

APPENDIX D

IMPAIRMENT DETERMINATION FOR THE PROPOSED FORT PICKENS PIER AND FERRY SERVICE

IMPAIRMENT DEFINED

The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service (NPS) managers must always seek ways to avoid or minimize to the greatest degree practicable adverse impacts on park and monument resources and values. However, the laws do give NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values.

Although Congress has given NPS management discretion to allow certain impacts within parks, that discretion is limited by statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute impairment. However, an impact would more likely constitute impairment to the extent it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in the park's General Management Plan or other relevant NPS planning documents.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park.

HOW IS AN IMPAIRMENT DETERMINATION MADE?

NPS *Management Policies 2006* directs decision makers to use professional judgment in making an impairment determination. This means that the decision maker must consider any environmental assessment or analyses required under the National Environmental Policy Act (NEPA), consultations required under Section 106 of the National Historic Preservation Act, relevant scientific and scholarly studies, advice and insights offered by subject matter experts, and the results of public involvement activities.

Park resources and values that may be impaired include scenery; natural and historic objects; wildlife and the habitats that sustain them; ecological, biological, and physical processes; natural visibility; natural landscapes and soundscapes; water and air resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals.

Impairment findings are not necessary for visitor experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, etc. because impairment findings

relate to park resources and values. These impacts areas are not generally considered to be park resources or values according to the Organic Act.

PURPOSE AND SIGNIFICANCE OF GULF ISLANDS NATIONAL SEASHORE

Congress authorized Gulf Islands National Seashore (GUIS) as a unit of the NPS in the Act of January 8, 1971 (PL 91-660). The purpose of GUIS is to preserve and interpret for public use and enjoyment the Gulf Coast barrier islands and bayou ecosystem and its system of coastal defense fortifications.

The significance of GUIS stems in large part from the following factors:

- The Seashore contains one of the most complete collections of publicly accessible structures relating to the evolution of seacoast defense in the United States, representing a continuum of development from early Spanish exploration and colonization through World War II.
- The Seashore contains publicly accessible natural and scenic barrier islands, beach, dune, and water resource areas in close proximity to major population centers.
- Protected and undeveloped natural resource areas provide habitat for several endangered species in diverse ecosystems, as well as stop-over habitat for migratory birds and critical nursery habitat for marine flora and fauna. These areas serve as an enclave for complex terrestrial and aquatic plant and animal communities which characterize the northern Gulf Coast and fully illustrate to the public the natural processes which shape these unique areas.
- The land and marine archeological resources located throughout the Seashore represent a continuum of human occupation in a coastal environment and are important in enhancing the public knowledge of the past, including interactions between the earliest settlers and original inhabitants of this area of the Gulf Coast.
- The Seashore provides a benchmark to compare conditions in developed areas of the Gulf Coast to natural areas.
- The Seashore possesses a rare combination of recreational opportunities on publicly accessible undeveloped barrier islands, of which two are designated wilderness areas.

IMPAIRMENT DETERMINATION FOR THE PROPOSED FERRY PIER

As directed by the NPS Environmental Quality Division, in a memorandum dated July 6, 2010, an impairment determination must be completed for each resource impact topic carried forward and analyzed for the Preferred Alternative or selected action. The determination must include:

- 1) a brief description of the resource condition,
- 2) whether the resource is necessary to fulfill the park's purpose,
- 3) whether the resource is key to the natural or cultural integrity, or opportunity for enjoyment, of the park,
- 4) whether the resource is identified as a significant resources, and

- 5) a “because statement” as to why the proposed action would or would not result in impairment of the resource.

Twelve impact topics subject to the impairment determination were retained for analysis in the Fort Pickens Pier and Ferry Service. The table below summarizes the topics and indicates the impairment determination for each.

Table D1. Impairment Determination Summary for the Fort Pickens Pier and Ferry Service

Resource Topic	Is this resource necessary to fulfill the park’s purpose or key to the park’s resource integrity?	Would impairment of the resource result from implementation of the Preferred Alternative?
Geologic Resources and Geohazards	Yes	No
Air Quality	Yes	No
Soundscapes	Yes	No
Water Quality	Yes	No
Floodplains and Wetlands	Yes	No
Protected Species	Yes	No
Important Wildlife and Wildlife Habitat	Yes	No
Marine and Estuarine Resources	Yes	No
Unique Ecosystems, World Heritage Sites, and Biosphere Reserves	Yes	No
Non-native Species	Yes	No
Archaeological and Historical Resources	Yes	No
Energy Resources	Yes	No

The individual impact topics and their corresponding impairment discussion are given below.

GEOLOGIC RESOURCES AND GEOHAZARDS

The national seashore islands are significant in their east/west orientation, large supply of reworked sand, and susceptibility to hurricane forces. These elements combine to make them extremely dynamic, constantly changing environments that provide habitats and ecosystems, which, if properly cared for, can be natural laboratories for observing relatively rapid natural changes on populations of plants and animals. Santa Rosa Island, like all barrier islands, is a product of natural functions such as erosion/accretion and overwash. The island migrates to the west through the daily process of alongshore drift and to the north during extreme storm events through overwash.

Following hurricane impact, these same natural functions serve to rebuild the structure of the island. The island is fronted by a low-elevation beach berm that develops following a hurricane and can be over-topped by elevated water levels during strong frontal storms. Overwash during these storms is part of the post-hurricane recovery of the barrier island. The sediment deposited in these overwash fans is important to the recovery of the dunes and the vertical structure of the island. The dune system redevelops from and within the overwash sediments and through sediment delivery under fair-weather conditions.

The geologic resources are necessary to fulfill the park's purpose as they play a role in several of the significance factors for the park. They also are a key to the natural integrity of the coastal ecosystem. The geologic resources are not specifically identified as significant resources, but they play a key role in the barrier island processes.

Impacts from actions contained in the preferred alternative would not result in impairment of geologic resources in the park because the preferred alternative would only have negligible, short-term, adverse impacts during construction and minor, long-term, and adverse impacts after construction. The construction of a new pier may influence how geologic features and processes are affected by tides, currents, ship wakes, overwash, sea level rise, and wind, and would affect littoral drift and modify sediment transport. These impacts would not result in an impairment of the resources.

AIR QUALITY

Under the terms of the 1990 Clean Air Act (CAA) amendments, GUI is designated as a Class II airshed. By definition, Class II areas of the country are set aside for protection under the CAA. Protection is somewhat less stringent than in Class I areas. The primary means by which the protection and enhancement of air quality are accomplished are through implementation of National Ambient Air Quality Standards (NAAQS).

Available monitoring data from 2003 to 2007 were used to estimate air quality parameters for GUI as part of the *Air Quality in National Parks 2008 Annual Performance and Progress Report*. The five-year average of the annual fourth-highest 8-hour ozone concentration at GUI was determined to be greater than or equal to 0.076 ppm, and GUI was assigned the status of significant concern with an improving trend (NPS, 2009a in Environmental Assessment).

The air quality resources are necessary to fulfill the park's purpose as they play a role in the significance factors for the park, specifically providing a benchmark to compare conditions in developed areas to natural areas. They also are a key to the natural integrity of the coastal ecosystem. Air quality at GUI has been identified as a significant resource with its designation as a Class II airshed.

Impacts from actions contained in the preferred alternative would not result in impairment of air quality in the park because the preferred alternative would only have negligible, short-term, adverse impacts on air quality from construction equipment. The construction of the pier would affect local air quality. The impacts on air quality would be below or at the lower levels of detection, or absent. Any impact on air quality would be slight and short-term, and air quality would be expected to return to pre-existing conditions shortly after the alternative has been implemented. These impacts would not result in an impairment of the resources.

SOUNDSCAPES

The natural ambient soundscape is the aggregate of all the natural sounds that occur in the Fort Pickens Area with the physical capacity for transmitting natural sounds. The natural sounds occurring in the Fort Pickens Area include those generated by wind, waves, and wildlife. Soundscapes in the Fort Pickens Area also include the sound generated by barge and boat traffic in the intracoastal waterway, vehicle use along Fort Pickens Road, and aircraft noise associated with the nearby Pensacola NAS.

The soundscapes at GUIS are necessary to fulfill the park's purpose as they play a role in several of the significance factors for the park, specifically as they enhance protected and undeveloped areas. They also are a key to the natural integrity of the coastal ecosystem. Soundscapes are not specifically identified as significant resources, but they are an important part of both the natural environment and visitor experience on the island.

Impacts from actions contained in the preferred alternative would not result in impairment of soundscapes in the park because the preferred alternative would only have minor to moderate, short-term, adverse impacts on soundscapes during construction activities. The impacts on soundscapes would be localized to the construction area. Any impact on soundscapes would be short-term, and soundscapes would be expected to return to pre-existing conditions shortly after the alternative has been implemented. These impacts would not result in an impairment of the resources.

WATER QUALITY

The principal waterbodies associated with GUIS (Florida) are the Gulf of Mexico, Pensacola Bay, and Santa Rosa Sound. Pensacola Bay, Santa Rosa Sound, and waters of the Gulf of Mexico surrounding the Santa Rosa Island area have been designated as Outstanding Florida Waters (OFWs), indicating these bodies of water are worthy of special protection due to natural attributes. The purpose of the designation as an OFW is to protect existing good water quality. FDEP will not issue permits for direct pollutant discharges to OFWs, which would lower ambient (existing) water quality, or for indirect discharge, which would significantly degrade the OFW.

The project area, located on the western side of Santa Rosa Island, is located along the south side of Pensacola Bay. Pensacola Bay has been impacted by numerous non-point and point source pollution sources resulting in a reduction of natural biodiversity and productivity in the Bay. Non-point sources include urban stormwater runoff, agricultural runoff, marinas, boat traffic, the drainage of wetlands, and seepage of contaminated groundwater into surface waters. Most of these impacts are from the landward areas along Pensacola Bay.

Water quality resources are necessary to fulfill the park's purpose as they play a role in several of the significance factors for the park, including habitat for a variety of marine species, a benchmark to compare conditions in developed areas to natural areas, and recreational opportunities. They also are a key to the natural integrity of the coastal ecosystem. Water quality has been identified as a significant resource based on the OFW designation.

Impacts from actions contained in the preferred alternative would not result in impairment of water quality in the park because the preferred alternative would only have negligible to minor, short-term and long-term, adverse impacts on water quality. Additionally, the preferred alternative would have some long-term beneficial impacts to water quality. New construction would include a new pier and docking facilities, as well as ADA-compliant passages, to facilitate pedestrians to and from the ferry pier. The proposed ferry service and NPS and recreational boats utilizing the new pier would introduce additional vessel traffic (approximately three to four roundtrip ferry voyages daily); however, currently, recreational and commercial boating traffic is high within Pensacola Bay. Therefore, negligible impacts to water quality will be associated with the operation of the ferry service. Beneficial impacts to water quality would be decreased shoreline parking by personal boaters and fewer automobiles driving and parking in the Fort Pickens Area, reducing the potential for water quality impacts. Additionally, mitigation for this alternative would include appropriate Best Management Practices (BMPs), such as the use of turbidity curtains during in-water construction and development of Spill Prevention, Control, and

Countermeasures (SPCC) Plans for construction and ferry operation. These impacts would not result in an impairment of the resources.

FLOODPLAINS AND WETLANDS

To comply with Executive Order (EO) 11988 (*Floodplain Management*), NPS has prepared a floodplain Statement of Findings (SOF), which can be found in the Environmental Assessment as Appendix B; the SOF provides detailed information on the justification for use of the floodplains, description of site-specific flood risks, and proposed mitigation measures. Due to the low topography, virtually the entire Fort Pickens area (*i.e.*, 1,740 acres) is within the regulatory (100-year) flood zone, and flooding occurs on an average of 15 days/year. As a result, the entire 1,740-acre park unit is subject to inundation during major hurricanes. Even during smaller storms, rising waters result in the periodic inundation of portions of the Fort Pickens roadway.

The tidally influenced surf zone along the beach in the vicinity of the proposed pier location is considered a wetland area under NPS DO-77-1 (Wetland Protection). This tidally influenced surf zone is approximately 60 feet wide and extends along the beachfront within the project area. The wetland area does not contain wetland vegetation or hydric soils as a result of its location within the splash zone of breaking waves from Pensacola Bay. Southeast of the proposed pier location, there are also several freshwater emergent and freshwater forested/shrub wetlands.

Floodplains and wetlands are necessary to fulfill the park's purpose as they play a role in several of the significance factors for the park, including protected and undeveloped natural resource areas and a benchmark to compare conditions in developed areas of the Gulf Coast to natural areas. They also are a key to the natural integrity of the coastal ecosystem. The floodplain system serves to absorb wave energy during storms and spread sand and sediments in a way that sets back the successional clock and allows the island to move. These coastal floodplains and wetlands enhance biological productivity by supporting a high rate of plant growth, which helps to maintain biodiversity and the integrity of ecosystems. Floodplains and wetlands are not specifically identified as significant resources, but they play a key role in both the natural environment and barrier island processes.

Impacts from actions contained in the preferred alternative would not result in impairment of floodplains and wetlands in the park because the preferred alternative would have negligible to minor, short- and long-term, adverse impacts on floodplains and moderate, short- and long-term impacts to wetlands within the tidally influenced surf zone as a result of pier construction. New construction on the island would include construction of the pier, as well as modification of existing trails to be ADA-compliant. Approximately 0.16 acre of floodplains and 0.03 acres of wetlands would be impacted as a result of construction. Additionally, mitigation measures would include ferry and dock closures, warning signs, and evacuations as appropriate for protecting life and minimizing damage. Details regarding impacts to floodplains can be found in the floodplain SOF (Environmental Assessment, Appendix B). Wetland mitigation measures would include erosion and sedimentation control to protect the adjacent surf zone wetlands during and after construction, and eradication of invasive plants during construction activities. These impacts would not result in an impairment of the resources. Because the pier is a water-dependent activity and the proposed wetland impact is less than 0.1 acre, the project is exempt from the need for a wetland SOF.

PROTECTED SPECIES (FEDERAL & STATE LISTED THREATENED AND ENDANGERED SPECIES, AND OTHER SPECIES OF SPECIAL MANAGEMENT CONCERN)

Twenty-one listed species have been identified as likely to be present in the proposed project area based on species' preferred habitat and personal communication with GUIs, US Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) staff. These species include Florida manatee, sea turtles, American alligator, Gulf sturgeon, smalltooth sawfish, Santa Rosa beach mouse, and several shorebirds. Additional information on protected species is available in the Environmental Assessment and the Biologic Assessment (Appendix A in the Environmental Assessment).

Protected species resources are necessary to fulfill the park's purpose as they play a role in several of the significance factors for the park, including diverse ecosystems and providing a benchmark to compare conditions in developed areas to natural areas. They also are a key to the natural integrity of the coastal ecosystem and offer opportunities for enjoyment for visitors who wish to see the species. Protected species at GUIs are significant resources as they are a key part of the complex terrestrial and aquatic plant and animal communities which characterize the northern Gulf Coast barrier islands.

Impacts from actions contained in the preferred alternative would not result in impairment of protected species in the park because the preferred alternative would only have negligible to minor short-term and negligible long-term adverse impacts on protected species. The noise and activity associated with pier construction activities could have short-term adverse impacts on protected species. The ferry service operation could also have adverse impacts to protected species including increased potential for vessel strikes with marine protected species. The impacts on protected species are discussed in detail in the BA (Environmental Assessment, Appendix A). Additionally, mitigation for this alternative would include BMPs such as the use of turbidity curtains during in-water construction. Compliance would be fulfilled with the terms and conditions required by any regulatory agency. Mitigation measures to minimize impacts to protected species include conducting construction activities in accordance with Standard Manatee Construction Conditions (FLFWC, 2005 in Environmental Assessment) and the Sea Turtle and Smalltoothed Sawfish Construction Conditions (NMFS, 2006 in Environmental Assessment). These impacts would not result in an impairment of the resources.

IMPORTANT WILDLIFE AND WILDLIFE HABITAT

As described in the Environmental Assessment, there are no resident large terrestrial mammals that inhabit Santa Rosa Island; however, numerous smaller native mammal species do inhabit the island. Over 280 species of birds have been recorded at GUIs and include songbirds, waterfowl, wading birds, birds of prey, and shorebirds. Forty-seven species of reptiles have been identified at GUIs, including several state and federally listed species.

Wildlife and wildlife habitat are necessary to fulfill the park's purpose as they play a role in several of the significance factors for the park, including diverse ecosystems and providing a benchmark to compare conditions in developed areas to natural areas. They also are a key to the natural integrity of the coastal ecosystem and offer opportunities for enjoyment for visitors who wish to see the species. Wildlife and wildlife habitat at GUIs are significant resources as they are a key part of the complex terrestrial and aquatic plant and animal communities which characterize the northern Gulf Coast barrier islands.

Impacts from actions contained in the preferred alternative would not result in impairment of wildlife and wildlife habitat in the park because the preferred alternative would only have negligible to minor short-term and negligible long-term adverse impacts to wildlife and wildlife habitat associated with the construction of infrastructure and operation of the ferry system. Terrestrial wildlife and wildlife habitat may be affected through additional pedestrian traffic through the dunes. Improvement of existing trails to make them ADA-compliant may result in additional minor short-term impacts on terrestrial wildlife and wildlife habitat. Additionally, mitigation measures described in the BA in Appendix A of the Environmental Assessment would minimize impacts to wildlife and wildlife habitat associated with construction and ferry operation. These impacts would not result in an impairment of the resources.

MARINE AND ESTUARINE RESOURCES

More than 200 species of fish, several species of shellfish, and several marine mammals have been observed in waters surrounding GUIs. Myriad larval and young fish occupy the shallow waters around the islands and find food and protection in the seagrass beds. All of Pensacola Bay and waters surrounding GUIs are designated as Essential Fish Habitat (EFH), defined as those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity. The designation and conservation of EFH seek to minimize adverse effects on habitat caused by fishing and non-fishing activities. EFH in Pensacola Bay provides habitat for several species of fish and shellfish. Also, nearshore waters within one nautical mile of the mainland from Pensacola Pass to Apalachicola Bay and the Perdido Key area and the area north of Santa Rosa Island were designated as critical habitat by USFWS and NMFS. The waters surrounding the Florida District of GUIs contain approximately 1,930 acres of potential seagrass habitat in the Perdido Key area and waters north of Santa Rosa Island.

Marine and estuarine resources are necessary to fulfill the park's purpose as they play a role in several of the significance factors for the park, including diverse ecosystems and providing a benchmark to compare conditions in developed areas to natural areas. They also are a key to the natural integrity of the coastal ecosystem and offer opportunities for enjoyment for visitors who wish to see the species. Marine and estuarine resources at GUIs are significant resources by designation through critical habitat and EFH; they also are a key part of the complex terrestrial and aquatic plant and animal communities which characterize the northern Gulf Coast barrier islands.

Impacts from actions contained in the preferred alternative would not result in impairment of marine and estuarine resources in the park because the preferred alternative would only have negligible to minor, short- and long-term, and adverse impacts to estuarine and marine resources. The Fort Pickens ferry service would be operational, and in-water construction would be necessary. In-water construction may have short-term adverse impacts on marine and estuarine resources. The proposed ferry service and NPS and recreational boats utilizing the new pier would introduce additional vessel traffic (approximately three to four roundtrip ferry trips daily); however, currently, recreational and commercial boating traffic is high within Pensacola Bay. Therefore, negligible impacts to estuarine and marine resources will be associated with the ferry service. Additionally, mitigation associated with this alternative includes BMPs for avoiding any discharge of any materials from the ferry. Lookout and avoidance procedures would be in place to avoid marine species strikes. Mitigation measures described in the BA in Appendix A of the Environmental Assessment will minimize impacts to marine and estuarine resources associated with construction and the ferry operation. These impacts would not result in an impairment of the resources.

UNIQUE ECOSYSTEMS, WORLD HERITAGE SITES, AND BIOSPHERE RESERVES

There are two unique ecosystems in the vicinity of the proposed project area: an aquatic preserve and a barrier island ecosystem. The Fort Pickens Aquatic Preserve surrounds the western end of Santa Rosa Island and the eastern end of Perdido Key. The Fort Pickens Aquatic Preserve was designated by Florida Legislature in 1970. It encompasses 34,000 acres, including portions of Santa Rosa Sound, Pensacola Bay, and Big Lagoon, as well as part of GUIs. The submerged lands along the northern sides of the barrier islands are characterized by shallow saline waters, continuous and patchy seagrass beds, and salt marshes. Also, barrier island ecosystems, such as Santa Rosa Island, are unique and important natural areas that support a variety of wildlife. Barrier islands along the Gulf coast are especially important for nesting sea turtles, populations of small mammals, and as foraging and loafing habitat for a variety of resident and migratory birds (shorebirds, wading birds, and songbirds). No designated World Heritage Sites or Biosphere Reserves are located in the project vicinity.

These unique ecosystems are necessary to fulfill the park's purpose as they play a role in the significance factors for the park, specifically protected and undeveloped natural resource areas. They also are a key to the natural integrity of the coastal ecosystem. These areas are identified as significant resources by their designation as an aquatic preserve.

Impacts from actions contained in the preferred alternative would not result in impairment of unique ecosystems in the park because the preferred alternative would have negligible to minor, short- and long-term, and adverse impacts to unique ecosystems. The Fort Pickens ferry service would be operational, and in-water construction would be necessary. Turbidity and potential spills associated with construction and ferry operation may impact the aquatic preserve. Additionally, mitigation needed for this alternative includes BMPs, such as the use of turbidity curtains during in-water construction and development of an SPCC Plan for pier construction and ferry operation. These impacts would not result in an impairment of the resources.

NON-NATIVE SPECIES

Although non-native species such as the Norway rat (*Rattus norvegicus*), armadillo (*Dasypus novemcinctus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), black rat (*Rattus rattus*) (NPS, 2006c), hispid cotton rat (*Sigmodon hispidus*), and Chinese tallow (*Triadica sebifera*) are found in the Florida and Mississippi Districts of GUIs, these species are not known to occur in the project area.

Following Hurricane Ivan, GUIs observed a substantial spread of torpedograss (*Panicum repens*). The highly invasive grass was observed mainly along the northern shorelines of the barrier islands and the southern shorelines of the mainland, where a sizeable margin of it became established between the water and the uplands. Torpedograss may be present in the project area.

Control of non-native species is necessary to fulfill the park's purpose as several of the significance factors for the park could be impacted by non-native species, including diverse ecosystems and providing a benchmark to compare conditions in developed areas to natural areas. They can also affect the natural integrity of the coastal ecosystem. Control of non-native species is not specifically identified as a significant resource area at GUIs, but their control plays an important part of the natural environment at the barrier island.

Impacts from actions contained in the preferred alternative would not result in impairment by non-native species in the park because the preferred alternative would have negligible impacts on

non-native species. Construction vehicles and watercraft have the potential to inadvertently transport non-native species to the area. Construction activities will be conducted using BMPs to avoid the introduction of non-native species. These impacts would not result in an impairment of the resources.

ARCHAEOLOGICAL AND HISTORICAL RESOURCES

The Fort Pickens Area represents one of the greatest concentrations of historic coastal defense fortifications in the country and was in active military use for approximately 151 years. Fort Pickens was one of the three defensive works that comprise the historic crossfire designed to protect the Pensacola Navy Yard. The other forts were Fort McRee on Perdido Key (now submerged) and Fort Barrancas at the Pensacola Navy Yard. An area containing many of the important coastal defense fortifications was designated as a national historic district on the NRHP on May 31, 1972. The historic district covers the western three miles of the Fort Pickens unit of GUIS. The proposed pier would connect to the mainland within the boundaries of this designated historic district.

Prehistoric archaeological resources have not been documented at the Fort Pickens Area. Evidence of colonial and recent occupation is present within Fort Pickens. An archaeology study of the Fort Pickens Area was completed in 1973 (NPS, 1980). The 1973 survey found no prehistoric sites but did locate an important historic archaeological site, the Second Site of Pensacola, a Spanish settlement that was located on the island from the early 1700s until it was destroyed by a hurricane in 1752. The identified sites associated with the Second Site of Pensacola are not in the vicinity of the proposed pier.

On land, areas adjacent to the outside of the seawall are subject to continuous disturbance from wave action and would not be suitable areas for unknown intact archaeological resources. These areas at the existing fishing pier and the potential new pier location to the east of the fishing pier have been significantly disturbed by human activity from seawall construction and other modern construction activities (walkway to existing fishing pier, parking areas, and road). Because of these disturbances, these areas have a very low probability of containing unknown intact archaeological resources.

An underwater and beach zone archaeology survey was completed in 2010 in the vicinity of the existing fishing pier and the potential new pier location to the east of the fishing pier (Cook, 2010). The study was done using sidescan sonar and magnetometer surveys, with follow-up underwater and beach investigations. Several buried features, scatters of rubble, including concrete, brick, and other artifacts, and intact pilings, were located in the vicinity of the potential new pier that are associated with an 1830s-era wharf or pier structure. After consultation with SHPO, these resources were determined to be significant elements of the NRHP-listed historic district at Fort Pickens.

Archaeological and historic resources are necessary to fulfill the park's purpose as they are specifically noted as one of the significance factors for the park. They also are a key to the cultural integrity of the history of Fort Pickens. These areas are considered as significant resources by their designation as potentially eligible for listing on the NRHP.

Impacts from actions contained in the preferred alternative would not result in impairment of archaeological and historic resources in the park because proposed moderate, short- and long-term, adverse impacts to archeological resources would be appropriately mitigated through a

Memorandum of Agreement with SHPO. The proposed project would have negligible to minor, short- and long-term, adverse impacts to historic resources.

Construction for the proposed new pier would drive piles or set anchors in the bay bottom to support the pier. NPS has consulted with the State Historic Preservation Office (SHPO), and the agencies have agreed that the proposed pier construction would adversely affect historic features in the beach area but would avoid underwater near-shore resources. NPS and SHPO have agreed to an appropriate minimization and mitigation plan, incorporating pier placement and design recommendations. NPS and SHPO are in the process of executing a Memorandum of Agreement that would require NPS to recover and describe the discovered archaeological resources in a technical report to be provided to SHPO. SHPO determined that, under this plan, the unavoidable adverse effects to these resources would be properly and adequately mitigated.

Limited landward ground disturbance would take place, which would include construction of a wooden walkway that would bridge the historic seawall and allow access across the seawall to the pier. An existing access trail that is located between Buildings 15, 16, and 17 would be upgraded to meet ADA requirements, and installation of a covered passenger shelter on existing surfaces. The proposed construction would not physically disturb any of the historic resources. Project implementation would change the viewshed from the structures by introducing new elements, but other similar visual elements (existing fishing pier and concrete sidewalks) and modern construction (fencing and parking lots) exist with the viewshed.

The preferred alternative would also have beneficial impacts to historic resources. Arriving at the park by ferry would provide a memorable and historically significant means of visiting Fort Pickens and would not be out of character with the existing historic district. The Pensacola Bay area developed around maritime and naval activities, and the forts of GUIS, including Fort Pickens, are an integral part of the maritime history of the area. These impacts would not result in an impairment of the resources.

ENERGY RESOURCES

Vehicle use (for both transportation and maintenance) constitutes the primary source of energy consumption in the Fort Pickens Area. Other energy uses include electricity consumption at buildings and at the campground, and fuel consumption for landscape management (mowers and gas-powered maintenance equipment). The proposed project would not prevent access to any known energy resources in the project vicinity, such as coal, oil, or natural gas. The project would have no such impacts on the availability of these resources.

Energy resources are necessary to fulfill the park's purpose as they could affect the park's ability to provide for or support the significance factors for the park. They also are a key to ensuring the park's ability to provide for visitor opportunities. Energy resources are not specifically identified as significant resources, but they are important for providing for public use.

Impacts from actions contained in the preferred alternative would not result in impairment of energy resources in the park because the preferred alternative would only have minor, short-term, adverse impacts on energy resources during construction activities, and negligible to minor, long-term, and adverse impacts after the construction activities are complete. Energy resources would be consumed in the fabrication of construction materials and in the actual pier retrofitting process. The new pier would provide an alternative means to access Fort Pickens, reducing the number of vehicles and vehicle time spent idling in traffic or waiting for parking to become available. After construction, maintaining additional structures would require additional energy consumption and

costs than would the current condition or the no action alternative. Therefore, the additional energy consumption would be minimal compared to the overall energy use of the park. These impacts would not result in an impairment of the resources.