historic structures would be rehabilitated for use by NPS staff and volunteers. The potential adverse impacts on water quality from the increased number of NPS staff and volunteers that could be accommodated in the village would be similar to alternative A because the volume of wastewater generated would not substantially increase over the volume generated under alternative A. Under this alternative, the structures would be connected to a central wastewater treatment system designed to meet applicable state wastewater quality standards. Like the septic systems, central wastewater treatment would require development of an infiltration / evaporation system to dispose of the treated effluent. The size of the infiltration / evaporation system would be determined by the number of staff and volunteers expected to use the structures at any one time. Because the water table is relatively high and there is little organic matter in the soil, the travel time for the discharge to reach the aquifer would be relatively short. Efforts to increase the time that the effluent is in the field would be employed to the extent practicable. These efforts could include a vegetative cover over the area where the treated effluent is discharged. The short-term adverse impacts on water quality from centralized treatment would be negligible because all construction would occur above the water table.

Although some soil disturbance would occur, the likelihood of impacting water quality from runoff is very low because the disturbance would not be in the vicinity of the coast or surface water sources on the island. The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible because the wastewater would be treated to meet state standards. Over the long term, the volume of effluent discharged into the aquifer would have a beneficial impact on terrestrial systems by increasing the amount of fresh water available to vegetation and potentially to wildlife through the freshwater wetlands. The volume of effluent discharged would be unlikely to change the freshwater / saltwater interface and volume of freshwater discharge into the estuarine or marine systems. Therefore, the adverse impacts would be negligible.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact water resources on South Core Banks.

Conclusion. The adverse water quality impacts from alternative B would be greater than the no-action alternative because structures in the village would be occupied. The long-term adverse impacts on water quality from the increased number of NPS staff and volunteers that could be accommodated in the village would be negligible. In the long term, the volume of effluent discharged into the aquifer would have a beneficial impact on terrestrial systems by increasing the amount of fresh water available to island vegetation and potentially to wildlife through the freshwater wetlands. The volume of effluent discharged

would be unlikely to change the freshwater / saltwater interface and the volume of freshwater discharge into the estuarine or marine systems. Therefore, the adverse impacts would be negligible. There would be no cumulative impacts on water quality from implementing this alternative. The adverse impacts from implementing this alternative would not constitute impairment of national seashore resources.

Alternative C

Analysis. Under alternative C, seven structures would be rehabilitated for use by NPS staff and volunteers and private leaseholders. The seven structures would be connected to the potable water system and proposed central wastewater treatment system. The centralized wastewater treatment system would be designed to meet applicable state wastewater quality standards. More wastewater would be generated under this alternative than alternative B because a greater number of structures would likely be occupied at any given time. The size of the infiltration / evaporation system would likely be larger than the one developed under alternative B to handle a greater volume of effluent. Because the water table is relatively high and there is little organic matter in the soil, the travel time for the discharge to reach the aquifer would be relatively short. Efforts to increase the time that the effluent is in the field would be employed to the extent practicable. These efforts could include a vegetative cover over the area where the treated effluent is discharged.

The short-term adverse impacts on water quality during construction of the system would be the same as for alternative B and would be negligible. The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible because the wastewater would be treated to meet state standards. The volume of effluent discharged under this alternative would be greater than under alternative B. In the long term, the effluent discharged into the aquifer would have a beneficial impact on terrestrial systems by increasing the amount of fresh water available to vegetation and potentially to wildlife through the freshwater wetlands. The volume of effluent discharged would be unlikely to change the fresh water / salt water interface and volume of freshwater discharge into the estuarine or marine systems. Therefore, the adverse impacts would be negligible.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact water resources on South Core Banks.

Conclusion. The volume of wastewater generated under alternative C would increase over the volume generated under alternative B because additional structures would be occupied. The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible because the effluent from the centralized treatment would be treated to meet state standards. In the long term, the volume of effluent discharged into the aquifer would have a beneficial impact on terrestrial systems by increasing the amount of fresh water available to island vegetation and potentially to wildlife through the freshwater wetlands. The volume of effluent discharged would be unlikely to change the freshwater / saltwater interface and the volume of freshwater discharge into the estuarine or marine systems. Therefore, the adverse impacts would be negligible. There would be no cumulative impacts on water quality from implementing this alternative. The adverse impacts from implementing alternative C would not constitute impairment of national seashore resources.

Alternative D

Analysis. The potential impacts on water quality under alternative D would be greater than for alternative B because 12 of the structures would be rehabilitated for occupancy. The 12 structures would be connected to the potable water system and proposed central wastewater treatment system. The centralized wastewater treatment system would be designed to meet applicable state wastewater quality standards. The eight structures not used by NPS staff and volunteers would be managed by a concessioner. The structures used by the concessioner would likely see nearly continuous use throughout the April to November visitation season. Consequently, the wastewater treatment system and the infiltration / evaporation system would need to be larger than in alternative B to accommodate the volume of waste and effluent generated. The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible because the wastewater would be treated to meet state standards. Because the water table is relatively high and there is little organic matter in the soil, the travel time for the discharge to reach the aquifer would be relatively short. Efforts to increase the time that the effluent is in the field would be employed to the extent practicable. These efforts could include a vegetative cover over the area where the treated effluent is discharged. The short-term adverse impacts on water quality during construction of the system would be the same as for alternative B, negligible. The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible because the wastewater would be treated to meet state standards.

In the long term, the volume of effluent discharged into the aquifer could have both beneficial and adverse impacts on seashore habitats. The impact on terrestrial systems would be beneficial because of the increased amount of fresh water available to vegetation and potentially to wildlife through the freshwater wetlands. If the volume of effluent discharged is greater than can be assimilated by the aquifer, the freshwater / saltwater interface and volume of freshwater discharge into the estuarine or marine systems would increase and have an adverse impact on these habitats. The adverse impacts would be localized and negligible to minor depending on the volume of fresh water discharged.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact water resources on South Core Banks.

Conclusion. The volume of wastewater generated under alternative D would increase over the volume generated under alternative B. The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible because the wastewater would be treated to meet state standards. In the long term, the volume of effluent discharged into the aquifer could have both beneficial and adverse impacts on seashore habitats. The impact on terrestrial systems would be beneficial because of the increased amount of fresh water available to island vegetation and potentially to wildlife through the freshwater wetlands. If the volume of effluent discharged exceeds the assimilative capacity of the aquifer, there could be a long-term adverse impact on estuarine and marine systems. The adverse impacts would be localized and negligible to minor. There would be no cumulative impacts on water quality from implementing this alternative. The adverse impacts from implementing alternative D would not constitute impairment of national seashore resources.

Alternative E

Analysis. The potential impacts on water quality under alternative E would be about the

same as for alternative D because 12 of the structures would be rehabilitated for occupancy. The 12 structures would be connected to the potable water system and proposed central wastewater treatment system. The centralized wastewater treatment system would be designed to meet applicable state wastewater quality standards. The eight structures not used by NPS staff and volunteers would be managed either by a concessioner or through a long-term lease. Although the expected occupancy rate could vary more under this alternative than under alternative D, this variation would not likely change the infrastructure requirements for centralized wastewater treatment or the volume of effluent generated. The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible because the wastewater would be treated to meet state standards. The volume of effluent discharged under this alternative would be greater than under alternative B because a greater number of structures would likely be occupied at any given time. The size of the infiltration / evaporation system would be larger than the one developed under alternative B in order to handle a greater volume of effluent. Because the water table is relatively high and there is little organic matter in the soil, the travel time for the discharge to reach the aquifer would be relatively short. Efforts to increase the time that the effluent is in the field would be employed to the extent practicable. These efforts could include a vegetative cover over the area where the treated effluent is discharged.

In the long term, the volume of effluent discharged into the aquifer could have both beneficial and adverse impacts on seashore habitats. The impact on terrestrial systems would be beneficial because of the increase in fresh water available to vegetation and potentially to wildlife through the freshwater wetlands. If the volume of effluent discharged is greater than can be assimilated by the aquifer, the freshwater / saltwater interface and volume of freshwater discharge into the estuarine or marine systems would increase and have an adverse impact on these habitats. The impacts would be localized and negligible to minor.

Cumulative Impacts. There are no past, present, or reasonably foreseeable future actions at the national seashore that would impact water resources on South Core Banks.

Conclusion. The volume of wastewater generated under alternative E would be about the same as for alternative D. The long-term adverse impacts on water quality in the surficial aquifer associated with occupancy of the structures would be negligible because the wastewater would be treated to meet state standards. In the long term, the volume of effluent discharged into the aquifer could have both beneficial and adverse impacts on seashore habitats. The impact on terrestrial systems would be beneficial because of the increased amount of fresh water available to island vegetation and potentially to wildlife through the freshwater wetlands. If the volume of effluent discharged exceeds the assimilative capacity of the aquifer, there could be a long-term adverse impact on estuarine and marine systems. The adverse impacts would be localized and negligible to minor. There would be no cumulative impacts on water quality from implementing this alternative. The adverse impacts from implementing alternative E would not constitute impairment of national seashore resources.

DEFINITIONS OF INTENSITY LEVELS

Negligible: NPS operations would not be affected or the effect would be at or below the lower levels of detection and would not have an appreciable effect on NPS operations.

Minor: The effects would be detectable, but would be of a magnitude that would not have an appreciable effect on NPS operations.

Moderate: The effects would be readily apparent and would result in a substantial change in NPS operations in a manner noticeable to staff and the public.

Major: The effects would be readily apparent and would result in a substantial change in NPS operations in a manner noticeable to staff and the public and be markedly different from existing operations.

NO-ACTION ALTERNATIVE

Analysis

Stabilization of 13 structures in the Cape Lookout Village Historic District would require NPS facilities and maintenance staff to undertake substantial management of construction activities necessary to make the properties safe, weather resistant, and structurally sound. In addition to addressing standard construction practices, NPS staff would have the further responsibilities of ensuring that approved stabilization measures are carried out in accordance with the *Secretary's Standards* to avoid the loss or damage of historic fabric and character-defining features. Additional actions placing demands on the limited facilities management staff would be removal of two noncontributing properties, renovation of space in the 1873 Lighthouse Keeper's Quarters for NPS staff and volunteers, connection of village structures to upgraded electrical service, and construction of two new septic systems for the district. The maintenance staff would oversee the above undertakings and would retain ongoing maintenance responsibility for operation of the district's infrastructure, repair of historic structures, and management of the cultural landscape. Implementation of these actions would result in long-term minor to moderate adverse impacts on NPS facilities operations.

The expense associated with delivering construction materials to the cape would be anticipated to increase the initial capital outlay for construction as compared with similar construction on the mainland. The costs associated with implementing the above actions would need to be addressed by additional funding allocations to the national seashore's budget for short-term capital improvements and long-term operations. The adverse impacts on the national seashore's budgetary allocations for maintenance operations would be both short term and long term, and minor to moderate.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on national seashore operations are facility improvements for visitor use in the vicinity of the lighthouse, rehabilitation of the lighthouse, implementation of recommendations from the "Draft Cultural Landscape Report," and potential facility / visitor use improvements resulting from implementing the commercial services plan (in progress). These projects would enhance the long-term protection and integrity of the historic district, and improve the visitor experience. However, they entail additional expenses and demands on the budget and staff, thereby having long-term, minor to moderate adverse cumulative impacts on national seashore operations.

Consequently, the impacts of the other actions described above, in combination with the impacts of the no-action alternative, would result in minor to moderate adverse cumulative impacts on national seashore operations.

Conclusion

Long-term minor to moderate adverse impacts on national seashore operations would be anticipated from the no-action alternative as a result of the increased expense and requirements for facilities management staff to stabilize and maintain historic structures and carry out other proposed undertakings. The overall cumulative impacts on national seashore operations would also be long-term, minor to moderate, and adverse.

ALTERNATIVE A

Analysis

Stabilization of 13 structures and rehabilitation of 3 structures in the Cape Lookout Village Historic District would require NPS facilities and maintenance staff to undertake substantial management of construction activities necessary to make the properties safe, weather resistant, structurally sound, and suited for adaptive use. In addition to addressing standard construction practices, NPS staff would have to ensure that approved stabilization and rehabilitation measures were carried out in accordance with the *Secretary's Standards* to avoid the loss or damage of historic fabric and character-defining features. Additional actions placing demands on the limited facilities management staff would be removal of two noncontributing properties, renovation of space in the 1873 Lighthouse Keeper's Quarters for NPS staff and volunteers, connection of village structures to upgraded electrical service and potable water, and construction of three new septic systems for the district. The maintenance staff would oversee these undertakings, and would retain ongoing maintenance responsibility for operation of the district's infrastructure, repair of historic structures, and management of the cultural landscape. Implementation of these actions would result in long-term minor to moderate adverse impacts on NPS facilities operations

The expense associated with delivering construction materials to the cape would increase the initial capital outlay for construction compared with similar construction on the mainland. The costs associated with implementing the above actions would need to be addressed by additional funding allocations to the national seashore's budget for short-term capital improvements and long-term operations. The adverse impacts on the national seashore's budgetary allocations for maintenance operations would be both short term and long term, and minor to moderate.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on national seashore operations are facility improvements for visitor use in the vicinity of the lighthouse, rehabilitation of the lighthouse, implementation of recommendations from the "Draft Cultural Landscape Report," and potential facility / visitor use improvements resulting from the *Commercial Services Plan* (in progress). These projects would enhance the long-term protection and integrity of the historic district and improve the visitor experience. However, they entail additional expenses and demands on the budget and staff of the national seashore's facilities management division for construction and maintenance, thereby having long-term, minor to moderate adverse cumulative impacts on national seashore operations. Consequently, the impacts of the other actions described above, in combination with the impacts of the alternative A, would result

in minor to moderate adverse cumulative impacts on national seashore operations.

Conclusion

Long-term minor to moderate adverse impacts on national seashore operations would be anticipated from implementing alternative A as a result of the increased expense and requirements for facilities management staff to stabilize, rehabilitate, and maintain historic structures and carry out other proposed undertakings. The overall cumulative impacts on national seashore operations would also be long term, minor to moderate, and adverse.

ALTERNATIVE B

Analysis

Stabilization of 13 structures and rehabilitation of 4 structures in the Cape Lookout Village Historic District would require national seashore facilities and maintenance staff to undertake substantial management of construction activities necessary to make the properties safe, weather resistant, structurally sound, and suited for adaptive use. In addition to addressing standard construction practices, staff would have to ensure that approved stabilization and rehabilitation measures were carried out in accordance with the *Secretary's Standards* to avoid the loss or damage of historic fabric and character-defining features. Additional actions placing demands on the limited facilities management staff would be removal of two noncontributing properties, renovation of space in the 1873 Lighthouse Keeper's Quarters for NPS staff and volunteers, connection of village structures to upgraded electrical service and potable water, and construction of a central waste water treatment system for the district. Three historic structures would be relocated to their original site locations. The maintenance staff would oversee these undertakings, and would retain ongoing maintenance responsibility for operation of the district's infrastructure, repair of historic structures, and management of the cultural landscape. Implementing these actions would result in long-term minor to moderate adverse impacts on the national seashore's facilities operations.

The expense associated with delivering construction materials to the cape would increase the initial capital outlay for construction compared with similar construction on the mainland. The costs associated with implementing the above actions would need to be addressed by additional funding allocations to the national seashore's budget for short-term capital improvements and long-term operations. Additional staff might be needed in the maintenance division, such as a wastewater facilities technician to manage the wastewater treatment system. The adverse impacts on the national seashore's budgetary allocations for maintenance operations and staffing would be both short term and long term, and minor to moderate.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on national seashore operations are facility improvements for visitor use in the vicinity of the lighthouse, rehabilitation of the lighthouse, implementation of recommendations from the "Draft Cultural Landscape Report," and potential facility / visitor use improvements resulting from the *Commercial Services Plan* (in progress). These projects would enhance the long-term protection and integrity of the historic district and improve the visitor experience. However, they would entail additional expenses and demands on the budget and staff of the national seashore's facilities management division for construction and maintenance, thereby having long-term, minor to moderate adverse cumulative impacts on national seashore operations. Consequently, the impacts of the other

actions described above, in combination with the impacts of alternative B, would result in minor to moderate adverse cumulative impacts on national seashore operations.

Conclusion

Long-term minor to moderate adverse impacts on national seashore operations would be anticipated from implementing alternative B as a result of the increased expense and requirements for facilities management staff to stabilize, rehabilitate, relocate, and maintain historic structures and carry out other proposed undertakings. The overall cumulative impacts on national seashore operations would be long term, minor to moderate, and adverse.

ALTERNATIVE C

Analysis

Stabilization of 13 structures and rehabilitation of 7 structures in the Cape Lookout Village Historic District would require national seashore facilities and maintenance staff to undertake substantial management of construction activities necessary to make the properties safe, weather resistant, structurally sound, and suited for adaptive use. In addition to addressing standard construction practices, staff would have to ensure that approved stabilization and rehabilitation measures were carried out in accordance with the *Secretary's Standards* to avoid the loss or damage of historic fabric and character-defining features. Additional actions placing demands on the limited facilities management staff would be removal of two noncontributing properties, renovation of space in the 1873 lighthouse keeper's quarters for NPS staff and volunteers, connection of village structures to upgraded electrical service and potable water, and construction of a central waste water treatment system for the district. Also, three historic structures would be relocated to their original site locations. The maintenance staff would oversee these undertakings, and would retain ongoing maintenance responsibility for operation of the district's infrastructure, substantial repair of historic structures, and management of the cultural landscape. Leaseholders selected for use of rehabilitated structures would be responsible for routine maintenance and furnishings (but not for items anticipated to be used for interpretive purposes). Implementation of these actions would result in long-term moderate adverse impacts on national seashore facilities operations.

The expense associated with delivering construction materials to the cape would increase the initial capital outlay for construction compared with similar construction on the mainland. The costs associated with implementing the above actions would need to be addressed by additional funding allocations to the national seashore's budget for short-term capital improvements and long-term operations. It might be necessary to hire additional staff in the maintenance division (e.g., wastewater facilities technician) and/or that increased NPS law enforcement or interpretive ranger presence be provided in the historic district to address the greater levels of visitor use. The adverse impacts on the national seashore's budgetary allocations for maintenance operations and staffing would be both short term and long term, and moderate.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on national seashore operations are facility improvements for visitor use in the vicinity of the lighthouse, rehabilitation of the lighthouse, implementation of recommendations from the "Draft Cultural Landscape Report," and potential facility / visitor use improvements resulting from the *Commercial Services Plan* (in progress). These projects would enhance the long-term protection and

integrity of the historic district and improve the visitor experience. However, they entail additional expenses and demands on the budget and staff of the national seashore's facilities management division for construction and maintenance, thereby having long-term, minor to moderate adverse cumulative impacts on national seashore operations. Consequently, the impacts of the other actions described above, in combination with the impacts of alternative C, would result in minor to moderate adverse cumulative impacts on national seashore operations.

Conclusion

Long-term moderate adverse impacts on national seashore operations would be anticipated from implementing alternative C as a result of the increased expense and requirements for facilities management staff to stabilize, rehabilitate, relocate, and maintain historic structures and carry out other proposed undertakings. The overall cumulative impacts on national seashore operations would be long term, minor to moderate, and adverse.

ALTERNATIVE D

Analysis

Stabilization of 13 structures and rehabilitation of approximately 12 structures in the Cape Lookout Village Historic District would require national seashore facilities and maintenance staff to undertake substantial management of construction activities necessary to make the properties safe, weather resistant, structurally sound, and suited for adaptive use. In addition to addressing standard construction practices, staff would have to ensure that approved stabilization and rehabilitation measures were carried out in accordance with the *Secretary's Standards* to avoid the loss or damage of historic fabric and character-defining features. Additional actions placing demands on the limited facilities management staff would be removal of two noncontributing properties, renovation of space in the 1873 Lighthouse Keeper's Quarters for NPS staff and volunteers, connection of village structures to upgraded electrical service and potable water, and construction of a central waste water treatment system for the district. Three historic structures would be relocated to their original site locations. The maintenance staff would oversee these undertakings and would retain ongoing maintenance responsibility for operation of the district's infrastructure, substantial repair of historic structures, and management of the cultural landscape. Concessions operators selected for use of rehabilitated structures would be responsible for routine maintenance and furnishings (but not for items anticipated to be used for interpretive purposes). Implementation of these actions would result in long-term moderate adverse impacts on national seashore facilities operations.

The expense associated with delivering construction materials to the cape would be anticipated to increase the initial capital outlay for construction compared with similar construction on the mainland. The costs associated with implementing the above actions would need to be addressed by additional funding allocations to the national seashore's budget for short-term capital improvements and long-term operations. It might be necessary to hire additional staff in the maintenance division (e.g., wastewater facilities technician) and/or that increased NPS law enforcement or interpretive ranger presence be provided in the historic district to address the greater levels of visitor use. The adverse impacts on the national seashore's budgetary allocations for maintenance operations and staffing would be both short term and long term, and moderate.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on national seashore operations are facility improvements for visitor use in the vicinity of the lighthouse, rehabilitation of the lighthouse, implementation of recommendations from the "Draft Cultural Landscape Report," and potential facility / visitor use improvements resulting from the *Commercial Services Plan* (in progress). These projects would enhance the long-term protection and integrity of the historic district and improve the visitor experience. However, they would entail additional expenses and demands on the budget and staff of the national seashore's facilities management division for construction and maintenance, thereby having long-term, minor to moderate adverse cumulative impacts on national seashore operations. Consequently, the impacts of the other actions described above, in combination with the impacts of alternative D, would result in minor to moderate adverse cumulative impacts on national seashore operations.

Conclusion

Long-term moderate adverse impacts on national seashore operations would be anticipated from implementing alternative D as a result of the increased expense and requirements for facilities management staff to stabilize, rehabilitate, relocate, and maintain historic structures and carry out other proposed undertakings. The overall cumulative impacts on national seashore operations would be long-term, minor to moderate, and adverse.

ALTERNATIVE E

Analysis

Stabilization of 13 structures and rehabilitation of approximately 12 structures in the Cape Lookout Village Historic District would require national seashore facilities and maintenance staff to undertake substantial management of construction activities necessary to make the properties safe, weather resistant, structurally sound, and suited for adaptive use. In addition to addressing standard construction practices, staff would have to ensure that approved stabilization and rehabilitation measures were carried out in accordance with the *Secretary's Standards* to avoid the loss or damage of historic fabric and character-defining features. Additional actions placing demands on the limited facilities management staff would be removal of two noncontributing properties, renovation of space in the 1873 Lighthouse Keeper's Quarters for NPS staff and volunteers, connection of village structures to electrical service and potable water, and construction of a central waste water treatment system for the district. Three historic structures would be relocated to their original site locations. The maintenance staff would oversee these undertakings, and would retain ongoing maintenance responsibility for operation of the district's infrastructure, substantial repair of historic structures, and management of the cultural landscape. Concessions operators or leaseholders selected for use of rehabilitated structures would be responsible for routine maintenance and furnishings (but not for items anticipated to be used for interpretive purposes). Implementing these actions would result in long-term moderate adverse impacts on national seashore facilities operations.

The expense associated with delivering construction materials to the cape would increase the initial capital outlay for construction compared with similar construction on the mainland. The costs associated with implementing the above actions would need to be addressed by additional funding allocations to the national seashore's budget for short-term capital improvements and long-term operations. It might be necessary to hire additional staff in the maintenance division (e.g., wastewater facilities technician) and/or that

increased NPS law enforcement or interpretive ranger presence be provided in the historic district to address the greater levels of visitor use. The adverse impacts on the national seashore's budgetary allocations for maintenance operations and staffing would be both short term and long term, and moderate.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on national seashore operations are facility improvements for visitor use in the vicinity of the lighthouse, rehabilitation of the lighthouse, implementation of recommendations from the "Draft Cultural Landscape Report," and potential facility / visitor use improvements resulting from the *Commercial Services Plan* (in progress). These projects would enhance the long-term protection and integrity of the historic district and improve the visitor experience. However, they entail additional expenses and demands on the budget and staff of the facilities management division for construction and maintenance, thereby having long-term, minor to moderate adverse cumulative impacts on national seashore operations. Consequently, the impacts of the other actions described above, in combination with the impacts of alternative E, would result in minor to moderate adverse cumulative impacts on national seashore operations.

Conclusion

Long-term moderate adverse impacts on national seashore operations would be anticipated from implementing alternative E as a result of the increased expense and requirements for facilities management staff to stabilize, rehabilitate, relocate, and maintain historic structures and carry out other proposed undertakings. The overall cumulative impacts on national seashore operations would be long term, minor to moderate, and adverse.

VISITOR USE AND EXPERIENCE

METHODOLOGY

NPS *Management Policies 2006* state that the enjoyment of park resources and values is part of the fundamental purpose of all parks, and that the National Park Service is committed to providing appropriate, high-quality opportunities for visitor enjoyment.

Two of the national seashore's long-term goals include (1) determining alternative methods for providing visitor facilities given the difficulty of maintaining existing facilities with increased visitation, and (2) providing information, interpretation, and education that assists visitors in achieving a better understanding of the unique natural and cultural history of the barrier islands.

Observation of visitation patterns combined with assessment of what is currently available was used to estimate the impacts of the actions under the various alternatives.

DEFINITIONS OF INTENSITY LEVELS

Negligible: The impact would be at or below the lower levels of detection and would not have an appreciable effect on visitors.

Minor: The impact would be slight but detectable, would not occur in primary resource areas, or would affect few visitors.

Moderate: The impact would be readily apparent, would occur in primary resource areas, or would affect many visitors. The impact would be clearly detectable by visitors and could have an appreciable effect on visitor experiences.

Major: The impact would be severely adverse or exceptionally beneficial, would occur in primary resource areas, or would affect the majority of visitors.

NO-ACTION ALTERNATIVE

Analysis

Under the no-action alternative, visitors to the Cape Lookout Village Historic District would have day-use opportunities to explore the district and see the outside of the stabilized historic structures. Limited vegetation clearing would be undertaken. Although no on-site interpretation would be provided, visitors would be able to gain some appreciation of the district's architectural styles and spatial arrangement by observing the structures. This would have a long-term (if limited) beneficial impact on visitor use and experience. Noise and other disruptions associated with construction activities in the historic district might introduce short-term minor to moderate adverse impacts on visitor use and experience, but these impacts would last only as long as the construction.

Cumulative Impacts.

Other projects either underway or proposed that would have an impact on visitor use and experience are facility improvements in the vicinity of the lighthouse, rehabilitation of the lighthouse, and implementation of recommendations from the "Draft Cultural Landscape Report" and *Commercial Services Plan*. The visitor experience in the lighthouse area of the historic district would be enhanced by the construction of new restrooms, removal of public vehicle parking to a location north of the district, and new facilities that provide better visitor orientation and interpretation of the historic district's significant resources. Eventual rehabilitation and opening of the lighthouse to regular visitor access would further increase opportunities for more visitors to experience this iconic structure and its relationship to other portions of the district and the South Core Banks.

Implementing recommendations for enhancing the integrity of the district's cultural landscape (preserving historic patterns of circulation, spatial relationships among the structures, etc.) would also improve the visitor experience, along with other anticipated improvements resulting from the *Commercial Services Plan* (in process). The above actions would have long-term beneficial impacts on visitor use and experience. Consequently, the beneficial impacts of the other actions described above, in combination with the adverse and beneficial impacts of the no-action alternative, would result in overall beneficial cumulative impacts on visitor use and experience. The no-action alternative would contribute a small component of adverse impacts to the beneficial cumulative impacts.

Conclusion

Long-term beneficial impacts would occur to visitor use and experience under the no-action alternative because visitors would have day use opportunities to see and receive some appreciation of the stabilized structures in the historic district. Short-term minor to moderate adverse impacts would occur to visitor use and experience during construction. The overall cumulative impacts on visitor use and experience would be beneficial.

ALTERNATIVE A

Analysis

Under Alternative A, visitors to the Cape Lookout Village historic district would have day use opportunities to explore the district and see the outside of the stabilized and rehabilitated historic structures. Three structures would be renovated for interpretation which would further visitor understanding of the Cape's social and architectural history. Enhanced interpretation, along with selective vegetation clearing to provide visitors a greater sense of the more open viewsheds that existed during the district's period of significance, would have long-term beneficial impacts on visitor use and experience. Noise and other disruptions associated with construction activities in the historic district may introduce short-term minor to moderate adverse impacts on visitor use and experience, but these impacts would last only as long as the period of construction.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on visitor use and experience are facility improvements in the vicinity of the lighthouse, rehabilitation of the lighthouse, and implementation of recommendations from the "Draft Cultural Landscape Report" and *Commercial Services Plan*. The visitor experience in the lighthouse area of the historic district would be enhanced by the construction of new restrooms, removal of public vehicle parking to a location north of the district, and new facilities that provide better visitor orientation and interpretation of the historic district's significant resources. Eventual rehabilitation and opening of the lighthouse to regular visitor access would further increase opportunities for greater numbers of visitors to experience this iconic structure, and its relationship to other portions of the district and the South Core Banks. Implementation of recommendations for enhancing the integrity of the district's cultural landscape (e.g. preserving historic patterns of circulation, spatial relationships among the structures, etc.) would also serve to improve the visitor experience, along with other anticipated improvements resulting from the commercial services plan (in process). The above actions would have long-term beneficial impacts on visitor use and experience. Consequently, the beneficial impacts of the other actions described above, in combination with the adverse and beneficial impacts of alternative A, would

result in overall beneficial cumulative impacts on visitor use and experience. Alternative A would contribute a small component of adverse impacts to the beneficial cumulative impacts.

Conclusion

Long-term beneficial impacts would occur to visitor use and experience under alternative A because visitors would have day use opportunities to view and receive interpretation of selected stabilized structures in the historic district. Selective vegetation clearing would provide visitors a greater sense of the more open viewsheds that existed during the district's period of significance. Short-term minor to moderate adverse impacts would occur to visitor use and experience during construction. The overall cumulative impacts on visitor use and experience would be beneficial.

ALTERNATIVE B

Analysis

Under alternative B, visitors to the Cape Lookout Village historic district would have day use opportunities to explore the district and see the outside of some stabilized and rehabilitated historic structures. Seven structures would be renovated for interpretation, which would greatly enhance visitor understanding of the cape's social and architectural history. Enhanced interpretation, along with selective vegetation clearing to provide visitors a greater sense of the more open views that existed during the district's period of significance, would have long-term beneficial impacts on visitor use and experience. Noise and other disruptions associated with construction activities in the historic district might introduce short-term minor to moderate adverse impacts on visitor use and experience, but these impacts would last only as long as the construction.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on visitor use and experience are facility improvements in the vicinity of the lighthouse, rehabilitation of the lighthouse, and implementation of recommendations from the "Draft Cultural Landscape Report" and *Commercial Services Plan*. The visitor experience in the lighthouse area of the historic district would be enhanced by the construction of new restrooms, removal of public vehicle parking to a location north of the historic district, and new facilities that provide better visitor orientation and interpretation of the historic district's significant resources. Eventual rehabilitation and opening of the lighthouse to regular visitor access would further increase opportunities for more visitors to experience this iconic structure and its relationship to other portions of the historic district and the South Core Banks. Implementing recommendations for enhancing the integrity of the district's cultural landscape (preserving historic patterns of circulation, spatial relationships among the structures, etc.) would also improve the visitor experience, along with other anticipated improvements resulting from the *Commercial Services Plan* (in process). The above actions would have long-term beneficial impacts on visitor use and experience. Consequently, the beneficial impacts of the other actions described above, in combination with the adverse and beneficial impacts of alternative B, would result in overall beneficial cumulative impacts on visitor use and experience. Alternative B would contribute a small component of adverse impacts to the beneficial cumulative impacts.

Conclusion

There would be long-term beneficial impacts on visitor use and experience under alternative B because visitors would have day use opportunities to see and receive interpretation

of selected stabilized structures in the historic district. Selective vegetation clearing would provide visitors a greater sense of the more open views that existed during the district's period of significance. Short-term minor to moderate adverse impacts would occur to visitor use and experience during construction. The overall cumulative impacts on visitor use and experience would be beneficial.

ALTERNATIVE C

Analysis

Under alternative C, visitors to the Cape Lookout Village historic district would have opportunities to explore the district and see stabilized and rehabilitated historic structures. Three structures would be rehabilitated for use by private leaseholders, which would provide overnight / extended-stay opportunities for a limited number of visitors. Most visitors would still visit the historic district on a day use basis. Eight structures would be renovated for interpretation, which would greatly enhance visitor understanding of the cape's social and architectural history. Enhanced interpretation, along with selective vegetation clearing to provide visitors a greater sense of the more open views that existed during the district's period of significance, would have long-term beneficial impacts on visitor use and experience. Noise and other disruptions associated with construction activities in the historic district might introduce short-term minor to moderate adverse impacts on visitor use and experience, but these impacts would last only as long as the construction.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on visitor use and experience are facility improvements in the vicinity of the lighthouse, rehabilitation of the lighthouse, and implementation of recommendations from the "Draft Cultural Landscape Report" and *Commercial Services Plan*. The visitor experience in the lighthouse area of the historic district would be enhanced by the construction of new restrooms, removal of public vehicle parking to a location north of the district, and new facilities that provide better visitor orientation and interpretation of the historic district's significant resources. Eventual rehabilitation and opening of the lighthouse to regular visitor access would further increase opportunities for more visitors to experience this iconic structure and its relationship to other portions of the historic district and the South Core Banks. Implementing recommendations for enhancing the integrity of the district's cultural landscape (preserving historic patterns of circulation, spatial relationships among the structures, etc.) would also improve the visitor experience, along with other anticipated improvements resulting from the *Commercial Services Plan* (in process). The above actions would have long-term beneficial impacts on visitor use and experience. Consequently, the beneficial impacts of the other actions described above, in combination with the adverse and beneficial impacts of alternative C, would result in overall beneficial cumulative impacts on visitor use and experience. Alternative C would contribute a small component of adverse impacts to the beneficial cumulative impacts.

Conclusion

Long-term beneficial impacts would occur to visitor use and experience due to substantially improved interpretive opportunities, selective vegetation clearing to enhance views, and the limited availability of historic structures to private leaseholders for overnight or extended-stay occupancy. Short-term minor to moderate adverse impacts would result from construction-related noise and disruption in the district. Overall beneficial cumulative impacts would be anticipated.

ALTERNATIVE D

Analysis

Under alternative D, visitors to the Cape Lookout Village historic district would have opportunities to explore the district and see stabilized and rehabilitated historic structures. A minimum of eight structures would be rehabilitated for use by a concessions operator, which would provide overnight / extended-stay opportunities for a larger number of visitors than alternative C. Visitors would still be able to visit the district on a day use basis. Eight structures would be renovated for interpretation, which would greatly enhance visitor understanding of the cape's social and architectural history. Enhanced interpretation, along with selective vegetation clearing to provide visitors a greater sense of the more open views that existed during the district's period of significance, would have long-term beneficial impacts on visitor use and experience. Noise and other disruptions associated with construction activities in the historic district might introduce short-term minor to moderate adverse impacts on visitor use and experience, but these impacts would last only as long as the construction.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on visitor use and experience are facility improvements in the vicinity of the lighthouse, rehabilitation of the lighthouse, and implementation of recommendations from the "Draft Cultural Landscape Report" and *Commercial Services Plan*. The visitor experience in the lighthouse area of the historic district would be enhanced by the construction of new restrooms, removal of public vehicle parking to a location north of the historic district, and new facilities that provide better visitor orientation and interpretation of the historic district's significant resources. Eventual rehabilitation and opening of the lighthouse to regular visitor access would further increase opportunities for more visitors to experience this iconic structure and its relationship to other portions of the district and the South Core Banks. Implementing recommendations for enhancing the integrity of the district's cultural landscape (preserving historic patterns of circulation, spatial relationships among the structures, etc.) would also improve the visitor experience, along with other anticipated improvements resulting from the *Commercial Services Plan* (in process). The above actions would have long-term beneficial impacts on visitor use and experience. Consequently, the beneficial impacts of the other actions described above, in combination with the adverse and beneficial impacts of alternative D, would result in overall beneficial cumulative impacts on visitor use and experience. Alternative D would contribute a small component of adverse impacts to the beneficial cumulative impacts.

Conclusion

Long-term beneficial impacts would occur to visitor use and experience under alternative D because of substantially enhanced interpretive opportunities, selective vegetation clearing to improve historic viewsheds, and the greater availability of structures to more of the visiting public under a concessions operation for overnight or extended-stay occupancy. There would be short-term minor to moderate adverse impacts on visitor use and experience during construction. The overall cumulative impacts on visitor use and experience would be beneficial.

ALTERNATIVE E

Analysis

Under alternative E, visitors to the Cape Lookout Village historic district would have opportunities to explore the district and see stabilized and rehabilitated historic structures.

A minimum of eight structures would be rehabilitated for use by a concessions operator or by private leaseholders. This would provide overnight / extended-stay opportunities for larger numbers of visitors than under alternative C if a concessions operator were to manage most of the rehabilitated properties. Opportunities for more of the visiting public to have overnight experiences would be correspondingly reduced by the number of properties held by private leaseholders. Visitors would still be able to visit the district on a day use basis.

Eight structures would be renovated for interpretation, which would greatly further visitor understanding of the cape's social and architectural history. Enhanced interpretation, along with selective vegetation clearing to provide visitors a greater sense of the more open views that existed during the district's period of significance, would have long-term beneficial impacts on visitor use and experience. Noise and other disruptions associated with construction activities in the historic district might introduce short-term minor to moderate adverse impacts on visitor use and experience, but these impacts would last only as long as the construction.

Cumulative Impacts

Other projects either underway or proposed that would have a cumulative impact on visitor use and experience are facility improvements in the vicinity of the lighthouse, rehabilitation of the lighthouse, and implementation of recommendations from the "Draft Cultural Landscape Report" and *Commercial Services Plan*. The visitor experience in the lighthouse area of the historic district would be enhanced by the construction of new restrooms, removal of public vehicle parking to a location north of the district, and new facilities that provide better visitor orientation and interpretation of the historic district's significant resources. Eventual rehabilitation and opening of the lighthouse to regular visitor access would further increase opportunities for more visitors to experience this iconic structure and its relationship to other portions of the district and the South Core Banks. Implementing recommendations for enhancing the integrity of the district's cultural landscape (preserving historic patterns of circulation, spatial relationships among the structures, etc.) would also improve the visitor experience, along with other anticipated improvements resulting from the *Commercial Services Plan* (in process). The above actions would have long-term beneficial impacts on visitor use and experience. Consequently, the beneficial impacts of the other actions described above, in combination with the adverse and beneficial impacts of alternative E, would result in overall beneficial cumulative impacts on visitor use and experience. Alternative E would contribute a small component of adverse impacts to the beneficial cumulative impacts.

Conclusion

Long-term beneficial impacts would occur to visitor use and experience under alternative E because of substantially enhanced interpretive opportunities, selective vegetation clearing to improve historic views, and the availability of structures to visitors under a concessions operation or to private leaseholders for overnight or extended-stay occupancy. There would be short-term minor to moderate adverse impacts on visitor use and experience during construction. The overall cumulative impacts on visitor use and experience would be beneficial.

CONSULTATION AND COORDINATION, APPENDIX, GLOSSARY, SELECTED REFERENCES, AND PREPARERS

CONSULTATION AND COORDINATION

During the preparation of this reuse plan and environmental assessment, the National Park Service has consulted with public agencies, organizations, and individuals having a stake in the project.

Internal NPS scoping was conducted at the national seashore headquarters on February 10-11, 2004. National seashore, NPS Southeast Regional Office (SER), and NPS Denver Service Center (DSC) staff conducted a public scoping workshop on April 24, 2004.

National seashore, SER, and DSC staff also conducted work sessions at the national seashore on June 22-23, 2004, and November 8-10, 2004, to develop plan alternatives. A "Choosing by Advantages" workshop was subsequently held March 1-2, 2005, to select the preferred alternative.

Public meetings on the preferred alternative were conducted on January 25-26, 2005.

Presentations on the plan have been made by national seashore Superintendent Bob Vogel to the following groups:

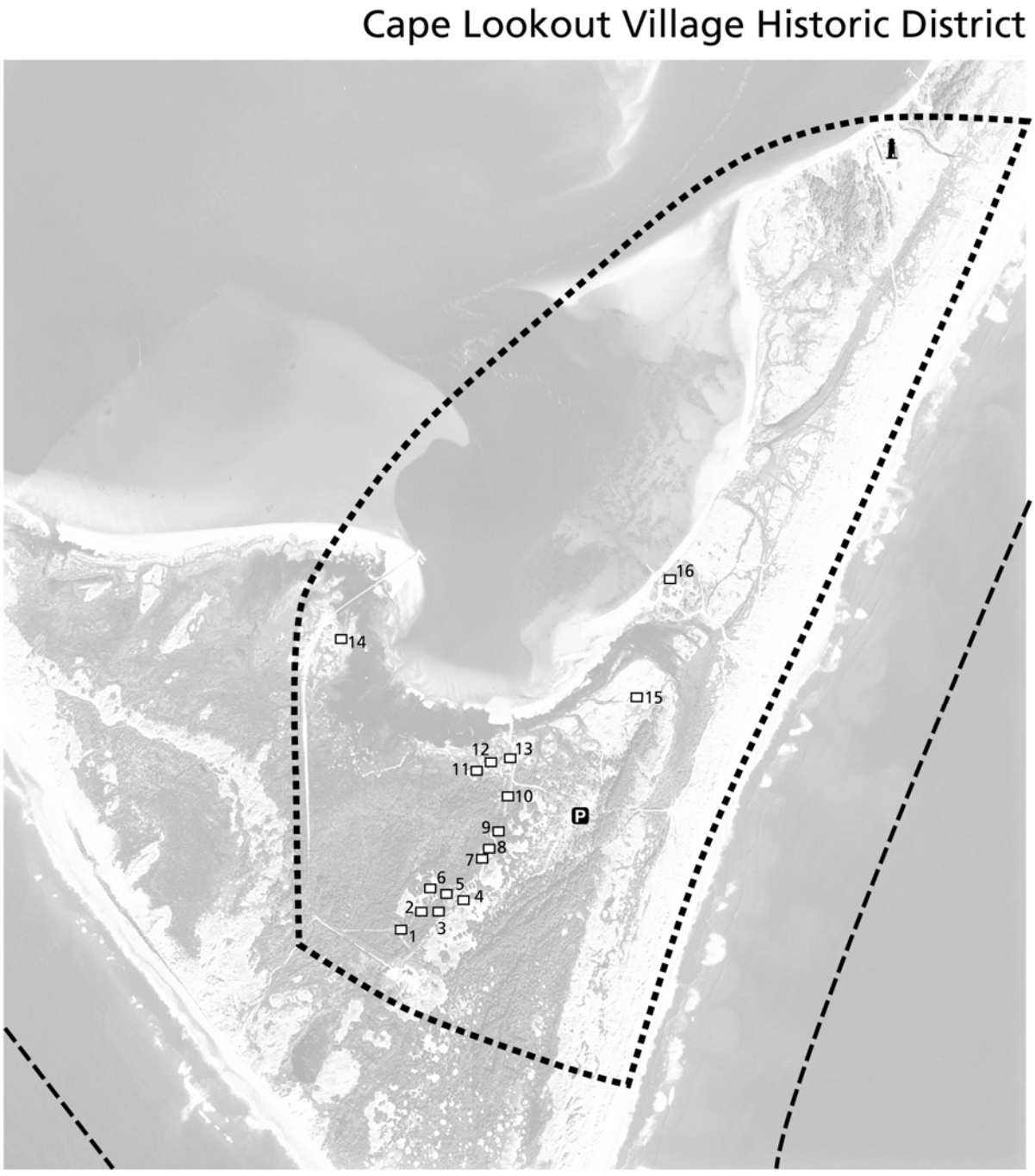
- North Carolina Maritime Museum, (Director, Beaufort, NC).
- Cape Lookout Environmental Education Center, (Board).
- Friends of Cape Lookout, (Board, Moorhead City, NC).

Consultation with the U.S. Fish and Wildlife Service took place on July 16, 2004 and in July 2006. The National Oceanic and Atmospheric Administration (Habitat Conservation Division) was sent a letter dated July 16, 2004. The North Carolina Department of Environment and Natural Resources (Division of Coastal Management) was sent a letter during scoping dated July 20, 2004. The National Park Service will seek a coastal zone consistency determination concurrent with the review of this document.

A representative from the North Carolina Division of Archives and History, State Historic Preservation Office, has visited the historic district and participated in planning meetings with NPS staff to provide input on treatment options. In a letter dated October 30, 2006, the National Park Service notified the North Carolina Division of Archives and History, State Historic Preservation Office, about the current project, and the intent to evaluate impacts on cultural resources in accordance with the requirements of Section 106 of the National Historic Preservation Act and the National Environmental Policy Act. The National Park Service will provide the state historic preservation officer with a copy of this plan and environmental assessment for compliance review.

Information about this project was placed on the NPS planning website in 2004. A draft of this document is on the national seashore's website for public review.

APPENDIX: BUILDINGS IN THE HISTORIC DISTRICT



National Seashore Boundary

Cape Lookout Village Historic District Boundary

Historic Structure

Parking Lot

Lighthouse

1 Lewis-Davis House (Carrie Arendell Davis)
2 Gaskill-Guthrie House
3 Guthrie-Ogilvie House (Luther Guthrie)
4 Setzer-Dawsey House
5 Life Saving Station Boathouse
6 O'Boyle-Bryant House (Bryant)
7 Fishing Cottage #1
8 Fishing Cottage #2
9 Life Saving Station
10 Gordon Willis House
11 Jetty Workers House #2
12 Jetty Workers House #1
13 1907 Keepers Quarters
14 Baker-Holderness House (Casablanca)
15 Seifert-Davis House (Coca-Cola House)
16 Les & Sally Moore House & Store

1 Lewis-Davis House (Carrie Arendell Davis)

2 Gaskill-Guthrie House

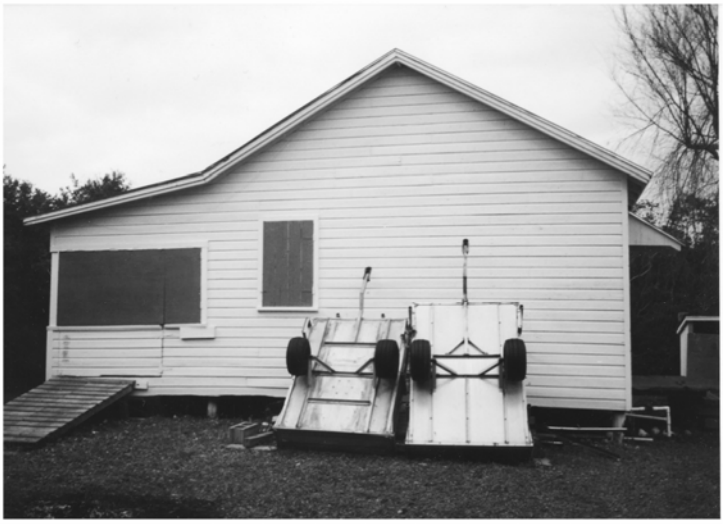
3 Guthrie-Ogilvie House (Luther Guthrie)

4 Setzer-Dawsey House

5 Life Saving Station Boathouse

6 O'Boyle-Bryant House (Bryant)

7 Fishing Cottage #1



8 Fishing Cottage #2

9 Life Saving Station

10 Gordon Willis House

12 Jetty Workers House #1

11 Jetty Workers House #2

13 1907 Keepers Quarters

14 Baker-Holderness House (Casablanca)

15 Seifert-Davis House (Coca-Cola House)

16 Les & Sally Moore House & Store

GLOSSARY

Cultural Landscape — A reflection of human adaptation and use of natural resources, 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.

Historic Properties — All cultural resources, including archeological resources, cultural landscapes, ethnographic resources, and historic structures/buildings that are eligible for or listed in the National Register of Historic Places.

Defensible Space — An area (either man-made or natural) around structures where vegetation is modified to slow the rate and intensity of an advancing wildfire, or to reduce the threat of structural damage due to falling tree limbs and other vegetation as a result of storms and other natural events.

Ethnographic Resource — A 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.

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

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