National Park Service
U.S. Department of the Interior

Assateague Island National Seashore
Maryland

Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation Environmental Assessment

August 2013

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Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation
Environmental Assessment

ASSATEAGUE ISLAND NATIONAL SEASHORE

Worcester County, Maryland
August 2013

The National Park Service (NPS) at Assateague Island National Seashore has prepared this environmental assessment to analyze the effects of removing and relocating the Bayside Picnic and South Ocean Beach Parking Areas, located in Maryland. The purpose of this project is to remove and relocate the Bayside Picnic and South Ocean Beach Parking Areas to locations that are less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore.

Two alternatives were analyzed for meeting the objectives of the plan:

Alternative A, No Action / Continue Current Management: The National Park Service would continue to use and maintain the existing Bayside Picnic Parking Area, the South Ocean Beach Parking Area, and Life of the Dunes Trail Parking Area with no changes to the current infrastructure or locations. This alternative represents a continuation of existing management and provides a baseline for evaluating the impacts of the action alternative.

Alternative B, Removal and Relocation of Parking Areas: The existing Bayside Picnic, South Ocean Beach, and Life of the Dunes Trailhead Parking Areas would be removed and the Bayside Picnic Parking Area and South Ocean Beach Parking Area would be relocated to locations that are less exposed to the elements and less susceptible to damage from future storm events. Implementing these approaches would provide future visitor access to these areas of the national seashore and limit operational expenses associated with maintaining the existing parking area locations. Additionally, the removal of the existing parking area at South Ocean Beach would enable natural processes to prevail, allowing the build-up of primary dunes, increasing stabilization, and allowing for better management of the dune landscape.

Neither of the alternatives analyzed in this environmental assessment are likely to result in significant environmental impacts.

PUBLIC COMMENT

If you wish to comment on the environmental assessment, you may mail comments to the name and address below or post comments online at http://parkplanning.nps.gov/asis. This environmental assessment will be on public review for 30 days. 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.

Please address written comments to:
Deborah Darden, Superintendent
Assateague Island National Seashore
Attn: Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation EA
7206 National Seashore Lane
Berlin, MD 21811

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Chapter 1: Purpose Of and Need for Action

ASSATEAGUE ISLAND NATIONAL SEASHORE

On September 21, 1965, Public Law 89-195 established Assateague Island National Seashore as a unit of the National Park System to protect the natural resources and recreational values of Assateague Island and adjacent coastal waters. The authorized boundary includes approximately 48,700 acres of land and water in Maryland and Virginia. Of this, 8,400 acres in Virginia are managed as Chincoteague National Wildlife Refuge, and 600 acres are managed as Assateague State Park in Maryland. The mission of the national seashore is to preserve the unique coastal resources of Assateague Island and the natural ecosystem conditions and processes upon which they depend, while providing high quality resource-based recreational and educational opportunities.

Today, Assateague Island National Seashore is nationally significant because it:

- is part of a natural system with geologic processes unique to barrier islands, characterized by constant change both seasonally and daily, subtle and dramatic.
- is one of the last surviving undeveloped shorelines along the east coast of the United States. Assateague's 37 miles of barrier beach and bay are a remnant of a natural continuum of islands that once stretched from Cape Cod to Mexico.
- is characteristic of the ecological habitats normally associated with barrier island systems including ocean, beach, dunes, maritime forest, inlets, salt marshes, and bays.
- is a permanent and temporary home to a great diversity of land and aquatic life, including rare species that depend on the unique habitats that result from the overlap of northern and southern habitat zones and the confluence of estuarine and ocean waters.
- is a critical natural landform in the path of the Atlantic Flyway serving as a major stopover for migratory birds.
- is one of the few publicly accessible places along the developed East Coast where visitors can experience unimpaired seashore values such as clean ocean water and beaches, undeveloped bay and marshlands, natural sounds, quiet, solitude, natural viewsheds and night skies.
- is a premier outdoor recreational and educational resource offering outstanding opportunities for hiking, camping, nature study, beach combing, fishing, hunting, shellfishing, swimming, birding, biking, picnicking, recreational off-road vehicle (ORV) use, as well as many other leisure and educational activities.
- is home to the Assateague feral horses made famous by the book "Misty of Chincoteague" and provides a unique opportunity to view free-roaming horses in a natural barrier island setting.

PROJECT BACKGROUND

The Bayside Picnic Parking Area is located on Chincoteague Bay, just west of the Bayside Camping Area, and at the terminus of Bayside Drive (see figure 1). Bayside Drive turns west off of Bayberry Drive approximately ¼ mile south of the national seashore entrance station. The parking area provides access to various activities on Chincoteague Bay including boating, shellfishing, sunbathing, and picnicking, to name a few.

The South Ocean Beach Parking Area is located approximately 1 ¼ miles south of the national seashore entrance station to the southeast of the roundabout (see figures 1 and 2). The parking

area provides access to South Ocean Beach and the paved bike path along Bayberry Drive. The Life of the Dunes Nature Trail Parking Area is located approximately 1 ¼ miles south of the national seashore entrance and to the southwest of the roundabout (see figures 1 and 2). The parking area provides access to the Life of the Dunes Nature Trail and the bike path. This parking area also serves as overflow for South Ocean Beach during peak visitation.

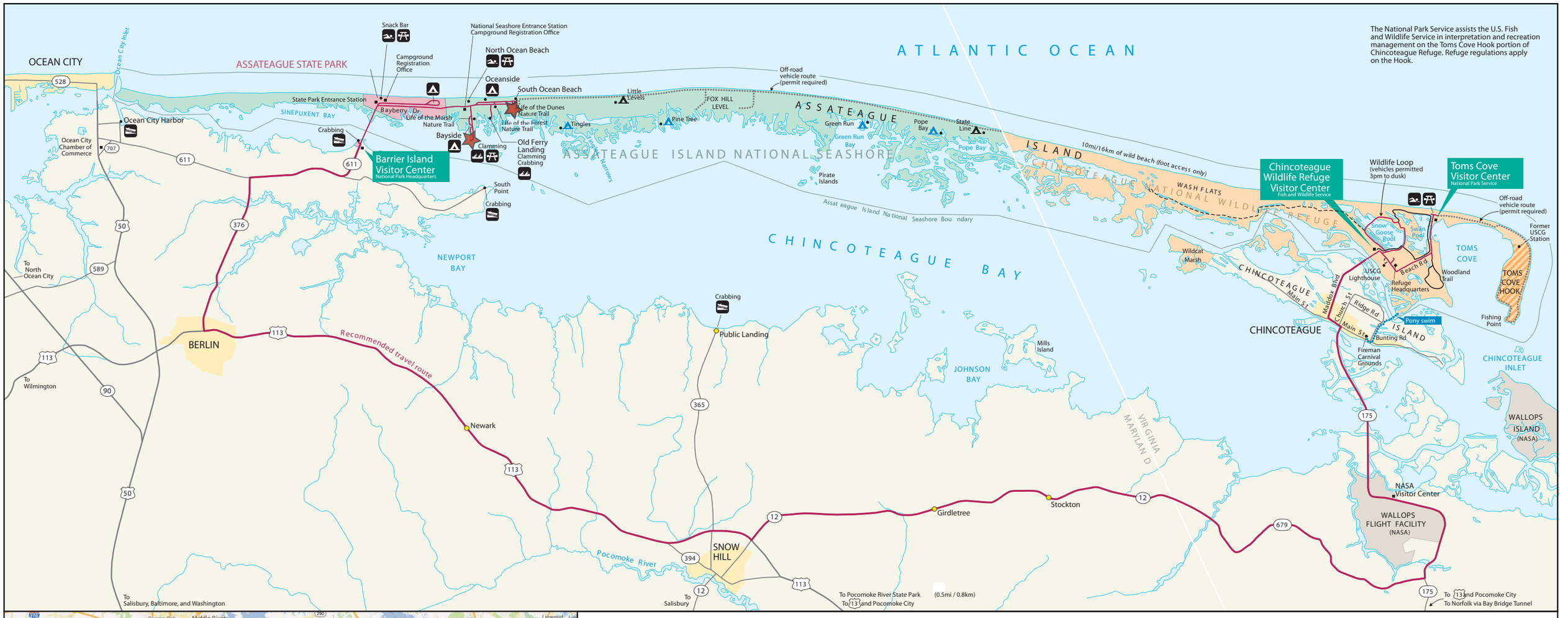
In October, 2012 Hurricane Sandy affected 24 states from Florida to New England causing hundreds of millions of dollars of damage to property. Between October 26 and 30, 2012, President Obama issued Major Disaster declarations in the States of New Hampshire, New York, and Connecticut; and Emergency declarations in the States of New Hampshire, Virginia, West Virginia, Delaware, Rhode Island, Pennsylvania, Maryland, Massachusetts, and the District of Columbia. These declarations in the states of New York, New Jersey and Maryland entitle eligible projects to receive relief through the Emergency Relief for Federally Owned Roads program which supports the federal response to the disasters and emergencies. Established in 1977, the mission for the Emergency Relief for Federally Owned Roads' program is to provide funding and engineering services to restore access to public lands.

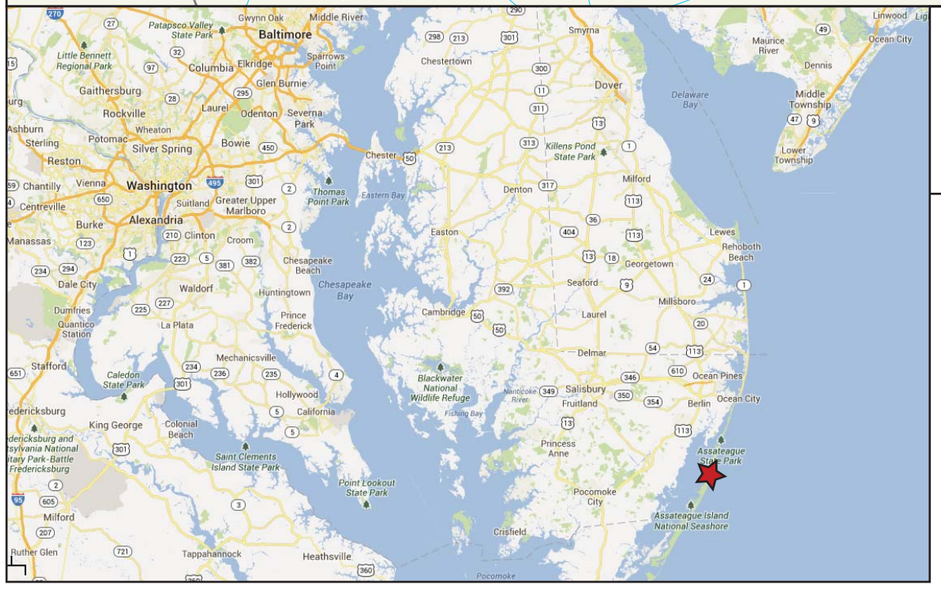
In response to the immediate need to repair damage from the hurricane and to reestablish visitor services, preliminary damage survey reports were prepared to identify and document specific work items to be completed. The damage survey reports for the Bayside Picnic and South Ocean Beach Parking Areas are summarized below. Both parking areas are located in the northern half of the national seashore within the state of Maryland. The NPS disaster number for this project is MD2013-1-NPS.

Bayside Picnic Parking Area (PMIS 194834) – The initial damage survey reports prepared for this project identified the need to remove and replace approximately 650 square yards of existing asphalt pavement in kind and to reconstruct a previously existing boardwalk which had washed away during the storm. The asphalt parking area was designed to accommodate up to 75 vehicles, but has been eroding away due to storm activity over the past 10 years. As a result, the parking area has been reduced in size or moved farther from the shore's edge several times. The national seashore has since determined that the existing location of the parking area remains vulnerable to future storm activity and has requested that it be relocated to an area less susceptible to damage.

South Ocean Beach Parking Area (PMIS 194874) – The initial damage survey reports prepared for this project identified replacement in kind, to include removal of sand, repair pavement and curb, replace curb stops, restore parking islands, and replace pavement markings. However, this asphalt paved parking area, designed to accommodate 66 vehicles, continues to be enveloped by sand as the barrier island is influenced by ocean currents.

The National Park Service assists the U.S. Fish and Wildlife Service in interpretation and recreation management on the Toms Cove Hook portion of Chincoteague Refuge. Refuge regulations apply on the Hook.





National Park Service lands

National Wildlife Refuge lands

State Park lands

Recommended travel route
The 50-mile distance between the north and south ends of the island takes about 1 ¼ hours to drive. We recommend the route shown in red on the map.

Refuge area closed to public March 15 through August 31

Hiking trail

Hiker/Biker trail (paved)

Off-road vehicle route (permit required)

Public campground

Campsite: backpack in only

Campsite: backpack or canoe in

Picnic area

Lifeguarded beach

Boat launch

Canoe access

Project Areas

North

0 1 2 Kilometers

0 1 2 Miles

Figure 1: Assateague Island National Seashore Map

Assateague Island National Seashore

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Existing Bayside Picnic Parking Area

Existing Life of the Dunes Nature Trail Parking Area

Existing South Ocean Beach Parking Area

0 50 100 200 Feet

0 12.5 25 50 Meters

North

Approximate Project Areas

Figure 2: Project Area Maps

Assateague Island National Seashore

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PURPOSE OF THE ACTION

The purpose of this project is to remove and relocate the Bayside Picnic and South Ocean Beach Parking Areas to locations that are more sustainable as a result of being less exposed to the elements, less susceptible to damage from future storm events, and to provide continued visitor access to these areas of the national seashore.

NEED FOR THE ACTION

The project is needed for the following reasons:

- The existing parking lot locations are vulnerable to reoccurring storm activity and susceptible to damage.
- The necessary clean up and repair to the parking areas required after reoccurring storm events places a burden on park operations.
- Prolonged parking area closures limit the national seashore's ability to provide high quality resource based recreational opportunities to the public.
- The continued erosion and encroachment of shorelines on the asphalt and boardwalks at both locations serve as a source of manmade debris into Chincoteague Bay, the Atlantic Ocean, and along the surrounding shoreline.
- Maintaining the current location of the South Ocean Beach Parking Area is altering the evolution of landforms on the island by affecting the natural inland migration of the adjacent sand dunes.

An environmental assessment is needed to evaluate the environmental impacts of removal and relocation of the Bayside Picnic and South Ocean Beach Parking Areas at Assateague Island National Seashore. The National Park Service has prepared this environmental assessment in cooperation with the Federal Highway Administration (FHWA) Eastern Federal Lands Highway Division. This environmental assessment has been prepared in accordance with the requirements of the National Environmental Policy Act of 1969, as amended and its implementing regulations (40 CFR 1500-1508), and NPS Director's Order #12, *Conservation Planning, Environmental Impact Analysis, and Decision-Making* (DO-12, 2011) and accompanying DO-12 Handbook (2001).

PROJECT GOALS AND OBJECTIVES

Objectives are specific statements of purpose, and describe what must be accomplished to a large degree for the project to be considered a success. This will allow the National Park Service to decide on alternative actions. The following objectives were developed for this environmental assessment:

- Relocate and redesign both the Bayside Picnic and South Ocean Beach parking areas to be more sustainable in both form and function.
- Design both parking areas to provide visitors safe access and circulation to adjacent areas and maintain compliance with the Americans with Disabilities Act (ADA).
- Minimize harm to sensitive natural or cultural resources when removing and relocating the parking areas.
- Maintain the current level of use and parking capacity for visitors at the Bayside Picnic and South Ocean Beach areas.
- Reduce the national seashore's footprint by using native materials where possible and remove existing asphalt.

RELATIONSHIP TO PREVIOUS PLANNING EFFORTS

The National Park Service has developed plans and implemented actions that could affect or be affected by removing and relocating the Bayside Picnic and South Ocean Beach Parking Areas. In addition, other regional plans and actions exist that could affect or be affected by the proposed action. These plans and actions include general management planning, alternative transportation planning, and resource management within Assateague Island National Seashore, and coastal zone management plans as described in chapter 3. The potential relevance of these planning efforts to the proposed action are described further in chapter 3 and considered within the cumulative analysis.

SCOPING PROCESS AND PUBLIC PARTICIPATION

Scoping is an early and open process to determine the breadth of environmental issues and alternatives to be addressed in an environmental assessment. Assateague Island National Seashore conducted both internal scoping with appropriate Federal Highway Administration Eastern Federal Lands Highway Division and NPS staff and external scoping with the public and interested or affected groups.

Internal scoping was conducted on June 4, 2013 by staff members from Assateague Island National Seashore, the Federal Highway Administration Eastern Federal Lands Highway Division, planning professionals from the NPS Denver Service Center, and design engineers. This interdisciplinary planning team defined the purpose and need, identified potential actions to address the need, determined what the likely issues and impact topics would be, and identified the relationship, if any, of the proposed action to other planning efforts at the national seashore.

The public and other non-governmental organizations were informed of the proposed action by a scoping letter distributed on July 8, 2013. Consultation with other agencies was also initiated by letter on July 8, 2013. The National Park Service also issued a press release July 8, 2013 to announce the environmental assessment and solicit public comments during a 30 day comment period ending on August 9, 2013.

ISSUES AND IMPACT TOPICS

This section identifies potential project-related issues, the resources, and other values (impact topics) that could be affected by the proposed action and its alternatives. Candidate impact topics for this environmental assessment were identified from: internal and public scoping; federal laws, regulations, and orders; NPS guidance such as *Management Policies 2006* (NPS 2006); and NPS knowledge of national park resources.

Based on the issues identified during scoping, the following impact topics were carried forward for further analysis in chapter 3 of this environmental assessment. A number of potential impact topics were initially considered but then dismissed from detailed analysis. These are also described below.

RETAINED IMPACT TOPICS

For the impact topics that were retained for detailed analysis, issues associated with these topics are addressed in the analysis of the proposed actions and alternatives in chapter 3. The issues were identified by the interdisciplinary team and by the public during the public scoping period.

Coastal Processes – In general, natural shoreline processes (such as erosion, deposition, overwash, shoreline migration) would be allowed to continue without interference by parking area relocation and removal activities. The relocation of these parking areas further inland would benefit these processes by allowing them to occur naturally without the need to maintain

visitor parking areas. There would continue to be alteration of the coastal environment related to storms, hurricanes, other natural events, and climate change. The National Park Service will comply with the provisions of Executive Order 11988 (*Floodplain Management*) and Maryland coastal zone management plans prepared under the Coastal Zone Management Act. As defined by the Coastal Zone Management Act, the actions subject to the enforceable polices of approved state management programs are any actions that (1) cause changes in the manner in which land, water, or other coastal zone natural resources are used, (2) cause limitations on the range of uses of coastal zone natural resources, or (3) cause changes in the quality or quantity of coastal zone natural resources. Parking area relocation and removal activities would occur within the coastal zone; therefore, this impact topic was retained for analysis. A federal consistency determination in accordance with Coastal Zone Management Act is included in appendix B.

Floodplains – According to Federal Emergency Management Agency (FEMA) flood insurance rate maps (community panel number 240083 0200 C), both the Bayside Picnic and South Ocean Beach Parking Areas fall within the 100-year floodplain. The National Park Service will comply with the provisions of Executive Order 11988 (*Floodplain Management*) and NPS Director's Order #77-2. A floodplains statement of findings was written in compliance with these orders and is included in appendix C. Therefore, this impact topic was retained for analysis.

Wetlands – There are several small wetland areas near the proposed parking areas and within the areas being considered for a pedestrian walkway near the South Ocean Beach Parking Area. These wetland areas were delineated and considered during planning and alternative preliminary design. The National Park Service will comply with the provisions of Executive Order 11990 (*Protection of Wetlands*) and NPS Director's Order #77-1. A wetlands statement of findings was written in compliance with these orders and is included in appendix D. There is potential for wetland impacts to occur; therefore wetlands were carried forward for further assessment.

Visitor Use and Experience and Recreation Resources – The parking areas currently have several different user groups including commercial use. Parking area relocation and removal activities could affect public access and the visitor experience of these areas of the national seashore. There could also be temporary closures of parking areas during construction that could affect visitors. Therefore, visitor use and experience is addressed as an impact topic in this environmental assessment.

Public Health and Safety – The relocation of both parking areas would increase the walking distance for some visitors depending on what area of the national seashore they were trying to access. Visitors to the South Ocean Beach Parking Area would need to cross the road in order to access South Ocean Beach. There would be potential concerns for people crossing the road that could affect the potential for accidents and/or collisions. Therefore, this impact topic was retained for analysis.

Park Operations – Temporary closure of parking areas could affect park operations during construction timeframes. Additionally, the use of a sea shell clam aggregate and clay surfacing material would result in a new standard of maintenance for the individual parking areas. As a result of the potential impacts to the national seashore staff, park operations were retained as an impact topic for further evaluation.

IMPACT TOPICS CONSIDERED BUT NOT FURTHER ANALYZED

This section explains why some impact topics were not evaluated in more detail. Impact topics were dismissed from further evaluation either because the resource does not occur in the area or because implementing the alternatives would have only negligible to minor impacts on the resource or value.

Air Quality – Emissions of particulates that could affect air quality, including visibility in the general vicinity of the project areas, could temporarily increase during preparation, installation,

and the subsequent removal of the parking areas from the use of motorized equipment at the site and from exhaust from gasoline- or diesel-powered vehicles and equipment. This equipment would also temporarily emit air pollutants. However, activities requiring the use of machinery would not be expected to be long-term. Mitigation measures described in more detail in the "Alternatives" chapter (such as dust suppression) would be employed to minimize or avoid potential effects on air quality. Because of the short-term and localized nature of the operation, impacts to air quality from preparation, installation, and the subsequent removal of the parking areas would be negligible. This impact topic was, therefore, dismissed from further analysis.

Ecologically Critical Areas or Other Unique Natural Resources – The proposed action and alternatives being considered would not affect any designated ecologically critical areas, wild and scenic rivers, or other unique natural resources, as referenced in the Wild and Scenic Rivers Act, NPS *Management Policies 2006*, 40 *Code of Federal Regulations* [CFR] 1508.27, or the 62 criteria for national natural landmarks. Therefore, the topic was not retained for further analysis.

Geological Resources – Both parking areas are located in areas that have been previously disturbed. They are underlain by loamy soils and sandy marine deposits. Bedrock blasting would not be needed to install project components. The area disturbed to relocate the parking areas would be limited to the near surface and therefore disturbance of soils would be negligible. Proposed site activities would not alter geologic features, and site geology would not affect the installation or maintenance of the parking areas. Therefore, geology was dismissed from further consideration.

Marine or Estuarine Resources – Parking area relocation and removal activities would be conducted on upland environments of the national seashore and a buffer would be maintained between these resources and the construction areas. Best management practices would be conducted during parking area relocation and removal activities to prevent any damage to estuarine resources by personnel, vehicles, or use. Stormwater management is addressed under the water quality impact topic. Therefore, impacts to marine or estuarine resources would be negligible and this impact topic was dismissed from further analysis.

Soundscapes – An important part of the NPS mission is to preserve the natural soundscapes. During relocation and removal of the parking areas and/or associated activities, sounds from equipment and work crews would increase. Best management practices would be employed during these activities to minimize noise. Sounds generated from relocation and removal of the parking areas and the associated activities would be temporary, lasting only as long as the construction activity was occurring.

In the long-term, the use of the relocated parking areas would not measurably increase sound levels from those produced by the parking areas in their existing locations. Adverse impacts on soundscapes due to relocation and removal activities would be negligible to minor. Therefore, this topic was dismissed from further analysis.

Special Status Species – The Endangered Species Act of 1973 requires examination of impacts to all federally-listed threatened, endangered, and candidate species. Section 7 of the Endangered Species Act requires all federal agencies to consult with the U.S. Fish and Wildlife Service to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitats. NPS *Management Policies 2006* and Director's Order #77 *Natural Resources Management Guidelines* require the National Park Service to proactively conserve listed species and prevent detrimental effects on these species, as well as to examine the impacts to federal candidate species, and state listed threatened, endangered, candidate, rare, declining, and sensitive species. In addition, many bird species in the project area are protected by the Migratory Bird Treaty Act of 1918. This act protects migratory birds, their parts, and nests or eggs.

Special status species and/or habitat are not known to occur within the vicinity of the two parking areas. Park records and field surveys did not identify any special status species and/or habitat

concerns. There would be no disturbance to wetlands or intertidal areas under the proposed action and the proposed new parking area locations would provide a larger set-back from the shoreline and a larger vegetative buffer that would benefit these sensitive habitats. This impact topic is, therefore, dismissed from further analysis.

Vegetation - According to **NPS** *Management Policies 2006*, the National Park Service strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants (NPS 2006). Parking area relocation and removal activities associated with the South Ocean Beach Parking Area would occur within the approximate footprint of the existing Life of the Dunes Nature Trail Parking Area and would therefore disturb, displace, and/or compact very little vegetation.

Parking area relocation and removal activities associated with the Bayside Picnic Parking Area would occur within a currently vegetated area. Under the proposed action, less than two acres of vegetation would be cleared for the new parking area. When compared to the similarly vegetated acreage of the national seashore, including nearby areas on the Bayside Peninsula, the square footage of the vegetation impacted would be minor. This impact topic is, therefore, dismissed from further analysis. The National Park Service is submitting a Consistency Determination (provided in appendix B) to the State of Maryland in accordance with the Coastal Zone Management Act and will comply with all applicable policies regarding vegetation.

Water Quality – Limited construction of parking areas would result in a limited amount of ground-disturbing activity (approximately 148,000 square feet)) and the associated potential for soil erosion and storm water runoff. Best management practices would be implemented to avoid and minimize potential effects to water quality and hydrology. Aquatic resources in the nearby Chincoteague Bay and Atlantic Ocean would not be adversely affected because erosion and sediment control measures and best management practices would be used to address runoff. Previously disturbed areas where the former parking areas stood would be allowed to re-vegetate. The National Park Service would coordinate with the Maryland Department of Environment with regard to any permit requirements to address stormwater. Any impacts to water quality would be expected to be negligible; therefore this impact topic was not further addressed.

Wilderness – There are no areas currently designated as wilderness in the national seashore. It is also unlikely that any land within the proposed project areas would meet the criteria established in the Wilderness Act of 1964 (16 United States Code 1131, et seq.) – that the "imprint of man's work substantially unnoticeable" – because of existing development and facilities. This impact topic is therefore dismissed from further analysis.

Wildlife and Fish – During construction there could be a temporary disturbance or displacement of wildlife common to the project areas and its environs. Adjacent areas, however, would continue to provide abundant nesting, escape, and protective cover. Some small animals may be forced to relocate to areas outside the general project area, but this is not expected to have any long-term adverse effect upon local populations. Wildlife would be expected to reoccupy the general project area following construction.

Assateague Island falls within the Atlantic migratory flyway and birding is a popular activity at the Bayside Picnic Area and throughout the park. Migratory birds frequently converge along the eastern shore of Sinepuxent Bay near the northwest portion of Assateague Island National Seashore during fall and spring migrations. The Bayside Picnic Area is popular with the birding community because it provides access to view this convergence. The shrub-scrub and wooded areas adjacent to the existing Bayside Picnic Parking Area provide a resting place for some of these birds. Under the proposed action, less than two acres of vegetation would be cleared for the new parking area. The entire Bayside Peninsula consists of approximately 78 acres and pockets of shrub-scrub and forested habitat can be found throughout the peninsula as well as on most of the islands numerous bayside peninsulas and along the western shore of Assateague Island. Clearing activities would take place in the winter prior to the peak spring bird migration

season and the vegetative area that would need to be cleared for the proposed action does not include any migratory bird nesting areas. Due to the small portion of shrub-scrub and wooded habitat that would be removed under the proposed action and the availability of similarly vegetated areas nearby, impacts to migratory birds would be considered minor.

Overall, any impacts to wildlife would be considered negligible to minor; therefore, this impact topic was dismissed from further analysis. The National Park Service is submitting a Consistency Determination (provided in appendix B) to the State of Maryland in accordance with the Coastal Zone Management Act and will comply with all applicable policies regarding wildlife and fish.

Archaeological Resources and Historic Structures – Efforts to identify cultural resources in the project area included a site files search at the Maryland Historical Trust, archival research, literature review, and a Phase I archeological survey conducted in May 2013. No archeological resources or historic structures were identified in the project area and no further investigations are required. The National Park Service has determined that implementation of the proposed action would have no effect on historic properties. Consultation with the Maryland State Historic Preservation Office and the Maryland Historical Trust confirmed their concurrence on the findings of the survey and the determination of "no historic properties affected." Copies of correspondence are included in appendix A.

The National Park Service would ensure that all personnel would be instructed on procedures to follow in case previously unknown archeological resources are uncovered during construction. Should construction unearth previously undiscovered archeological resources, work would cease in the area of any discovery and the park cultural resources specialist would be contacted. Consultation with the Maryland State Historic Preservation Officer would be conducted, in accordance with 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.

Cultural Landscapes – According to the NPS' *Cultural Resource Management* (NPS 1998) guideline, 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.

According to the NPS cultural landscapes inventory database, no cultural landscapes have been identified within the project area. Therefore, cultural landscapes were dismissed from further analysis.

Indian Trust Resources – Indian trust assets are owned by American Indians but are held in trust by the United States. Requirements are included in the Secretary of the Interior's Secretarial Order 3206, "American Indian Tribal Rites, Federal–Tribal Trust Responsibilities, and the Endangered Species Act," and Secretarial Order 3175, "Departmental Responsibilities for Indian Trust Resources." No Indian trust assets occur within Assateague Island National Seashore. Therefore, there would be no effects on Indian trust resources resulting from any of the alternatives. Therefore, the topic was not retained for further analysis.

Museum Collections – Museum collections (prehistoric and historic objects, artifacts, works of art, archival material, and natural history specimens) would be unaffected by the implementation of either alternative. Surveys completed in support of the proposed action did not yield any museum objects that would require accessioning or cataloguing. The park's museum collections would continue to be acquired, accessioned/cataloged, preserved, protected, and made available for access and use according to NPS standards and guidelines. Therefore, museum collections were not further analyzed as an impact topic.

Sacred Sites and Ethnographic Resources – Executive Order 13007 *Indian Sacred Sites* requires federal land managers to accommodate access to and ceremonial use of Indian sacred sites by Native Americans and to avoid adversely affecting the physical integrity of such sites. Procedures applicable to lands in national parks are defined in part 512, chapter 3 of the *Department of the Interior Departmental Manual*.

Management of ethnographic resources is addressed in chapter 10 of *NPS-28: Cultural Resource Management* (NPS 1998). This identifies ethnographic resources as "variations of natural resources and standard cultural resource types. They are subsistence and ceremonial locales and sites, structures, objects, and rural and urban landscapes assigned cultural significance by traditional users."

No ethnographic resources or sacred sites have been identified within the national seashore, and therefore these resources were dismissed from further consideration.

Energy Requirements and Conservation Potential – The National Park Service reduces energy costs, eliminates waste, and conserves energy resources by using energy-efficient and cost-effective technologies. Energy efficiency is incorporated into the decision-making process during the design and acquisition of buildings, facilities, and transportation systems that emphasize the use of renewable energy sources. Under any alternative, the National Park Service would continue to implement its policies of reducing costs, eliminating waste, and conserving resources by using energy-efficient and cost-effective technologies (NPS 2006). The National Park Service proposes to eliminate the asphalt at the parking areas, which would eliminate the need for future clearing of sand off the Ocean Beach parking area and other long-term maintenance and resurfacing of the asphalt. This would reduce future energy consumption to support these maintenance activities. The proposed alternatives would not appreciably change other short- or long-term energy use or conservation practices. The fuel used during parking area relocation and removal activities would not result in detectable changes in energy consumption at a local or regional level; therefore this impact topic was dismissed from further evaluation.

Environmental Justice – Executive Order 12898 *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. Guidelines for implementing this executive order under the National Environmental Policy Act are provided by the Council on Environmental Quality. According to the U.S. Environmental Protection Agency (1998), environmental justice is defined as:

> The fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. The goal of this "fair treatment" is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

Residents within the surrounding communities of the park are not disproportionately minority or low-income. The relocation and removal of the parking areas and associated activities would not disproportionately affect low-income or minority populations. Therefore, this topic was dismissed from further consideration.

Natural or Depletable Resource Requirements and Conservation Potential – As directed by NPS *Management Policies 2006* (NPS 2006), the National Park Service strives to minimize the short- and long-term environmental impacts of development and other activities through re-

source conservation, recycling, waste minimization, and the use of energy-efficient and ecologically responsible materials and techniques. Although energy and construction materials would be used for parking area relocation and removal activities under the action alternative, none of the proposed alternatives would change the park's overall energy consumption, use of nonrenewable (depletable) resources, or conservation potential. Thus, this topic was eliminated from further analysis.

Night Skies – Parking area relocation and removal construction activities would occur during daylight hours; therefore, these activities would not affect the visibility of night skies. No lighting would be used or installed in either parking area and therefore this impact topic was dismissed from further analysis.

Possible Conflicts with Other Land Use Plans and Policies – A portion of Maryland's Coastal Zone Management Program includes the Chesapeake Bay and Atlantic Bays Critical Areas. These areas were initially designated by the Atlantic Coastal Bays Protection Act of 2002, in an effort to improve and protect the quality of the coastal bays and include all lands within 1,000 ft. of the Chesapeake Bay or an Atlantic Bay. The Act was designed to reverse poor water quality trends by protecting the bays, tributaries, and the land surrounding these resources, as well as supporting multi-state agreements to protect the bays. Finally, in an action directly related to Assateague Island National Seashore and the project area, the Worcester County shoreline protection setback and buffer law requires a minimum 25-foot wide vegetated strip within a 50-foot setback on lots created after March 10, 1992 that lie along the tidal waters of the coastal bays and their tidal tributaries. The Bayside Picnic Parking Area falls within this critical area and needs to comply with this requirement as being within 1,000 ft. of the Chesapeake Bay or an Atlantic Bay. The appropriate enforceable policies of Maryland Coastal Zone Management Program have been addressed in the Consistency Determination submitted to the State, included as appendix B.

The proposed project would not interfere with plans or policies of Assateague State Park, Chincoteague National Wildlife Refuge, or other regional land use plans. The relationship of this project to other past, present, and reasonably foreseeable actions, within and adjacent to the park, is addressed in the cumulative impact analyses.

Prime and Unique Agricultural Lands – Prime farmland has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Unique land is land other than prime farmland that is used for production of specific high-value food and fiber crops. Both categories require that the land is available for farming uses (Council on Environmental Quality 1980). The map of prime and unique agricultural lands and other high-quality prepared by the American Farmland Trust (2002) indicates that these high-value resources do not occur in Worcester County, Maryland where the project area of concern is located. Therefore, this impact topic was not further evaluated. In addition the Worcester County prime farmland natural resource map does not identify any prime farmland within Assateague Island National Seashore (Worcester County Department of Natural Resources 2003). **Socioeconomics** – Section 1508.8 of the Council on Environmental Quality (1978) guidelines for implementing the National Environmental Policy Act establishes that "effects" include "ecological, aesthetic, historic, cultural, economic, social, or health." However, section 1508.14 clarifies that economic and social effects need to be considered only when they are interrelated with natural or physical environmental components regarding effects on the broader "human environment."

Socioeconomics were eliminated from detailed consideration because the alternatives would involve only negligible potential changes in the economic and social conditions of Worcester County (or elsewhere) over the life of the project.

During parking area relocation and removal activities, some visitors could avoid the area because of perceived reductions in experience quality and could choose alternative locations in or outside of the national seashore. However, parking area relocation activities would take place before the height of the visitor season and alternative parking areas would remain open and ac-

cessible. A loss of these visitors and their expenditures within Worcester County would represent a negligible impact on the economy of Worcester County. Therefore, this impact topic was dismissed from further analysis.

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Chapter 2: Alternatives

INTRODUCTION

This environmental assessment evaluates two alternatives: Alternative A, No-action / Continue Current Management and Alternative B, Removal and Relocation of Parking Areas, the NPS preferred alternative.

The no-action alternative describes existing conditions and current management direction regarding the two parking lots. It is included so that the potential impacts of the proposed action alternative can be directly compared to the existing baseline.

The action alternative proposed in this environmental assessment was developed by the National Park Service in cooperation with the Federal Highway Administration after careful assessment by subject-matter experts, including natural and cultural resource specialists, designers, park planners, and managers. The collective efforts of these individuals formed the basis for development of the proposed action alternative, Alternative B -Removal and Relocation of Parking Areas. Alternative B, the NPS preferred alternative.

ALTERNATIVE A: NO ACTION / CONTINUE CURRENT MANAGEMENT

Under the no-action alternative, the National Park Service would continue to use and maintain the existing Bayside Picnic Parking Area, the South Ocean Beach Parking Area, and Life of the Dunes Trail Parking Area with no changes to the current infrastructure or locations.

Under alternative A, the Bayside Picnic, South Ocean Beach, and Life of the Dunes Nature Trail Parking Areas would remain in the developed management zone, as determined by the existing general management plan and current general management planning. As such, these areas would continue to be managed to offer interpretive, educational, and management programs that provide a range of services to visitors.

Alternative A represents a continuation of the existing situation and provides a baseline for evaluating the impacts of the action alternative. Each aspect of the no action alternative is described more fully in the subsections that follow.

PARKING AREAS – CONDITION, LOCATION, SIZE, AND BUILDING MATERIALS

Bayside Picnic Parking Area

The existing Bayside Picnic Parking Area is located adjacent to Chincoteague Bay, just west of the Bayside Camping Area, and at the terminus of Bayside Drive (see figures 1 and 2). The parking area provides access to various activities on Chincoteague Bay including boating, shellfishing, sunbathing, and picnicking, to name a few.

The Bayside Picnic Parking Area is made of asphalt and has been eroding away as a result of storm activity over the past 10 years. The parking area was further damaged by Hurricane Sandy in October of 2012. During Hurricane Sandy, approximately 650 square yards of the asphalt parking area was destroyed and subsequently removed from the western edge of the parking area. The parking area originally was designed to accommodate approximately 63 vehicles, including 14 oversize vehicles, and 3 handicap spots. The loss of additional asphalt surface during Hurricane Sandy reduced the area available for traffic to circulate through and around the parking area.

Under alternative A, the Bayside Picnic Parking Area would remain in its current location. The asphalt that was destroyed during Hurricane Sandy would not be replaced and the parking area would remain at its current capacity. Routine maintenance and repairs would continue on the asphalt. In the event of future storm events, the Bayside Picnic Parking Area could be temporarily closed and the park staff would clean up and make necessary repairs to keep the parking area functional; however, as the bayside coastline continues to encroach on the parking area, portions of the asphalt parking area would not be replaced and the lot would be expected to shrink in size due to likely, future storm damage.

Stormwater management features at the existing Bayside Picnic Parking Area include drainage ditches around the perimeter of the parking area and culverts located east of the parking area. Stormwater is treated by sheetflow that is directed off of the parking surface. These drainage features routinely fill with sand and do not function as intended. Under alternative A, these features would be left in place and cleaned and repaired on an as needed basis.

Figure 3: Existing Bayside Picnic Parking Area inundated with water shortly after Hurricane Sandy and the resulting shoreline and asphalt encroachment

South Ocean Beach Parking Area

The existing South Ocean Beach Parking Area is located approximately 1 ¼ miles south of the national seashore entrance station to the southeast of the roundabout (see figures 1 and 2). The

parking area provides access to South Ocean Beach and the paved bike path along Bayberry Drive.

The South Ocean Beach Parking Area is made of asphalt and has been continuously enveloped by sand as the barrier island continues to be influenced by ocean currents, especially during storm events. During Hurricane Sandy, sand inundated the parking area, the asphalt paving and curbs were damaged, curb stops and pavement markings were washed away, and the parking islands were damaged. Several feet of sand needed to be removed in order to restore the 66 car capacity of the parking area.

Under alternative A, the South Ocean Beach Parking Area would remain in its current location. The curbs, curb stops, and parking islands that were damaged during Hurricane Sandy would not be replaced and/or repaired and the parking area would remain at its current capacity of 66 cars. Routine maintenance and repairs would continue on the asphalt. In the event of future storm events, the South Ocean Beach Parking Area could be temporarily closed and park staff would clean up and make necessary repairs to keep the parking area functional. Depending on the amount of sand that inundates the parking area during future storm events, removal could take increasingly greater time and resources to clear which would result in the potential for longer periods of closures. Additionally, routine maintenance would likely increase over time, even during non-storm conditions, as the shoreline retreats and the dune system evolves naturally. The existing South Ocean Beach Parking Area location is becoming more prone to capturing windblown sand, requiring more frequent removal operations and maintenance activity.

Stormwater management features at the existing South Ocean Beach Parking Area includes a series of drainage ditches and culverts around the perimeter of the parking area that drain towards a retention area at the northwest corner of the parking area (see figure 5). Drainage from this area continues under Bayberry Drive. Stormwater sheetflow off of the parking area is directed west to northwest into the shallow retention area and vegetated areas around the parking area. These drainage features routinely fill with sand and do not function as intended. Under alternative A, these features would be left in place and cleaned and repaired on an as needed basis.

Figure 4: Existing South Ocean Beach Parking Area pre-Hurricane Sandy (left) and covered with sand post-Hurricane Sandy (right)

Life of the Dunes Nature Trail Parking Area

The existing Life of the Dunes Nature Trail Parking Area is located approximately 1 ¼ miles south of the national seashore entrance and to the southwest of the roundabout. The parking area provides access to the Life of the Dunes Nature Trail and the bike path. This parking area also serves as overflow for South Ocean Beach during peak visitation.

The Life of the Dunes Nature Trail Parking Area is made of asphalt and sits farther inland from the South Ocean Beach Parking Area in a location less susceptible to damage during storm events. The Life of the Dunes Nature Trail Parking Area was not damaged during Hurricane Sandy and only minimal clean-up was required to restore its functionality. The parking area has a capacity of 11 cars and 3 oversize vehicles.

Under alternative A, the Life of the Dunes Nature Trail Parking Area would remain in its current location. Routine maintenance and repairs would continue on the asphalt. In the event of future storm events, the Life of the Dunes Nature Trail Parking Area could serve as an alternative parking area during temporary closures of the South Ocean Beach Parking Area.

Stormwater management features at the existing Life of the Dunes Nature Trail Parking Area include drainage ditches and a few culverts around the perimeter of the parking area (see appendix E). Stormwater is treated by sheetflow that is directed off of the parking surface. These drainage features routinely fill with sand and do not function as intended. Under alternative A, these features would be left in place and cleaned and repaired only if they became a hazard to public health and safety.

Figure 5: Existing Life of the Dunes Nature Trail Parking Area

PEDESTRIAN ACCESS AND CIRCULATION

Bayside Picnic Parking Area

The existing Bayside Picnic Parking Area sits immediately adjacent to the sandy beach of Chincoteague Bay. A previously existing boardwalk that connected the parking area to the shore along the western edge of the parking area was damaged and dismantled during Hurricane Sandy. The remnants of the boardwalk were removed and it has not been replaced. A concrete walkway currently connects the southeastern corner of the parking area to the restroom facilities. Otherwise, access and circulation around the Bayside Picnic Parking Area is informal and occurs along the sandy shores of Chincoteague Bay. The parking area and visitor amenities within the Bayside Picnic Area would remain ADA-accessible. These conditions would not change under alternative A.

South Ocean Beach Parking Area

The existing South Ocean Beach Parking Area sits adjacent to and inland from South Ocean Beach, on the eastern side of Bayberry Drive. A previously existing at-grade boardwalk that linked the parking area to the restroom facility and continued on to South Ocean Beach was washed away during Hurricane Sandy. The full boardwalk has not been replaced, but a smaller section was installed to bridge a swale along the edge of the asphalt that formed as a result of

changes to the surrounding dunes and landforms post-Hurricane Sandy. The new boardwalk connects the parking area to the newly installed restroom facilities and continues a short way to South Ocean Beach. All other access and circulation around the South Ocean Beach Parking Area is informal and occurs on the sandy perimeter and in between the dunes on the eastern side of the parking area, and the existing vegetation along the western edge. The parking area and visitor amenities at South Ocean Beach would remain ADA-accessible. These conditions would not change under alternative A.

Life of the Dunes Nature Trail Parking Area

The existing Life of the Dunes Nature Trail Parking Area is to the west of the South Ocean Beach Parking Area on the western side of Bayberry Drive. An asphalt bike path runs out of and along the eastern edge of the parking area. The bike trail goes north around the outside edge of the roundabout and continues along the western edge of Bayberry Drive. The Life of the Dunes Nature Trail head is just off the southeastern edge of the existing parking area. The trail is not paved and bikes are not permitted. The trail extends through the dunes to the south of the parking area. Additionally there are several visible social (unauthorized) trails cutting between vegetation and small interdunal wetlands to the east of the parking area and connecting across Bayberry Drive towards the South Ocean Beach Parking Area. The Life of the Dunes Nature Trail Parking Area serves as an overflow area for South Ocean Beach during the peak season and social trails have developed as a result of this use. The parking area and bike path at the Life of the Dunes Nature Trailhead would remain ADA-accessible. These conditions would not change under alternative A.

VISITOR AMENITIES

Bayside Picnic Parking Area

Under alternative A, the following existing at the Bayside Picnic Parking would be maintained and no new amenities would be proposed (see figure 6):

- 2 permanent restroom facilities, located off of the southwestern corner of the parking area;
- 10 to 12 picnic tables dispersed along the shoreline adjacent to the bay on the western side of the parking area;
- 6 grills dispersed among the picnic tables;
- Trash and recycling receptacles on either end of the west side of the parking area;
- A canoe, bike, and kayak rental stand operated by a concessioner located in the northeast corner of the parking lot;
- A bike rack located in front of the rental stand;
- 2 drinking water pumps; one in front of the restrooms and one in front of the rental stand; and
- An information kiosk along the shoreline to the northwest of the parking area.

South Ocean Beach Parking Area

The existing South Ocean Beach Parking Area provides the following visitor amenities (see figure 7):

- 2 removable restroom facilities located east of the parking area along the boardwalk;

- 1 shower / foot wash station with a bench located just east of the restroom facilities;
- Trash and recycling receptacles located on the eastern edge of the parking area near the boardwalk;
- An information kiosk was damaged during Hurricane Sandy and subsequently removed. The kiosk would be replaced under alternative A; and
- Bike rack.

Life of the Dunes Nature Trail Parking Area

The existing Life of the Dunes Nature Trail Parking Area provides the following visitor amenities (see figure 7):

- 1 bicycle rack at the southeastern corner of the parking area; and
- A trail head kiosk located at the trailhead of the Life of the Dunes Trail.

Figure 6: Bayside Picnic Parking Area - Alternative A, No Action / Continue Current Managment
Assateague Island National Seashore
U.S. Department of the Interior / National Park Service

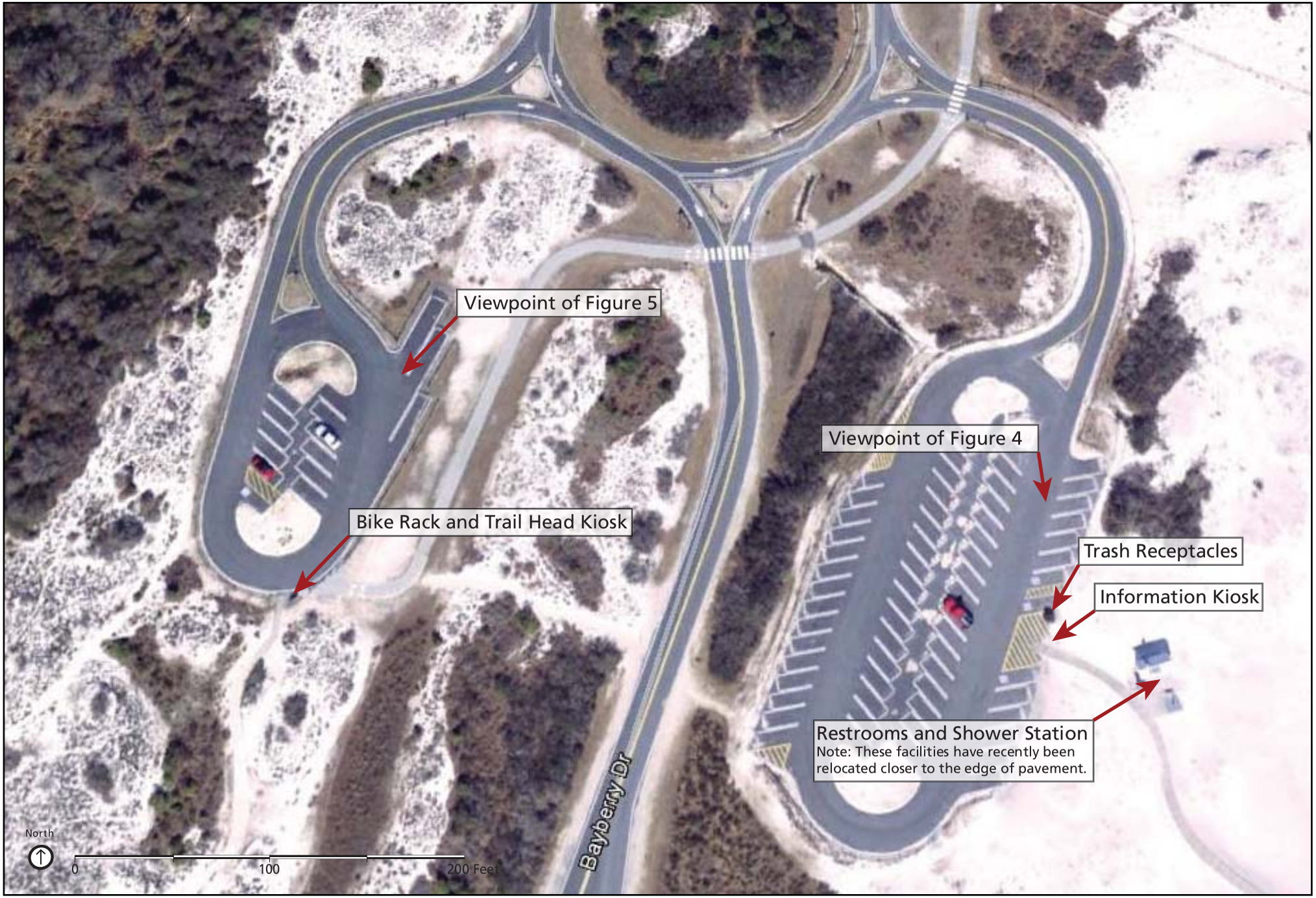

Figure 7: South Ocean Beach and Life of the Dunes Nature Trail Parking Areas
- Alternative A, No Action / Continue Current Managment
Assateague Island National Seashore
U.S. Department of the Interior / National Park Service

ALTERNATIVE B: REMOVE AND RELOCATE PARKING AREAS AND CORRESPONDING VISITOR AMENITIES (THE NPS PREFERRED ALTERNATIVE)

Under alternative B, the Bayside Picnic, South Ocean Beach, and Life of the Dunes Nature Trail Parking Areas would remain in the developed management zone, as determined by the existing general management plan and current general management planning. As such, these areas would continue to be managed to offer interpretive, educational, and management programs that provide a range of services to visitors.

PARKING AREAS – LOCATION, SIZE, AND BUILDING MATERIALS

Bayside Picnic Parking Area

Under alternative B, the Bayside Picnic Parking Area would be removed and relocated further inland to the east of the existing parking area (see figure 8). The proposed location was chosen for several reasons including the following:

- The proposed site would provide a more upland and protected location that would not be as prone to further shoreline erosion and future storm damage.
- The proposed site would avoid existing wetlands located along the northern edge of the Bayside Peninsula.
- The proposed site would maintain visitor access to the Bayside Picnic Area and provide a balance for different user types on the peninsula including campers, picnickers, birders, and boaters.
- The proposed site would allow for a 100-foot buffer of naturally occurring or planted vegetation between the proposed parking area and the high water line to be maintained in compliance with the Atlantic Coastal Bays Protection Act of 2002.
- The proposed site would allow for a minimum 25-foot wide vegetation strip within a 50-foot setback to be maintained in compliance with the Worcester County shoreline protection setback and buffer law.

The new parking area would be constructed from sea shell clam aggregate mixed with clay. Due to the surfacing material, parking spots would not be delineated with paint, but the new parking area would be designed to accommodate approximately 87 vehicles, including 12 oversize vehicles and 4 handicap spots (see sheet P01 in appendix E). A small portion of the existing asphalt at the Bayside Picnic Parking Area would remain and be utilized as a roundabout/loading zone and would include one handicap parking space.

The National Park Service evaluated several different surface materials and has determined that clay and shell aggregate is the optimum choice for the parking areas. This is based on previous experience, site specific conditions with sand surface, local weather, and site overwash during storm events. The clay and shell aggregate alternative has been successful in other coastal environments and is proposed for the parking areas. The debris that would be generated during storm events would be of natural materials, and require less clean up.

Construction of the new parking area would require the use of mechanized equipment and could require the need to import or export fill in order to recontour the new parking area accordingly. Potential sources for fill include the park's existing stock piles of natively sourced fill or locally acquired crushed road base. Any excess of native fill would be transported to the park's stock pile for use in future projects. Staging for construction would be located in the existing Bayside Picnic Parking Area and/or other nearby parking lots in the national seashore. Construction would take place during the off season when visitation is comparatively lower and would occur over a short term time frame of approximately 5 months. The new Bayside Picnic

Parking Area would be constructed before removal of the existing parking area commenced in order to minimize closure of the area to visitors.

Following construction of the new parking area, the northwestern portion of the existing parking area would be removed and restored. Restoration would include filling and recontouring the area to meet existing grade. Any fill not available on site would be imported from the Assateague Island National Seashore / Chincoteague National Wildlife Refuge shared stock piles of natively sourced sand and dirt fill. The stock piles are located in Virginia, approximately 20 miles south of the South Ocean Beach Parking Area and within the national wildlife refuge. Portions of the restored area would then be allowed to naturally revegetate. Existing park staff would monitor and manage for any invasive plant species that may occur in the area.

Maintenance of the aggregate mix would require monthly surface leveling by park staff during the peak season and occasional resurfacing with clam shells. While a small portion of asphalt at the Bayside Picnic Parking Area would remain, no additional asphalt would be used in the construction of the new parking area.

Under alternative B, stormwater management measures at the Bayside Picnic Parking Area would be implemented pending coordination with the Maryland Department of Environment and identification of appropriate measures. Site stormwater design features include an infiltration trench around the perimeter of the parking area as seen on figure 8. One reinforced concrete pipe (RCP) would be removed by the entrance to the new parking area (depicted on sheet M01 in appendix E). The National Park Service would use best management practices to address stormwater and water quality. Permitting requirements would be addressed with the State of Maryland as appropriate in advance of any construction activity.

South Ocean Beach Parking Area and Life of the Dunes Nature Trail Parking Area

Under alternative B, the Life of the Dunes Nature Trail Parking Area would be removed and the South Ocean Beach Parking Area would be relocated and reconstructed further inland in its place (see figure 9). The new parking area would be constructed from sea shell clam aggregate mixed with clay for the same reasons stated above. Due to the surfacing material, parking spots would not be delineated with paint, but the new parking area would be designed to accommodate approximately 76 vehicles, including two oversize vehicles and 3 ADA spaces adjacent to the boardwalk (see sheet P02 in appendix E).

Construction of the new parking area would require the use of mechanized equipment and could require the need to import or export fill in order to recontour the new parking area accordingly. As mentioned above, potential sources for fill include the park's existing stock pile of natively sourced fill or locally acquired crushed road base. Any excess of native fill would be transported to the park's stock pile for use in future projects. Staging for removal of the Life of the Dunes Nature Trail Parking Area and construction of the new South Ocean Beach Parking Area would be located in the existing South Ocean Beach Parking Area and/or other nearby parking areas in the national seashore. Construction would take place concurrently with construction at the Bayside Picnic Parking Area and would occur during the off season when visitation is comparatively lower. The construction period would occur over a short term time frame of approximately 5 months. The new South Ocean Beach Parking Area would be constructed before removal of the existing parking area commenced in order to minimize closure of the area to visitors.

Following construction of the new parking area, the existing South Ocean Beach Parking Area and the stormwater culverts would be removed and restored. Restoration would include filling and recontouring the area to meet existing grade. Any fill not available on site would be imported from the park's existing stock pile of natively sourced fill. Portions of the restored area would

then be allowed to naturally revegetate. Existing park staff would monitor and manage for any invasive plant species that may occur in the area.

As mentioned above, maintenance of the aggregate mix would require monthly surface leveling by park staff during the peak season and occasional resurfacing with clam shells. No asphalt would be used at the newly relocated South Ocean Beach Parking Area.

Under alternative B, stormwater management measures at the South Ocean Beach Parking Area would be implemented pending coordination with the Maryland Department of Environment and identification of appropriate measures. Site specific stormwater design features would include an infiltration trench around the perimeter of the parking area as seen on figure 9. The intent of stormwater management would be to restore the natural geomorphology in the area by removing one of the existing corrugated metal culverts (CMP) at the northern end of the existing South Ocean Beach Parking Area (as depicted on sheet M02 in appendix E) and allowing natural succession to occur. The National Park Service would use best management practices to address stormwater and water quality. Permitting requirements would be addressed with the State of Maryland as appropriate in advance of any construction activity.

PEDESTRIAN ACCESS AND CIRCULATION

Bayside Picnic Parking Area

Under alternative B, the proposed location for the new Bayside Picnic Parking Area would be further inland and farther away from the Chincoteague Bay shoreline. A new boardwalk path meeting Americans with Disabilities Act of 1990 standards would be constructed off of the southwestern edge of the new parking area. The boardwalk would provide access from the new parking area to the restroom facilities, the Chincoteague Bay, and to the relocated concessions rental stand. The parking area and visitor amenities within the Bayside Picnic Area would remain ADA-accessible. Within the wooded area between the relocated parking area and the Bayside Picnic Area, clearance between the vegetation and the boardwalk would be maintained. The southeastern portion of the existing parking area would be retained for use as a turn-around and loading area for boat trailers, commercial vehicles, and visitors, and would also provide handicap parking.

Sea shell clam aggregate mixed with clay would be used as a surfacing material; this would not allow for parking spots and/or traffic direction to be delineated with paint. As a result, traffic circulation and parking space locations would be suggested by split rail fencing within the centerline of suggested parking spaces. Signage would be posted to indicate that back-in parking would not be permitted in the new parking area. The perimeter of the new parking area may be marked with split rail fence or flexible fiberglass posts or other similar means in order to control traffic and discourage off-road parking.

South Ocean Beach Parking Area and Life of the Dunes Nature Trail Parking Area

Under alternative B, the proposed location for the South Ocean Beach Parking Area would be farther inland from South Ocean Beach and at the location of the existing Life of the Dunes Nature Trail Parking Area. The existing ADA-accessible asphalt bike path adjacent to the proposed location for the South Ocean Beach Parking Area would be maintained in its current location. An additional ADA-accessible at grade boardwalk path may be constructed off of the eastern side of the parking area, across Bayberry Drive, through the restored area and onto the beach. The parking area and visitor amenities within the Bayside Picnic Area would remain ADA-accessible. Any additional paths that led to road crossings would be marked with pedestrian cross walks to ensure public health and safety. A boardwalk path would also be constructed to provide ADA and visitor access to new restroom and shower facilities.

As mentioned above, due to the use of an aggregate surfacing material, parking spots would not be delineated with paint and split rail fencing would be used to suggest parking spot locations and traffic circulation within the new South Ocean Beach Parking Area. Signage would be posted to indicate that back-in parking would not be permitted in the new parking area. The perimeter of the new parking area may be marked with split rail fence, flexible fiberglass posts, or other similar means in order to control traffic, discourage off-road parking, and to direct visitors to designated beach access pathways.

VISITOR AMENITIES

Bayside Picnic Parking Area

Under alternative B, the following amenities would be provided at the Bayside Picnic Parking Area.

Amenities to remain include:

- The 2 permanent restroom facilities would remain in their current location;
- 10-12 picnic tables would remain in their current locations dispersed along the shoreline adjacent to the bay.
- The 2 drinking water pumps would remain in their current locations.

Amenities to be relocated or improved include the following:

- 8-10 additional picnic tables and a picnic pavilion or shade structure could be installed in the newly restored portion of the existing Bayside Picnic Parking Area;
- 4-9 additional grills would be dispersed among the picnic tables, for a total of 10-15 grills;
- Trash and recycling receptacles would be moved and placed adjacent to the restrooms;
- The park is currently in the process of developing a prospectus for future concession activities in the area. The future location of the canoe, bike, and kayak rental stand will be within the limits of the previously disturbed area of the existing parking lot (see also figure 9);
- The bike rack would be relocated in front of the rental stand;
- The information kiosk would be moved closer to the access path connecting each area; and
- A new shower tower / foot wash may be installed, as well additional moveable rest room facilities and changing stations adjacent to the new access path.

South Ocean Beach Parking Area

Under alternative B, the following amenities would be relocated or improved South Ocean Beach Parking Area:

- The 2 movable restroom facilities located at the existing South Ocean Beach Parking Area would be relocated to the eastern side of the proposed new parking area location;
- Moveable changing stations may be added to the eastern side of the proposed new parking area location;
- The existing shower / foot wash at the South Ocean Beach Parking Area would be removed and a new facility would be installed nearby the relocated bathrooms on the eastern side of the new South Ocean Beach Parking Area;

- Trash and recycling receptacles would be moved closer to the new parking area;
- A new kiosk could be installed providing additional information to visitors; and
- Bicycle racks would be installed adjacent to the new South Ocean Beach Parking Area.

The only amenity that would remain in its current condition would be the information kiosk located at the Life of the Dunes Trailhead.

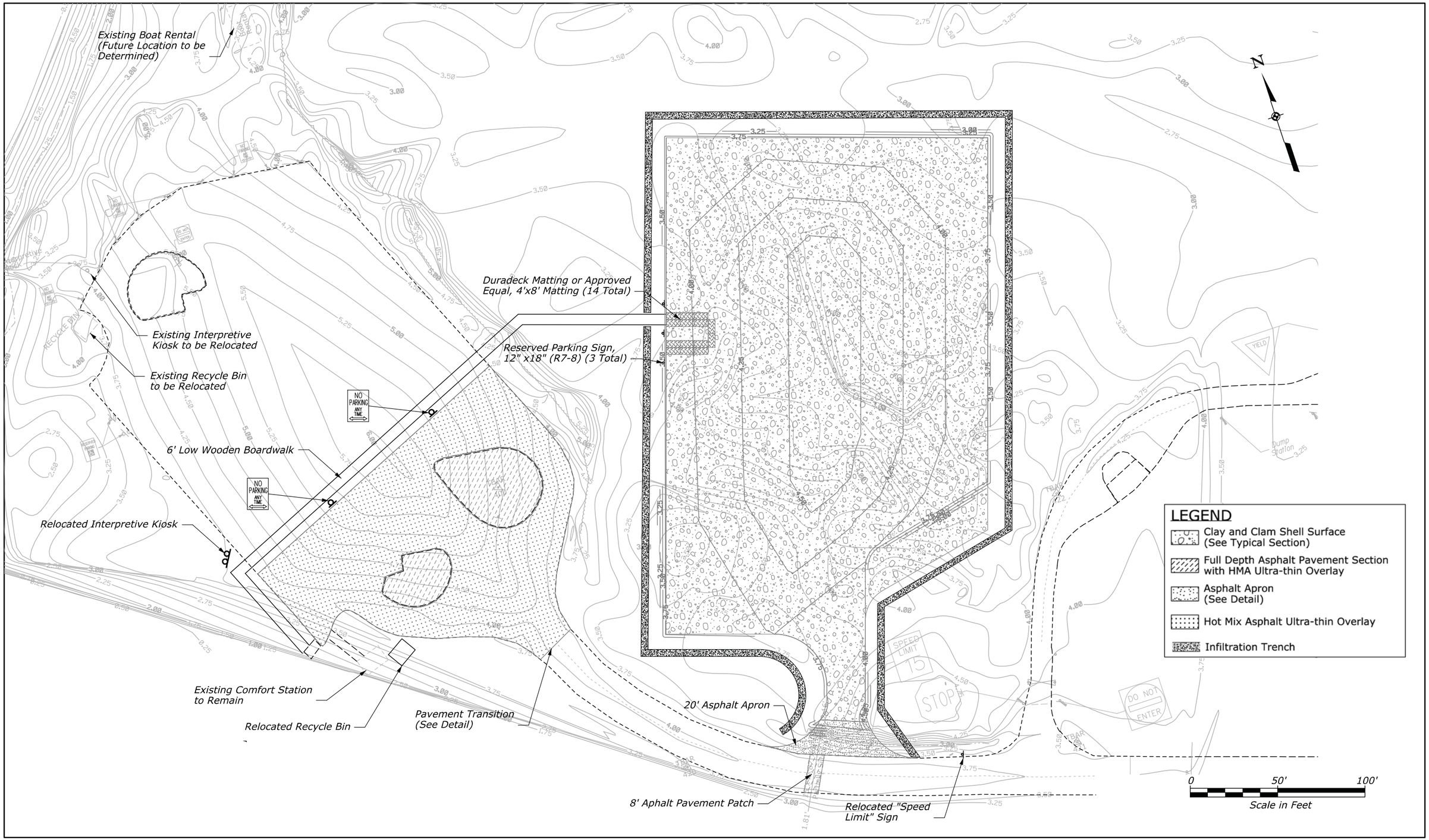

Figure 8: Bayside Picnic Parking Area - Alternative B, Remove and Relocate Parking Areas and Corresponding Visitor Amenities
Assateague Island National Seashore
U.S. Department of the Interior / National Park Service

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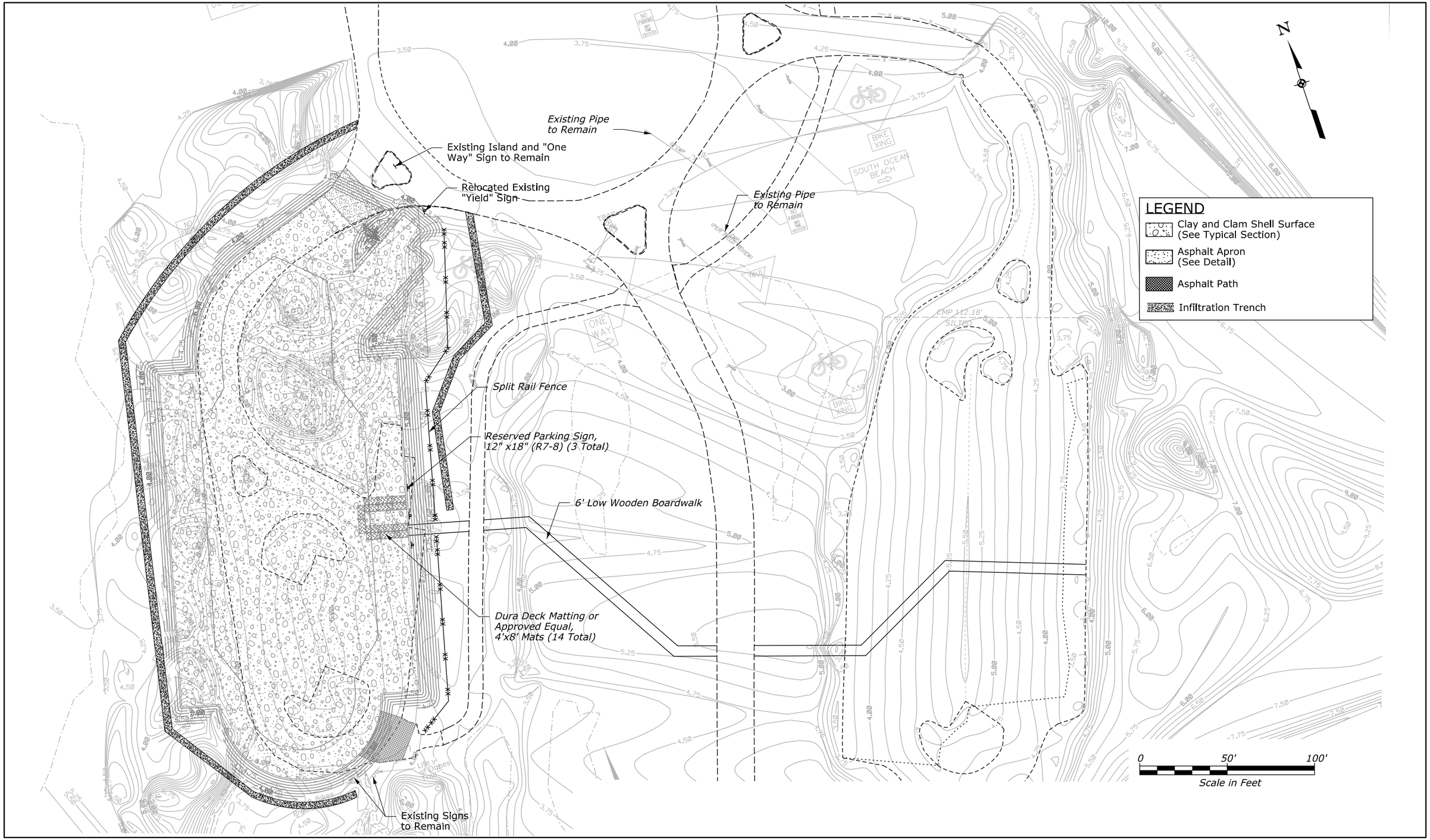

Figure 9: South Ocean Beach Parking Area - Alternative B, Remove and Relocate Parking Areas and Corresponding Visitor Amenities
Assateague Island National Seashore
U.S. Department of the Interior / National Park Service

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MITIGATION MEASURES

Mitigation is used to avoid, prevent, or minimize adverse impacts during project construction and project implementation. The following mitigation measures would be incorporated into alternative B, as needed. The National Park Service may need to obtain federal and state environmental permits and, as part of that process, additional mitigation measures could be required by other agencies.

The National Park Service commits to the mitigation measures identified in this section as a part of implementing the preferred alternative. The impacts of alternative B presented in chapter 3 were analyzed with these mitigation measures in place, with tailoring to meet site-specific conditions.

WATER RESOURCES (INCLUDING COASTAL PROCESSES, FLOODPLAINS, AND WETLANDS)

Identify specific provisions in construction contract(s) to prevent storm water pollution during construction activities, in accordance with the National Pollutant Discharge Elimination System permit program of the Clean Water Act and all other federal regulations, and in accordance with the storm water pollution prevention plan to be prepared for this project.

Plan and maintain buffers between areas of soil disturbance and wetlands or waterways.

Use soil erosion best management practices such as sediment traps, erosion check screen filters, and hydro mulch to prevent the entry of sediment into waterways.

Promptly remove and properly dispose of any hazardous waste that is generated in the project area.

Inspect equipment for leaks of oil, fuels, or hydraulic fluids before and during use to prevent soil and water contamination. Require contractors to implement a plan to promptly clean up any leaks or spills from equipment, such as hydraulic fluid, oil, fuel, or antifreeze.

Minimize onsite fueling and maintenance. If these activities cannot be avoided, fuels and other fluids in a restricted/designated area, and perform fueling and maintenance in designated areas that are bermed and lined to contain spills. Require provisions for the containment of spills and the removal and safe disposal of contaminated materials, including soil.

Take actions that would minimize effects on site hydrology and fluvial processes, including flow, circulation, water level fluctuations, and sediment transport. Take care to avoid any rutting caused by vehicles or equipment.

Conduct the action to minimize adverse effects on normal movement, migration, reproduction, or health of terrestrial fauna, including at low flow conditions.

Conduct the action to avoid degrading water quality to the maximum extent practicable. Employ measures to prevent or control spills of fuels, lubricants, or other contaminants from entering wetland areas. Ensure the action is consistent with state water quality standards and Clean Water Act Section 401 certification requirements.

Maintain appropriate erosion and siltation controls during construction.

Properly maintain fill material to avoid adverse impacts on aquatic environments or public safety.

VISITOR USE AND EXPERIENCE AND RECREATION RESOURCES

Share information with the public regarding implementation of this project and its effects on access, parking, and circulation through the national seashore. Distribute or post information at

entrance stations, on the park's website, at trailheads, at other visitor sites, and through press releases.

Develop and enforce an NPS-approved traffic and pedestrian control plan for use during construction. The plan would minimize disruption to visitors and park operations and ensure safety of the public, park employees, contractors, and residents. Require contractors to coordinate with park staff to minimize disruption of normal park activities. Inform construction workers and supervisors about the special sensitivity of park values, regulations, and appropriate housekeeping measures to be used.

Include specific provisions and implementation measures in the NPS/FHWA contract to prevent storm water pollution during construction activities, in accordance with the Clean Water Act's National Pollutant Discharge Elimination System permit program and all other federal, state, and local regulations. Require the construction contractor to develop and implement a storm water pollution prevention plan and dust control plan prior to construction. The National Park Service would provide contractor(s) with information related to storm water protection and dust control.

PUBLIC HEALTH AND SAFETY

Implement measures to close and/or redirect access and circulation in areas that would be affected by construction to ensure visitor health and safety. Provide information on alternatives that would help visitors achieve their goal while staying away from the work area.

Implement a traffic control plan during construction, as warranted. Include strategies to maintain safe and efficient traffic flow and keep full area closures to a minimum.

Implement measures to reduce adverse effects of construction on visitor health and safety.

PARK OPERATIONS

Coordinate activities of contractors and park staff to minimize disruption of normal park activities. Inform construction workers and supervisors about the special sensitivity of park values, regulations, and appropriate housekeeping measures to be used.

To minimize potential impacts on concessioners and visitors, consider stipulations on construction timing. For example, operate heavy construction equipment in noise-sensitive areas between 7 a.m. and 7 p.m. to minimize noise impacts. Consider timing of construction to occur during non-peak visitation period.

Prior to construction, conduct a meeting with concession operators, project managers, and business resources staff to provide information on anticipated issues that may occur.

GENERAL CONSTRUCTION BEST MANAGEMENT PRACTICES

Clearly state all protection measures in construction specifications.

Minimize the amount of ground disturbance for activities not directly related to construction, such as staging and stockpiling areas. Restore all staging and stockpiling areas following construction. Limit parking of construction and employee vehicles to designated staging areas or existing roads and parking lots.

Identify and define construction zones with construction tape, temporary fencing, or other material prior to any construction activity. Use the zone to confine activity to the minimum area required for construction. Stipulate that construction activities, including material staging and storage, cannot occur beyond the construction zone fencing.

Comply with federal and state regulations for the storage, handling, and disposal of all hazardous material and waste. If hazardous materials would be used on site, make provisions for storage, containment, and disposal. Provide the contractor with a copy of U.S. Environmental Protection Agency document *EPA 832-F-99-003, Storm Water Management Fact Sheet-Dust Control*. Require the contractor to submit a dust control plan prior to construction.

If recycled concrete or road base is used for backfill, ensure that it is free of waste metal products, debris, toxic material, or other deleterious substances and that it meets gradation and aggregate test requirements.

Backfill excavated areas with appropriate material and contour them so that, after settling, they will blend with the surrounding terrain.

Ensure that construction equipment uses the best available technology for sound dampening muffler and exhaust systems.

To save fuel and reduce noise and emissions, require contractors to develop and implement a plan that prevents excessive idling of all vehicles used in construction.

Require good housekeeping practices such as placing debris in refuse containers daily, emptying containers regularly, and prohibiting the burning or burying of refuse in the park.

ALTERNATIVES AND ACTIONS DISMISSED FROM FURTHER CONSIDERATION

The following options were considered during the early stages of the planning process but were dismissed based on their inability to meet the purpose and need and/or the objectives of the project. Not all of these options encompass an entire alternative, but rather various components of the alternatives.

USE OF ASPHALT PAVING

The use of asphalt paving would not meet the objectives of the proposed action and was therefore not carried forward as a component of an action alternative. The use of asphalt would not reduce the park's footprint since asphalt is not a native material. Additionally, use of asphalt would not fulfill the park's goal to remove asphalt in the park, nor reduce the potential for future redeposit of asphalt material as debris in the park as a result of storm activity.

Pervious pavers have been tried in the past, and were not highly successful. The types of pervious pavers do not remain anchored during storm events and would end up becoming debris. In addition, windblown sand covers the pavers, rendering them ineffective. The use of reinforced turf would not be highly successful in this island environment due to sandy conditions and lack of water to keep turf alive. Turf would also become covered in sand and would be difficult to maintain.

ALTERNATIVE LOCATIONS FOR THE PROPOSED BAYSIDE PICNIC AND SOUTH OCEAN BEACH PARKING AREAS

During initial design, alternative locations were considered for the new parking area locations. These potential locations are described below.

A site farther west of the chosen location was considered for the Bayside Picnic Parking Area, but rejected due to the proximity of this site to the existing shoreline. The rationale for rejecting this location was due to the fact that it did not meet the purpose of the action due to its proximity to the shoreline. The chosen proposed site provided a larger buffer between the parking area and the surrounding shoreline, thereby making the parking area less susceptible to storm damage, and protecting wetlands.

A site farther north of the chosen location was considered for the South Ocean Beach Parking Area. This site was previously undeveloped and would therefore not meet the objective of the proposed action to reduce the park's footprint. Construction on previously undisturbed ground would not minimize harm to natural resources. The vegetation removal necessary to construct the parking area in this location would have far exceeded the amount that would be required under alternative B. Additionally, this northern location would have complicated traffic patterns in this area and would increase the distance visitors would need to walk in order to access South Ocean Beach.

At the South Ocean Beach Parking Area, numerous locations were considered for the at grade boardwalk path including off the northeastern or southeastern corners of the parking area. A more centralized location of the eastern edge of the parking area was chosen in order meet the objective of the proposed action to minimize impacts to natural resources. The more centralized location would minimize impacts to existing vegetation and wetlands, minimize the walking distance to the beach, and allow space to accommodate the proposed visitor amenities.

THE PREFERRED ALTERNATIVE AND ENVIRONMENTALLY PREFERABLE ALTERNATIVE

THE ALTERNATIVE PREFERRED BY THE NATIONAL PARK SERVICE

Alternative B, consisting of relocating and removing the Bayside Picnic and South Ocean Beach Parking Areas, is the National Park Service's preferred alternative. This alternative best meets the purpose and need for the project, provides for use of native materials, provides for continued visitor use and beach and trail access, and reduces the long-term labor and maintenance costs of the parking areas due to the removal of asphalt.

THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE

In accordance with the DO-12 Handbook, the NPS identifies the environmentally preferable alternative in its National Environmental Policy Act documents for public review and comment [Sect. 4.5 E(9)]. The environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative (43 CFR 46.30).

Alternative B is the environmentally preferable alternative for several reasons. Under alternative B, the National Park Service would improve their ability to protect natural resources for future generations by removing and relocating the parking areas to locations that are less vulnerable to damage from future storm events. These locations provide a larger protective buffer between the parking areas and the shoreline and subsequently reduce the risk of future flooding. Additionally, the relocation of the parking areas would allow the shorelines and dune systems to evolve more naturally over time. Human impact on the island would be reduced by the removal of asphalt and the use of natural and native materials (sea shell clam aggregate mixed with clay) for surfacing the newly relocated parking areas. Improvements would also be made through the integration of stormwater best management practices at the parking areas.

SUMMARY COMPARISON OF THE ALTERNATIVES

Table 1 provides a summary of the important features of the alternatives. The visitor amenities described in table 1 would remain. Table 2 summarizes the environmental consequences that would result from each alternative. More detailed summaries of the factors responsible for the effects are presented in the "Conclusion" sections at the end of the analysis for each impact topic. Full analyses of the impacts are presented in chapter 3.

The purpose of this proposed action was identified at the beginning of chapter 1, with objectives that could be used to determine if an alternative would successfully meet the purpose of the project. Alternative A would not fully meet the objectives of relocating and redesigning both parking areas to less vulnerable locations or reducing the national seashore's footprint because the existing asphalt Bayside Picnic, South Ocean Beach, and Life of the Dunes Nature Trail Parking Areas would remain in their current locations.

Alternative B would relocate the parking areas to increase the setback, reduce the risk of flooding of park facilities due to storm events. The National Park Service would utilize more sustainable and native surfacing materials and remove existing asphalt.

Table 1: Comparison of the Alternatives

Feature	Alternative A: No-Action / Continue Current Management			Alternative B: Removal and Relocation of Parking Areas	
	Bayside Picnic Parking Area	South Ocean Beach Parking Area	Life of the Dunes Nature Trail Parking Area	Bayside Picnic Parking Area	South Ocean Beach and Life of the Dunes Nature Trail Parking Areas
Condition, Location, Size, and Building Materials	The Bayside Picnic Parking Area would remain in its current location. The asphalt would remain in its current condition. Routine maintenance and repairs would continue. Following future storm events, damaged portions of the asphalt parking area would not be replaced and the lot would be expected to shrink in size due to future storm damage. Existing stormwater features would be left in place and cleaned and repaired only if they became a hazard to public health and safety.	The South Ocean Beach Parking Area would remain in its current location. Damaged features from Hurricane Sandy would not be replaced and/or repaired. Routine maintenance and repairs would continue. The existing South Ocean Beach Parking Area location is becoming more prone to capturing windblown sand, requiring more frequent removal operations and maintenance activity. Existing stormwater features would be left in place and cleaned and repaired only if they became a hazard to public health and safety.	The Life of the Dunes Nature Trail Parking Area would remain in its current location. Routine maintenance and repairs would continue on the asphalt. In the event of future storm events, the Life of the Dunes Nature Trail Parking Area could serve as an alternative parking area during temporary closures of the South Ocean Beach Parking Area. Existing stormwater features would be left in place and cleaned and repaired only if they became a hazard to public health and safety.	The Bayside Picnic Parking Area would be removed and relocated further inland to the east of the existing parking area. The new parking area would be constructed from sea shell clam aggregate mixed with clay. Following construction of the new parking area, the northwestern portion of the existing parking area and stormwater culverts would be removed and restored. Restoration would include filling and recontouring the area to meet existing grade. Stormwater management measures at the Bayside Picnic Parking Area would be implemented pending coordination with the Maryland Department of Environment and identification of appropriate measures.	The Life of the Dunes Nature Trail Parking Area would be removed and the South Ocean Beach Parking Area would be relocated and reconstructed further inland in its place. The new parking area would be constructed from sea shell clam aggregate mixed with clay. Following construction of the new parking area, the existing South Ocean Beach Parking Area and the stormwater culverts would be removed and restored. Restoration would include filling and recontouring the area to meet existing grade. Stormwater management measures at the South Ocean Beach Parking Area would be implemented pending coordination with the Maryland Department of Environment and identification of appropriate measures.

Table 1: Comparison of the Alternatives (continued)

Feature	Alternative A: No-Action / Continue Current Management			Alternative B: Removal and Relocation of Parking Areas	
	Bayside Picnic Parking Area	South Ocean Beach Parking Area	Life of the Dunes Nature Trail Parking Area	Bayside Picnic Parking Area	South Ocean Beach Parking Area
Pedestrian Access and Circulation	A concrete walkway currently connects the southeastern corner of the parking area to the restroom facilities. Otherwise, access and circulation around the Bayside Picnic Parking Area is informal and occurs along the sandy shores of Chincoteague Bay.	A small section of boardwalk serves to bridge a swale along the edge of the asphalt that formed as a result of changes to the surrounding dunes and landforms post-Hurricane Sandy. The new boardwalk connects the parking area to the restroom facilities and continues a short way to South Ocean Beach. All other access and circulation around the South Ocean Beach Parking Area is informal and occurs on the sandy perimeter and in between the dunes on the eastern side of the parking area, and the existing vegetation along the western edge.	An asphalt bike path runs out of and along the eastern edge of the parking area. The Life of the Dunes Nature Trail head is just off the southeastern edge of the existing parking area. Additionally there are several visible social (unauthorized) trails cutting between vegetation and small interdunal wetlands to the east of the parking area and connecting across Bayberry Drive towards the South Ocean Beach Parking Area.	A new ADA-accessible boardwalk path would be constructed off of the southwestern edge of the new parking area to link the new parking area with a section of existing parking area to be maintained. The path would also connect to the restroom facilities, provide access to the water, and to the relocated concessions rental stand. The southeastern portion of the existing parking area would be retained for use as a turn-around and loading area for boat trailers, commercial vehicles, and visitors. Traffic circulation and parking space locations would be suggested by split rail fencing within the centerline of suggested parking spaces. Signage would be posted to indicate that back-in parking would not be permitted in the new parking area. The perimeter of the new parking area may be marked with split rail fence or flexible fiberglass posts or other similar means in order to control traffic and discourage off-road parking.	The existing asphalt bike path adjacent to the proposed location for the South Ocean Beach Parking Area would be maintained in its current location. An additional at grade boardwalk path may be constructed off of the eastern side of the parking area, across Bayberry Drive, through the restored area and onto the beach. Any additional paths that led to road crossings would be marked with pedestrian cross walks to ensure public health and safety. A path and concrete pads would also be constructed to restroom and shower facilities. Signage would be posted to indicate that back-in parking would not be permitted in the new parking area. The perimeter of the new parking area may be marked with split rail fence, flexible fiberglass posts, or other similar means in order to control traffic and discourage off-road parking.
Visitor Amenities	• 2 permanent restroom facilities, lo-	• 2 removable restroom facilities lo-	• 1 bicycle rack at the southeastern	• The 2 permanent restroom facilities would	• The 2 movable restroom facilities located at the ex-

Table 1: Comparison of the Alternatives (continued)

Feature	Alternative A: No-Action / Continue Current Management			Alternative B: Removal and Relocation of Parking Areas	
	Bayside Picnic Parking Area	South Ocean Beach Parking Area	Life of the Dunes Nature Trail Parking Area	Bayside Picnic Parking Area	South Ocean Beach Parking Area
	cated off of the southwestern corner of the parking area; • 10 to 12 picnic tables dispersed along the shoreline adjacent to the bay on the western side of the parking area; • 6 grills dispersed among the picnic tables; • Trash and recycling receptacles on either end of the west side of the parking area; • A canoe, bike, and kayak rental stand operated by a concessioner located in the northeast corner of the parking lot; • A bike rack located in front of the rental stand; • 2 drinking water pumps; one in front of the restrooms and one in front of the rental stand; and • An information kiosk along the shore-	cated east of the parking area along the boardwalk; • 1 shower / foot wash station with a bench located just east of the restroom facilities; • Trash and recycling receptacles located on the eastern edge of the parking area near the boardwalk; and • An information kiosk was damaged during Hurricane Sandy and subsequently removed. The kiosk would be replaced under alternative A. • Bike rack	corner of the parking area; and • A trail head kiosk located at the trailhead of the Life of the Dunes Trail.	remain in their current location; • 10-12 picnic tables would remain in their current locations dispersed along the shoreline adjacent to the bay. 8-10 additional picnic tables and a picnic pavilion or shade structure could be installed in the newly restored portion of the existing Bayside Picnic Parking Area; • 10-15 grills would be dispersed among the picnic tables; • Trash and recycling receptacles would be placed adjacent to the restrooms; • The canoe, bike, and kayak rental stand would be relocated further east and adjacent to the proposed access boardwalk path; • The bike rack would be relocated in front of the rental stand; • The 2 drinking water pumps would remain in their current locations; • The information kiosk	isting South Ocean Beach Parking Area would be relocated to the eastern side of the proposed new parking area location; • Moveable changing stations may be added to the eastern side of the proposed new parking area location; • The existing shower / foot wash at the South Ocean Beach Parking Area would be removed and a new facility would be installed nearby the relocated bathrooms on the eastern side of the new South Ocean Beach Parking Area; • Trash and recycling receptacles would be moved closer to the new parking area; • The information kiosk at the Life of the Dunes Trailhead would remain in its current condition and a new kiosk could be installed providing additional information to visitors; and • Bicycle racks would be installed adjacent to the new South Ocean Beach Parking Area.

Table 1: Comparison of the Alternatives (continued)

Feature	Alternative A: No-Action / Continue Current Management			Alternative B: Removal and Relocation of Parking Areas	
	Bayside Picnic Parking Area	South Ocean Beach Parking Area	Life of the Dunes Nature Trail Parking Area	Bayside Picnic Parking Area	South Ocean Beach Parking Area
	line to the north-west of the parking area.			would be moved closer to the access path connecting each area; and • A new shower tower / foot wash may be installed, as well additional moveable rest room facilities and changing stations adjacent to the new access path.	

Table 2: Summary of the Impacts of the Alternatives

Impact Topic	Alternative A: No-Action / Continue Current Management	Alternative B: Removal and Relocation of Parking Areas
Coastal Processes	Maintaining the current parking areas and conducting as-needed repairs would have a long-term, minor, adverse effect on coastal processes. The impacts would be long-term and adverse because continued efforts to repair a parking area in a location subjected to natural coastal processes would not allow the area to maintain natural sediment transport by wind and wave action. These impacts are considered minor because in the context of NPS policies regarding natural processes, the area of impact would be limited and would not impact a large portion of the sediment transport budget or the larger coastal processes. Alternative A would also contribute an adverse increment to cumulative impacts on coastal processes; however, the adverse increment would be negligible compared to the long-term minor beneficial impacts of past, present and future plans, projects and activities affecting coastal processes at the park When the intensity of the adverse impacts of alternative A are considered in the context of coastal processes at Assateague Island National Seashore, these impacts would not be considered significant.	The removal and relocation the Bayside Picnic and South Ocean Beach Parking Areas would have a long-term minor beneficial impact on coastal processes under alternative B because permanent removal of the nearshore parking areas would allow coastal processes to return to a natural state allowing natural sediment transport by wind and wave action. The proposed change would be considered minor because it would not affect a large portion of the sediment transport budget. Alternative B also contributes a small but beneficial increment to overall cumulative impacts that are long-term and beneficial. The beneficial impacts of alternative B on coastal processes would be minor because it would not affect a large portion of the sediment transport budget and although there would be a change toward more natural conditions under alternative B, the positive impacts would not likely be significant because the change would be very small compared to the context of coastal processes in general along the seashore.
Floodplains	The impact to floodplains associated with alternative A would be short-term, negligible, and adverse and alternative A would contribute a slight adverse increment to otherwise beneficial cumulative impacts. When the limited extent of the adverse impacts of alternative A are considered in the context of floodplain functions and values, these impacts would not likely be considered significant.	Alternative B would have long-term, moderate beneficial impacts because it would enhance floodplain functions and reduce flood potential by slowing sheetflow during precipitation events, enhancing the ability of wetlands to absorb these flows by decreasing the inflow rate, and increasing the size of natural buffer areas surrounding the new parking locations relative to open water. Alternative B would also have a large contribution to overall beneficial cumulative impacts. However, the beneficial impacts of alternative B on floodplains would not likely be significant because any enhancement of floodplain functions and values, reduction of flood potential and/or increase in natural buffers would be highly localized and would not likely result in any large-scale changes in floodplain functions and values.

Table 2: Summary of the Impacts of the Alternatives (continued)

Impact Topic	Alternative A: No-Action / Continue Current Management	Alternative B: Removal and Relocation of Parking Areas
Wetlands	Alternative A would have some negligible, adverse impacts associated with continued maintenance of the paved parking areas and would contribute a negligible adverse increment to the overall cumulative impacts that would be long-term and minor beneficial and long-term, negligible and adverse. None of the adverse impacts associated with alternative A would be considered significant because of the limited extent and short duration of any increased sedimentation or decrease in water storage capacity.	Alternative B would likely have long-term, moderate beneficial impacts to wetlands because it would enhance wetlands functions by slowing sheetflow during precipitation events, enhance the ability of wetlands to absorb these flows by decreasing the inflow rate, increase the size of natural buffer areas surrounding the new parking locations relative to open water, and restore natural processes to the areas currently occupied by the existing parking lots. Alternative B would also contribute a moderate beneficial increment to the overall beneficial cumulative impacts. However, the beneficial impacts of alternative B on wetlands would not likely be significant because the enhancement of wetland functions, increase in the size of buffers, or restoration of natural processes would be highly localized and would not likely result in any large-scale changes in wetland functions and values.
Visitor Use and Experience and Recreation Resources	Alternative A would have adverse impacts on visitor use and experience from the increased potential for temporary parking area closures associated with clean-up and deterioration of the parking areas following future storm events that would gradually reduce the number of spaces, inconveniencing visitors and possibly diminishing their overall experience of the park, especially those visitors that favor these areas. When all of the past, present, and future actions affecting the park are added to the impacts of alternative A the cumulative impacts would likely be adverse and long-term. The adverse impacts of alternative A would contribute a moderate increment to the overall adverse cumulative impact. The adverse impacts of alternative A would likely range from negligible to moderate, depending on the season and severity of storms and resulting damage to the parking areas. The adverse impacts would not likely be considered significant because the parking areas would continue to serve their intended functions for the majority of park visitors.	Alternative B would have long-term, moderate beneficial impacts as a result of reduced potential for inconveniences due to closures to repair storm damage plus the provision of additional visitor amenities. Alternative B would also result in short-term negligible to minor, adverse impacts due to inconveniences during construction activities and future maintenance. Due to the nature of mostly beneficial impacts, this alternative, in combination with other actions, plans, and policies, would result in long-term moderate beneficial cumulative impacts, to which, the beneficial impacts of alternative B would contribute a moderate increment to offset some of the adverse cumulative impacts. Although positive, the impacts of alternative B would not likely be considered significant because the primary result is that visitors' expectations continue to be met because visitors can continue use these areas and associated facilities to experience the park as intended.

Table 2: Impacts of the Alternatives (continued)

Impact Topic	Alternative A: No-Action / Continue Current Management	Alternative B: Removal and Relocation of Parking Areas
Public Health and Safety	Alternative A would have long-term, minor, and adverse impacts from the continued presence of pedestrians along Bayberry Drive once the South Ocean Beach Parking Area is full, in addition to pedestrian and vehicle conflicts and would contribute a slight adverse increment to the overall adverse cumulative impact. The impacts of alternative A would not be considered significant because there would be no change from existing conditions and any adverse impacts would be expected to remain minor.	Alternative B would have long-term, negligible to minor, adverse impacts on public health and safety from the increase of pedestrians crossing Bayberry Drive at the South Ocean Beach Parking Area. At the Bayside Picnic Parking Area, alternative B would result in long-term moderate beneficial impacts to public health and safety from the installation of a pedestrian walkway going directly from the parking area to visitor amenities at the Bayside Picnic Area. Alternative B would contribute a small increment of both beneficial and adverse impacts to overall cumulative impacts that would be primarily beneficial but offset by some adverse impacts. The adverse impacts of alternative B would not likely be significant because even with some expected increase in pedestrians from the South Ocean Beach Parking Area, existing conditions with regard to traffic speed and movement would remain the same; thus, no increase in the risk to pedestrians would be likely. Similarly, although the pedestrian walkway at the Bayberry Drive Parking Area would increase pedestrian safety by a clear separation of pedestrians and vehicle traffic, there have been no reported incidents as a result of the current situation; thus, while the increased safety factor of the separate walkway is certainly desirable to further reduce risk to pedestrians, it does not represent a significant change over current conditions.
Park Operations	Alternative A would have long-term, minor to moderate and adverse impacts on park operations from the potential for continued and increasing maintenance, repair, and clean-up of the Bayside Picnic and South Ocean Beach Parking Areas in their current locations. Alternative A would also contribute a moderate adverse increment to the overall adverse cumulative impacts. The adverse impacts on park operations would not likely be significant because staff time and efforts would continue to be allocated according to the park's needs and priorities, whether it was an increased effort to repair and maintain the two parking areas or directed at other tasks.	Alternative B would have primarily minor to moderate, long-term beneficial impacts on park operations from the relocation of the Bayside Picnic and South Ocean Beach Parking Areas and the subsequent reduction in maintenance, repair, and clean-up along with some negligible adverse impacts from the need to schedule monthly regrading activities. Alternative B would also contribute a large beneficial increment that would help offset overall adverse cumulative impacts. However, the beneficial impacts of alternative B would not likely be significant for the same reasons as stated under no action; i.e., staff time and efforts are directed according to the park's needs and priorities, which are subject to change depending on a variety of factors that cannot always be predicted. Thus, while operations would benefit from the relocation of these parking areas, it would not likely be a substantial enough change from existing conditions to represent a significant beneficial impact.

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Chapter 3: Affected Environment and Environmental Consequences

INTRODUCTION

This chapter provides a description of the affected environment for each impact topic analyzed, followed by analysis of both beneficial and adverse impacts that could result from implementing either of the alternatives described in chapter 2. This chapter is organized by impact topic to allow a comparison among alternatives based on issues. The impact topics are presented in the order they appear in chapter 1.

GENERAL METHODS FOR ANALYZING IMPACTS

In accordance with the CEQ regulations, direct, indirect, and cumulative impacts are described (40 CFR 1502.16) and the significance of the impacts is assessed (40 CFR 1508.27). Where appropriate, mitigating measures for adverse impacts are also described and incorporated into the evaluation of impacts. The specific methods used to assess impacts for each resource may vary; therefore, these methodologies are described under each impact topic.

TYPE OF IMPACT

The types of impacts discussed in this environmental assessment include:

Direct: Impacts that would occur as a result of the proposed action at the same time and place of implementation (40 CFR 1508.8).

Indirect: Impacts that would occur as a result of the proposed action but later in time or farther in distance from the action (40 CFR 1508.8).

Adverse: An impact that causes an unfavorable result to the resource when compared to the existing conditions.

Beneficial: An impact that would result in a positive change to the resource when compared to the existing conditions.

IMPACT INTENSITY, CONTEXT, AND SIGNIFICANCE

Once the direct, indirect, and cumulative impacts of an alternative have been identified, the impacts of the alternative are assessed using the CEQ definition of "significantly" (1508.27), which requires consideration of both context and intensity.

Context – This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Context provides comparative or "surrounding" information to help give impacts meaning. Context includes the park's purpose and significance; for example, the impact of a proposal to cut 10 acres of trees in a 100,000 acre lodgepole pine forest managed by an agency with a "use" mandate is different than cutting 10 acres of the only remaining 15 acre old growth sequoia managed by an agency with a "conservation" mandate. Context may also include laws, regulations, and policies established to protect specific resources; for example, the Endangered Species Act provides a legal context for assessing the severity of potential impacts to federally-listed threatened and endangered animals. Context also includes consideration of the duration of an impact; i.e., long-term and short-term impacts.

Intensity – This refers to the severity of the impact. An impact may be more or less severe; i.e., have greater or lesser magnitude, depending on a variety of considerations such as the extent of the impact (e.g., inches versus acres); the nature of the affected resource (e.g., common versus rare); the degree of certainty about the predicted impact (e.g., predictable versus unknown or uncertain); and similar considerations (1508.27(b)). In this plan/EA, the intensity of an impact may be described as negligible, minor, moderate or major, in order to allow the reader to more easily understand the predicted level of impact. These terms may be understood as having their everyday meanings:

Negligible: so small or unimportant or of so little consequence as to warrant little or no attention

Minor: not serious or important

Moderate: tending toward the mean or average amount or dimension; limited in scope or effect

Major: notable or conspicuous in effect or scope; prominent in size, amount, or degree; involving grave risk

For each impact topic analyzed, an assessment of the potential significance of the impacts according to context and intensity is provided in the "Conclusion" section that follows the discussion of the impacts under each alternative.

CUMULATIVE IMPACT ANALSYIS

Cumulative impacts are defined as "the impacts on the environment which result 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 alternative being considered with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other past, ongoing, and reasonably foreseeable future actions within Assateague Island National Seashore and in the surrounding region. A description of other National Park Service and other agency actions and programs is provided in the "Purpose and Need" chapter under the "Relationship to Previous Planning Efforts and the Cumulative Impact Scenario" section. All past, present, and reasonably foreseeable future actions considered in the environmental analysis include implementation of the following planning efforts.

General Management Plan for the National Seashore

The 1982 general management plan is the park's primary guidance document and reflects a systematic approach to management whereby recreational use and development is balanced with the need to ensure long-term preservation of natural resources and values. The National Park Service is currently in the process of preparing a new general management plan for Assateague Island National Seashore. The plan will be a 15-25 year strategic plan intended to provide overall direction for future management of the national seashore, and a framework for managers to use in making decisions about how best to protect park resources, what levels and types of uses are appropriate, what facilities should be developed, and how people should access the park. Under the park's existing general management plan and current general management planning efforts, the Bayside Picnic, South Ocean Beach, and Life of the Dunes Nature Trail Parking Areas all fall within a developed management zone. These areas are managed to offer interpretive, educational, and management programs that provide a range of services to visitors. The proposed action is consistent with ongoing general management planning efforts with regard to continued access to the Bayside Picnic Area and South Ocean Beach.

Alternative Transportation Planning within the National Seashore

Section 3039 of the Transportation Equity Act for the 21st Century (TEA-21), required the Secretary of Transportation and the Secretary of the Interior to "undertake a comprehensive study of alternative transportation needs in national parks and related Federal Lands." One of the sites included in the study was Assateague Island National Seashore. The resulting 2001 field report assessed the need for expanded transit to Assateague Island National Seashore and contributed to the rationale for conducting the 2012 Alternative Transportation Systems Planning Study and Business Plan for Alternative Transportation. The 2012 study considered alternative transportation solutions and addressed concerns about the risks for future access to the island (NPS 2012a).

The study identified a range of transportation issues at Assateague Island National Seashore including congestion at the entrance booths, illegal parking, limited wayfinding, challenges to

emergency evacuation, lack of alternative transportation, bicycle and pedestrian access, and difficulties in the management of the over-sand vehicle zone. Assateague Island also faces challenges as a barrier island and is likely to experience an increasingly dynamic land base on the island as a result of storms, natural shoreline processes, and sea level rise and other climate change effects. These changes raise questions about cost, sustainability, and access, and may challenge Assateague Island National Seashore's ability to provide traditional transportation infrastructure and to support vehicular access in the future. This study made recommendations to be considered by the park and in the general management planning process about how best to prepare for climate change and possible future scenarios involving changes in access (NPS 2012a). The proposed action would address recommendations to reduce the risk of future storm damage to NPS facilities by using mobile facilities that may be moved in advance of storm events, moving the parking areas to sites that would be more protected and further away from the shoreline, and by using surface materials that are native and more sustainable than asphalt. The proposed action would be provide continued access, and address sea level rise and other climate change affects. These actions would be consistent with recommendations from the study.

Resource Management Plan (NPS 1999)

The Assateague Island National Seashore Resource Management Plan describes broad strategies that are used to protect and manage the park's natural and cultural resources in a manner that complies with the spirit and intent of the enabling and regulatory legislation and the provisions of the general management plan (NPS 1999). The proposed action would comply with natural and cultural resource protection efforts within the park.

In addition to specific agency actions and programs, other activities that would cumulatively impact resources would continue within the park and on lands adjacent to the park or in the region. Activities associated with management of the park (building construction, resource management and monitoring, trail construction and maintenance, and transportation management) were identified as contributing to adverse impacts on resources from loss of habitat, nonpoint source discharges of sediment and nutrients into waterways, and noise emissions.

GEOGRAPHIC ANALYSIS AREA

The geographic area within the national seashore that was evaluated for effects is defined individually for each impact topic.

CLIMATE CHANGE / SEA-LEVEL RISE

This chapter describes the resource conditions of the park to better understand the effects of the alternatives. For each resource topic, this chapter identifies past, present, and future trends in resource conditions. The lack of qualitative information about climate change effects adds to the difficulty of predicting how these impacts would be realized in the national seashore; for example, wetlands and floodplains may be affected by sea level rise, and storm frequency and intensity may affect other natural resources and visitor amenities. The range of variability in the potential effects of climate change is large in comparison to what is known about the future under an altered climate in the national seashore in particular, even if larger-scale climatic patterns have been accurately predicted for the Atlantic Coast. Therefore, the potential effects of this dynamic climate on national seashore resources were included in the affected environment sections of the environmental assessment. These effects are not analyzed in detail under "Environmental Consequences" sections under each alternative because of the uncertainty and variability of outcomes and because these impacts are not expected to differ among the alternatives. A general description of climate change and its anticipated effects is provided below.

Climate change refers to any significant changes in average climatic conditions (such as mean temperature, precipitation, or wind) or variability (such as seasonality and storm frequency) lasting for an extended period (decades or longer). Recent reports by the U.S. Climate Change Science Program and Intergovernmental Panel on Climate Change (IPCC) (2007a, 2007b) provide evidence that climate change is occurring as a result of rising greenhouse gas emissions and could accelerate in coming decades.

While climate change is a global phenomenon, it manifests differently depending on regional and local factors. General changes that are expected in the future as a result of climate change include hotter, drier summers; warmer winters; warmer water; higher ocean levels; more severe wildfires; degraded air quality; more frequent heavy downpours; and increased drought. Maryland's coast is particularly vulnerable to both episodic storm events, such as hurricanes and nor'easters, and chronic hazards associated with shore erosion, coastal flooding, storm surge, and inundation. These coastal hazards are both driven and exacerbated by climate change and sea-level rise.

Rising sea levels over the last 20,000 years formed the highly incised and varied coastline of today's Chesapeake Bay. While the rapid rate of sea-level rise that occurred over the past 5,000 years has slowed, historic tide-gauge records show that levels are still rising and have increased by one foot within Maryland's coastal waters in the last 100 years (Maryland Department of Land and Natural Resources 2008). This rate is nearly twice that of the global average over the same time period. Maryland is experiencing more of a rise in sea level than other regions, due to naturally occurring regional land subsidence, which is estimated to occur on Assateague Island at a rate of approximately 9 inches per century (Holdahl and Morrison 1974). The degree to which sea level rise accelerates due to climate change could vary based on future global efforts to reduce greenhouse gas emissions. The Intergovernmental Panel on Climate Change accounts for this variability by using low and high emission scenarios in its sea level rise projections (IPCC 2007a, 2007b). The most recent Intergovernmental Panel on Climate Change projections are considered conservative by most experts because they do not include rapid ice sheet melting, which could greatly increase sea level rise (Maryland Department of Land and Natural Resources 2008). When including coastal Maryland subsidence rates, relative sea-level rise may range from 0.6 ft to 1–1.3 ft along Maryland's coast by the middle of the century. By 2100, accelerated melting of ice caps and glaciers could produce a relative sea-level rise of 2.7 ft under the lower emissions scenario to 3.4 ft under the higher emissions scenario (IPCC 2007a, Meier et al. 2007, Maryland Department of Land and Natural Resources 2008).

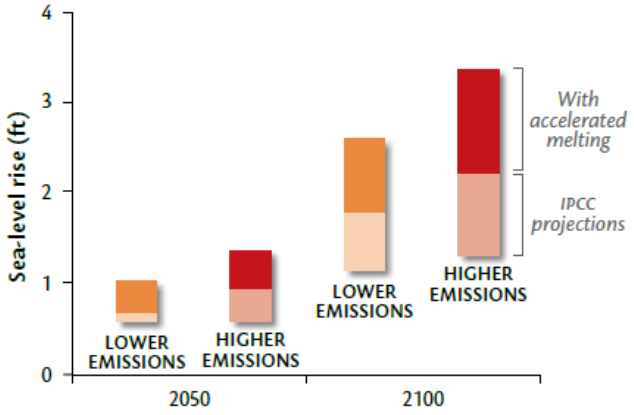

Figure 10. Sea-level rise projections in Maryland

Although some effects of climate change are known or likely to occur, many potential impacts are unknown. Much depends on the rate at which the temperature would continue to rise and whether global greenhouse gas emissions can be reduced or mitigated. Climate change science is a rapidly advancing field and new information is being collected and released continually. As the

science develops with refinements to climate change models and sea-level rise projections, the state of Maryland and local communities have initiated planning efforts. The Adaptation and Response Working Group of the Maryland Commission on Climate Change was established in 2007 by Maryland Governor Martin O'Malley, and was charged with developing the *Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change*, and was completed in August 2008 (Maryland Department of Land and Natural Resources 2008). This report includes specific policy recommendations for reducing the vulnerability of the state's natural and cultural resources and communities to the impacts of climate change, with a focus on sea-level rise and coastal hazards, including shore erosion and coastal flooding. The report concludes that "adaptation and response planning is crucial to Maryland's ability to achieve sustainability," and that a 'do nothing' approach will lead to unwise decisions and increased risk over time (Maryland Department of Land and Natural Resources 2008).

In September 2008, Worcester County completed its own response strategy for localized impacts associated with climate change, *Sea Level Response Strategy Worcester County, Maryland* (Worcester County Department of Comprehensive Planning 2008). The direct impacts of sea level rise in Worcester County include inundation of wetlands and lowlands; accelerated coastal erosion; increased flooding; raised water tables; and increased salinity of bays, rivers, and aquifers (Worcester County Department of Comprehensive Planning 2008). This report includes recommendations for adaptation strategies, such as infrastructure relocation and zoning regulations specific to Worcester County.

The potential influences of climate change are described under the coastal processes, floodplains, wetlands, visitor experience, and public health and safety resource topics. These are the resources that the planning team considers to be at the greatest risk from the impacts of climate change.

COASTAL PROCESSES

AFFECTED ENVIRONMENT

Coastal processes at the Assateague Island National Seashore are defined by its barrier island dynamics and changing coastline. The coastal processes involve the interaction of water, land, and air through waves/currents, sand, and wind. Natural processes (waves, currents, and severe weather), anthropogenic processes (coastal development and engineering processes), and climate change and sea level rise all impact barrier islands (Bush and Young 2009). The geology of Assateague Island National Seashore is slowly being reshaped by wind and water; however, powerful storms can dramatically alter the shoreline in a matter of hours, as waves wash over the beach and reshape the island from ocean to bay. Most coastal storms causing erosion and other damage are nor'easters (December to April) followed in frequency by hurricanes (June through November). Historically, Assateague Island was bordered by dunes established by the Army Corps of Engineers in the 1930s, and the National Park Service built up the dunes in the 1960s. However, coastal processes (wind and water) have reduced these efforts, which have not been sustained.

In the study area, the coastal processes on the two sides of the barrier island are different. The ocean shoreline of Assateague Island is gently curving; ocean waves and currents maintain a smooth, relatively straight, shoreline. This ocean shoreline experiences the longshore transport system and high-energy waves. The common wave movement on this side causes a net southerly current along the Maryland shoreline (USACE 1998). Therefore, the longshore currents cause sand to migrate along the coast from north to south. Leatherman (1976) found ocean currents and strong winds were both substantial contributors to sediment transport during storm events. This, in turn, will change the shape and location of the island and most importantly for the project area, the location of the shoreline. The ocean side is impacted by storm energy and surge directly from the ocean. During extreme weather, overwash events push the island toward the mainland by transporting sediments from the seaward beaches toward the bay side (NPS 2011).

The bay side shoreline is scalloped from historic tidal inlets and overwash events. This area is a lower energy system compared to the ocean side, but will still experience storm surge. Saltwater from the ocean enters the coastal bays through the Ocean City and Chincoteague Inlets. Circulation patterns and currents within the coastal bays are dependent on proximity to the inlets and wind conditions. Only 15 percent of tidal waters entering the Ocean City Inlet enter Sinepuxent and Chincoteague Bays (the remaining water flows north) (USACE 1998). Coastal bays, like Sinepuxent Bay and Chincoteague Bay adjacent to the Bayside Picnic Parking Area, have a relatively constant water surface area over the full tidal range.

Coastal processes for barrier islands can be interrupted by anthropogenic activities like coastal development and engineering processes. Engineering structures and other coastal development result in increased erosion, disrupted natural sediment flows, and altered hydrology. Engineering structures (e.g., jetties) north of the island have interfered with coastal processes by inhibiting the natural flows of sediment transport. This is leading to a sediment deficit south of the jetty. These anthropogenic forces continue to shape Assateague Island by causing the barrier island shoreline to slowly migrate west across the coastal bays.

Not only can barrier islands be impacted by humans, but also by sea level rise (Leatherman 1979). Along the U.S. east coast, barrier islands are generally migrating landward in response to rising sea level. Rising sea level forces barrier islands toward the land (Johnson 2000). As sea level rises, sand gets pushed up and toward the mainland, eventually being pushed or washed over by storms or waves onto the bay side of the barrier island. Barrier islands can fail if the rate of sea level rise increases too much relative to the supply of available sediment and the slope upon which the island is migrating.

The establishment of Assateague Island National Seashore has protected this barrier island from large-scale development. Management actions have been implemented to restore sediment supply and allow the barrier island to evolve through natural coastal processes.

With respect to coastal processes, it is NPS policy to preserve and protect geologic resources and features from adverse effects of human activity, while allowing natural processes to continue (NPS 2006). Further, it is NPS policy that natural shoreline processes (such as erosion, deposition, dune formation, overwash, inlet formation, and shoreline migration) will be allowed to continue without interference (NPS 2006).

Many of the coastal uses and resources associated with coastal processes are regulated under the federal Coastal Zone Management Act (e.g., erosion and coastal development). The National Oceanic and Atmospheric Administration administers the Coastal Zone Management Program and requires each coastal state to develop its own coastal management program based on federal guidance but reflecting its own specific issues and values. Each state/territory's coastal management program secured federal approval. The foundation of a coastal management program is a list of enforceable policies which allow the state to exert control over private and public land and water uses and natural resources in the coastal zone. As a federal agency, the National Park Service has to be consistent to the maximum extent practicable with the enforceable policies of Maryland for this project or provide an explanation as to why it is not. The National Park Service is submitting a Consistency Determination (provided in appendix B) to the State of Maryland in accordance with the Coastal Zone Management Act concurrently with this environmental assessment. According to Maryland's Coastal Zone Management Program, Maryland's coastal zone extends to the inland boundary of the 16 counties bordering the Atlantic Ocean, the Chesapeake Bay, and the Potomac River and includes Baltimore City and all local jurisdictions within the counties.

A portion of Maryland's Coastal Zone Management Program includes the Chesapeake Bay and Atlantic Bays Critical Areas. These areas were initially designated by the Atlantic Coastal Bays Protection Act of 2002, in an effort to improve and protect the quality of the coastal bays and include all lands within 1,000 ft. of the Chesapeake Bay or an Atlantic Bay. The Act was designed to reverse poor water quality trends by protecting the bays, tributaries, and the land surrounding these resources, as well as supporting multi-state agreements to protect the bays. Under the Act, a minimum 100-foot buffer of naturally occurring or planted vegetation, measured from the mean high water line of tidal waters, tidal wetlands, and tributary streams must be maintained in the Critical Area. Finally, in an action directly related to Assateague Island National Seashore and the project area, the Worcester County shoreline protection setback and buffer law requires a minimum 25-foot wide vegetated strip within a 50-foot setback on lots created after March 10, 1992 that lie along the tidal waters of the coastal bays and their tidal tributaries. Only the Bayside Picnic Parking Area needs to comply with this requirement as being within 1,000 ft. of the Chesapeake Bay or an Atlantic Bay. The appropriate enforceable policies of Maryland Coastal Zone Management Program have been addressed in the Consistency Determination, included as appendix B.

Climate Change / Sea-level Rise

Climate change affects sea level, amounts of rainfall, intensity and amount of runoff, the height duration and frequency of ocean waves, and long-term tracks, intensity and frequency of coastal storms (Nicholls 2004) that could, in turn, affect coastal processes, wetlands and floodplains. Climate change is expected to increase the extent and frequency of coastal flooding (Loehman and Anderson 2009) from storm surges and sea level rise. Changes in the frequency of severe storms and increased rainfall intensity could further aggravate flooding and storm damage (Titus and Richman 2001).

Due to its geography and geology, the Chesapeake Bay region is ranked the third most vulnerable area behind Louisiana and Southern Florida. Sea level rise impacts are already being detected all along Maryland's coast. The primary impacts of sea level rise include intensified coastal flood events, increased shore erosion, inundation of wetlands and low-lying lands, and saltwater intrusion into groundwater. Assateague Island is highly susceptible to all such impacts.

Maryland's recent projections for the end of the century consider a sea-level rise of 3.7 feet for adaptation planning for infrastructure that could tolerate occasional inundation. In addition, the report indicates a relative sea level rise of 2.1 feet by 2050 in order to accommodate the high end of the National Research Council projections as adjusted for regional factors particular to Maryland. This would essentially constitute an increase in mean sea level, on top of which storm surge would have to be factored in, to judge the risks to land-based facilities (Boesch et al. 2013).

Sea-level rise increases the height of storm waves, enabling them to extend further inland. In low-lying coastal areas, a one-foot rise in sea level translates into a one foot rise in flood level, intensifying the impact of coastal flood waters and storm surge (IPCC 2007a, b; Maryland Department of Land and Natural Resources 2010).

Historic tide-gauge records document that sea level is rising in Mid-Atlantic waters and the Chesapeake Bay at an average rate of 3 to 4 millimeters (mm) per year (0.018 to 0.157 inches /year). There has been approximately one foot of sea level rise in the Chesapeake Bay over the past 100 years. This rate is nearly twice that of the global historic average, as reported in the IPCC report. Maryland is experiencing more of a rise in sea level than other parts of the world, due to naturally occurring regional land subsidence. Land is currently subsiding in the Chesapeake Bay region at a rate of approximately 1.3 mm/year (0.051 inches/year).

Increased sea level and storm events may affect the ability of the landscape to convey flood waters as sea level and landscape features change. Collapse or alteration of the barrier islands may cause marshes to convert to salt marsh, tidal range and tidal influence may increase and spread farther inland, and acceleration of shoreline erosion would potentially occur (Maryland Department of Natural Resources 2010).

IMPACT ANALYSIS METHODS

Regulatory Framework

Current regulations and policies associated with coastal processes include the following:

- Coastal Zone Management Act
- Executive Order 13508 *Chesapeake Bay Protection and Restoration*
- NPS *Management Policies 2006* (NPS 2006)
- Reference Manual 77: Natural Resource Management

Geographic Analysis Area

The geographic area within the national seashore evaluated for effects for coastal processes is more broadly defined because of the interaction of water, land, and air through waves/currents, sand, and wind which will expand impacts beyond the localized parking areas. For coastal processes, the geographic area evaluated for effects is defined as the area within and adjacent (within 100 feet) to the existing and proposed locations of the Bayside Picnic and South Ocean Beach Parking Areas, the Life of the Dunes Nature Trail Parking Area, and the trail to South Ocean Beach from the parking area.

ALTERNATIVE A: NO ACTION / CONTINUE CURRENT MANAGEMENT

Impact Analysis

Under alternative A there would be no construction-related actions and no changes to parking areas would occur aside from maintenance and repair.

At the South Ocean Beach Parking Area, natural storm processes have continued to undermine the coastline on this high energy side of the barrier island. This can be expected to continue and repeated repairs to the parking area will be needed. At the Bayside Picnic Parking Area, rising water levels during natural storm processes have continued to undermine this location proximate to the water's edge. This can be expected to continue and continued repairs will be needed for it to be functional. Neither parking area can be sustained in its current form because natural coastal processes will continue to act at each location; thus, alternative A would have minor adverse impacts to coastal processes through the small degree of interference in these natural processes that would result from repeated attempts to repair and maintain the parking lots in their current location and configuration.

Cumulative Impacts

Maintaining the current parking areas and conducting as-needed repairs under alternative A would have long-term, minor adverse impacts. The Bayside Picnic and South Ocean Beach areas would continue to be managed as part o f the developed zone, as identified in the general management plan, and as such, parking and access to these areas would continue to be provided into the future. The cumulative impact of these management actions would be similar to existing conditions, with minor, adverse impacts to coastal processes. Under alternative A, recommendations from the Alternative Transportation Planning Study would not be implemented, and measures such as the use of mobile facilities, and use of sustainable materials would not be implemented. This would have long-term, minor adverse impacts. Other past, present and future efforts to comply with NPS policies to preserve and protect geologic resources and features from adverse effects of human activity, while allowing natural processes to continue would have a long-term, minor beneficial impact on the park's coastal processes.

When the long-term, minor adverse impacts of alternative A are combined with the long-term, minor beneficial impacts of past, present and future plans, projects and activities affecting coastal processes at the park, the resulting cumulative impacts would remain long-term, minor, and beneficial. The contribution of alternative A to the cumulative impact would be adverse but would be considered negligible.

Conclusion

Maintaining the current parking areas and conducting as-needed repairs would have a long-term, minor adverse effect on coastal processes. The impacts would be long-term and adverse because continued efforts to repair a parking area in a location subjected to natural coastal processes would not allow the area to maintain natural sediment transport by wind and wave action. These impacts are considered minor because in the context of NPS policies regarding natural processes, the area of impact would be limited and would not impact a large portion of the sediment transport budget or the larger coastal processes. Alternative A would also contribute an adverse increment to cumulative impacts on coastal processes; however, the adverse increment would be negligible compared to the long-term, minor beneficial impacts of past, present and future plans, projects and activities affecting coastal processes at the park. When the intensity of the adverse impacts of alternative A are considered in the context of coastal processes at Assateague Island National Seashore, these impacts would not be considered significant.

ALTERNATIVE B: RELOCATE THE BAYSIDE PICNIC PARKING AREA AND SOUTH OCEAN BEACH PARKING AREA AND CORRESPONDING VISITOR AMENITIES

Impact Analysis

Implementation of management actions proposed under alternative B would have long-term, minor beneficial effects on coastal processes. The actions proposed are consistent with National Park Service policies.

At the South Ocean Beach Parking Area, natural storm processes have continued to undermine the coastline on this high energy side of the barrier island. Removing and relocating the South Ocean Beach Parking Area further inland would reduce flood risk by creating a setback. It would avoid the need for repeated repairs and asphalt maintenance necessary to keep the parking area open to visitors. Also, restoring the current parking area to a naturally vegetated and sandy state would allow natural coastal processes to proceed.

At the Bayside Picnic Parking Area, rising water levels during natural storm processes have continued to undermine this location proximate to the water's edge. Relocating the Bayside Picnic Parking Area inland would reduce flood risk by creating a setback. It would avoid the need for repeated asphalt maintenance and repairs. In addition, restoring the current parking area to a naturally vegetated and sandy state would allow natural coastal processes to proceed. There would be long-term, minor beneficial impacts because permanent removal of the nearshore parking areas would allow coastal processes to return to a natural state allowing natural sediment transport by wind and wave action.

Cumulative Impacts

Under alternative B, removal and relocation of the Bayside Picnic and South Ocean Beach Parking Areas to locations that are less exposed to coastal processes would have a long-term, minor beneficial impact. The Bayside Picnic and South Ocean Beach areas would continue to be managed as part o f the developed zone, as identified in the general management plan, and as such, parking and access to these areas would continue to be provided into the future. The cumulative impact of these management actions would be similar to existing conditions, with minor, adverse impacts to coastal processes. Under alternative B, recommendations from the Alternative Transportation Planning Study would be implemented, and measures such as the use of mobile facilities, and use of sustainable materials would be implemented. This would have long-term, minor beneficial impacts. Past, present and future efforts to comply with National Park Service policies to preserve and protect geologic resources and features from adverse effects of human activity, while allowing natural processes to continue would have a long-term, minor beneficial impact on the park's coastal processes. When the long-term, minor beneficial impacts of alternative B are combined with the long-term, minor beneficial impacts of past, present and future plans, projects and activities affecting coastal processes at the park, the resulting cumulative impacts would also be long-term, minor, and beneficial. The contribution of alternative B to the cumulative impact would be small but positive.

Conclusion

The removal and relocation the Bayside Picnic and South Ocean Beach Parking Areas would have a long-term, minor beneficial impact on coastal processes under alternative B because permanent removal of the nearshore parking areas would allow coastal processes to return to a natural state allowing natural sediment transport by wind and wave action. The proposed change would be considered minor because it would not affect a large portion of the sediment transport budget. Alternative B also contributes a small but beneficial increment to overall cumulative impacts that are long-term and beneficial. The beneficial impacts of alternative B on coastal processes would be minor because it would not affect a large portion of the sediment

transport budget and although there would be a change toward more natural conditions under alternative B, the positive impacts would not likely be significant because the change would be very small compared to the context of coastal processes in general along the seashore.

FLOODPLAINS

AFFECTED ENVIRONMENT

Flooding on Assateague Island can range from minor overwash events from high tides to major flooding from hurricanes and other coastal storms. Excessive precipitation can also flood low elevation areas across the barrier island. Major storms can drive ocean storm surges completely across the island, dramatically changing habitats as well as the entire landscape. As storm winds and waves scour away sand from the ocean beaches, sediments are deposited along the bayside, which slowly moves the landform to the west. Storm surge combined with a high tide can breach the island and create new inlets. High waves and water have periodically swept entirely over Assateague Island and flowed into Chincoteague Bay. As demonstrated by Tropical Storm Isabel in 2003 and Hurricane Sandy in 2012, Assateague Island is extremely vulnerable to coastal flood events.

Assateague Island National Seashore supports a number of natural features that reduce flooding severity. For example, estuarine wetlands along the western shoreline of the island provide various functions, such as flood flow storage and sediment retention. Dunes along the seashore impede storm surge, and interdunal wetlands and other depressions also function to store water during overwash or large precipitation events. Beach dunes are typically formed through the trapping of sand by dune vegetation, and in the absence of vegetation, dunes may "migrate," moving with the prevailing wind direction. Vegetation adapted to rapid sand accumulation, sandblast, wind and water erosion, wind temperature fluctuations, and saltspray, such as American beachgrass (*Ammophila breviligulata*), facilitate dune stabilization along Assateague Island. Stabilized, non-migratory dunes provide flood protection services by preventing blowouts and impeding overwash. Dunes are present near the South Ocean Beach Parking Area and appear to be relatively stable. Dunes are not present near the Bayside Picnic Parking Area.

The entirety of Assateague Island is within the 100-year floodplain, as shown on Federal Emergency Management Agency Flood Insurance Rate Map number 2400830200C (FEMA 1992). The Federal Emergency Management Agency defines geographic areas as flood zones according to varying levels of flood risk. Each zone reflects the severity or type of flooding in the area. There are two 100-year floodplain zones within the Assateague Islands National Seashore. The first zone, labeled A-12 on Federal Emergency Management Agency maps, has a 100-year floodplain at 8.0 feet National Geodetic Vertical Datum of 1929 (NGVD29). This zone encompasses most of the bayside area of the island, and covers the Bayside Picnic Parking Area. The major source of flooding on this side of the island is overwash from Chincoteague Bay. In the immediate vicinity of the Bayside Picnic and South Ocean Beach proposed parking areas, estuarine wetlands, particularly along the northern shoreline of the peninsula provide shoreline stabilization function and reduce flood potential (by allowing for water storage during surges).

The second zone on the Federal Emergency Management Agency mapping is zone V-7, a zone where floodplain elevation is known to be influenced by wave action. This zone is isolated to the dune and beach area along the ocean side of the island and has a 100-year floodplain at 12.0 feet NGVD29 (FEMA 1992). The existing South Ocean Beach Parking Area is within zone V-7. The primary source of flooding at this location is from the ocean, with potential for minor flooding from Chincoteague Bay. The bayside of the proposed South Ocean Beach Parking Area, however, is protected by several hundred feet of forested and scrub-shrub intertidal estuarine wetlands and estuarine emergent marshes. Within the immediate vicinity of the proposed parking relocation, interdunal palustrine wetlands are found which may help ameliorate overwash conditions.

The current parking areas are composed of asphalt pavement. These impervious surfaces can increase flow rates (sheetflow) from precipitation events. Relative to permeable natural surfaces, smooth impermeable surfaces may accelerate scour and erosion in surrounding areas.

Climate Change / Sea-level Rise

Climate related changes are described in the coastal processes section of this chapter.

IMPACT ANALYSIS METHODS

Regulatory Framework

Current regulations and policies associated with floodplains include the following:

- Executive Order 11988 (*Floodplain Management*)
- NPS Director's Order #77-2
- NPS *Management Policies 2006*
- Floodplain Management and Procedural Manual #77-2

A floodplain statement of findings in included in appendix C in accordance with the regulatory framework identified above.

Geographic Analysis Area

The geographic area within the national seashore evaluated for effects for floodplains is more broadly defined beyond the extent of the parking areas to address impacts caused by altering the land surface, removing existing infrastructure, and restoring previously disturbed areas to a more natural condition. The geographic area evaluated for effects is defined as the area within and adjacent (within 100 feet) to the existing and proposed locations of the Bayside Picnic and South Ocean Beach Parking Areas, the Life of the Dunes Nature Trail Parking Area, and the trail to South Ocean Beach from the parking area.

ALTERNATIVE A: NO ACTION / CONTINUE CURRENT MANAGEMENT

Impact Analysis

There would be no disturbance to the floodplain related to management action implemented under alternative A because there would be no new construction-related actions and no changes made to the existing parking areas. The frequency, duration, and type of flooding as a result of maintaining the parking lots in their current locations and configurations would be expected to continue to cause some adverse impacts on floodplains, as the National Park Service would continue its policy of allowing natural processes to prevail.

The natural features that reduce flooding severity (wetlands and coastal topography) would continue to provide floodplain functions irrespective of the impervious surfaces of the existing parking lots, which is smooth and impermeable. The National Park Service would continue to maintain this surface. This surface would continue to convey sheetflow into surrounding areas during precipitation events relatively faster than natural highly permeable sandy ground cover. Changes in the quantity and quality of stormwater would not be measurable. In the South Ocean Beach Parking Area vicinity, conveyance of sheetflow from the existing paved surface is channeled into interdunal wetlands through culverts and ditches. This results in clogged culverts (primarily sand) and accumulation of some sediment in depressional and interdunal wetlands which likely decreases the water storage capacity to a small degree. Rapid conveyance of sheetflow from precipitation events into the interdunal wetlands may also surpass the infiltration rate of the wetlands, causing flooding to the surrounding areas that is limited and of short duration. The impact to floodplains associated with alternative A would be short-term, negligible, and adverse.

Cumulative Impacts

Past, present, and reasonably foreseeable actions that have the potential to impact floodplains in the project area include past repairs associated with storm damage response, and continued NPS policies to allow natural processes to prevail. Repair activities are likely to continue into the future as storm events would continue to occur. NPS repair activities remove sand and sediment from parking areas and restore pre-storm event contours. By doing so, these repair activities would likely have long-term, minor beneficial impacts on floodplain functions. The intensity of effect would be considered minor due to the relative limited extent of floodplain affected by the parking areas. When the short-term, negligible adverse impacts of alternative A are combined with the long-term, minor beneficial and short-term, negligible adverse impacts of past, present and future plans, projects and activities affecting floodplains at the national seashore, the overall cumulative impacts would be long-term and beneficial. Alternative A would contribute a slight adverse increment to the cumulative impacts but overall, cumulative impacts would remain beneficial.

Conclusion

The entirety of Assateague Island is within the 100-year floodplain. The impact to floodplains associated with alternative A would be short-term, negligible and adverse and alternative A contributes a slight adverse increment to otherwise beneficial cumulative impacts. When the limited extent of the adverse impacts of alternative A are considered in the context of floodplain functions and values, these impacts would not likely be considered significant.

ALTERNATIVE B: RELOCATE THE BAYSIDE PICNIC PARKING AREA AND SOUTH OCEAN BEACH PARKING AREA AND CORRESPONDING VISITOR AMENITIES

Impact Analysis

Relocation of the existing parking areas to sites further inland under alternative B would provide additional natural buffer from sheetflow from precipitation events. Further, the surfaces of the new parking areas would be comprised of a packed clay layer underlying a crushed clam shell surface. Although this surface is not likely permeable, the clam shell surface would increase surface roughness of the parking areas. Roughness is an important variable in measuring a surface's ability to convey water across the surface. A smoother surface, such as asphalt would convey water faster than a rough surface. Therefore, the proposed aggregate surface materials would continue to convey sheetflow into surrounding areas during precipitation events, but at a much slower rate than a paved asphalt surface. In addition, reduced sheetflow rates would reduce the risk of sedimentation and erosion. Changes in the quantity and quality of stormwater would not be measurable. These impacts would be adverse but would be negligible.

The natural features that reduce flooding severity (wetlands and coastal topography) would continue to provide floodplain ecological services (see also wetlands and coastal processes sections) This in turn would maintain the ability of wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization. The impact to floodplains associated with alternative B would be long-term and moderate and beneficial as a result of removing impermeable surface from floodplains, moving the parking areas farther inland and increasing the size of the buffer on floodplain areas, and utilizing a surface that would reduce the risk of sedimentation during precipitation events. Although small in areal extent, these impacts would be considered moderate because they would likely contribute noticeable benefits to the natural functioning of the floodplains in the vicinity of the existing parking areas.

Cumulative Impacts

The cumulative impacts relative to other actions related to maintenance and repair of facilities in or in close proximity to floodplains would be similar to those described for alternative A; i.e., short-term, negligible and adverse, and long-term, minor beneficial impacts due to NPS policies to maintain and promote natural processes. When the long-term, moderate beneficial impacts of alternative B are combined with the long-term, beneficial impacts of past, present and future plans, projects and activities affecting floodplains at the national seashore, the resulting cumulative impacts would be long-term, moderate, and beneficial. Alternative B would have a large contribution to the overall beneficial cumulative impact.

Conclusion

The floodplain encompasses all of Assateague Island. Alternative B would have long-term, moderate beneficial impacts because it would enhance floodplain functions and reduce flood potential by slowing sheetflow during precipitation events, enhancing the ability of wetlands to absorb these flows by decreasing the inflow rate, and increasing the size of natural buffer areas surrounding the new parking locations relative to open water. Alternative B would also have a large contribution to overall beneficial cumulative impacts. However, the beneficial impacts of alternative B on floodplains would not likely be significant because any enhancement of floodplain functions and values, reduction of flood potential and/or increase in natural buffers would be highly localized and would not likely result in any large-scale changes in floodplain functions and values.

WETLANDS

AFFECTED ENVIRONMENT

In May 2013, wetlands scientists with the assistance of personnel from the Assateague Island National Seashore, Natural Resources Management Division conducted field delineations of wetland features in the general vicinity of the Bayside Picnic Parking Area and the South Ocean Beach Parking Area proposed for removal and relocation. The wetlands delineation was conducted in accordance with the U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* (Environmental Laboratory 1987), *Regional Supplement to the Corps Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)* (USACE 2010), and the *National Park Service Procedural Manual #77-1: Wetland Protection* (NPS 2012b). Results of the wetlands delineation are summarized in a separate wetland delineation report (NPS 2013b).

Wetland boundaries were determined by evaluating the presence or absence of wetland indicators at two or more observation points. The boundary is mapped between an observation point evaluated as an upland location and an observation point evaluated as a wetland. Three criteria must be met for an observation point to be considered within a wetland location: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology.

Delineated wetlands were identified using the Cowardin classification system (Cowardin et al. 1979). Under this classification, wetlands may be generally placed into marine (wetlands associated with oceanic environments), riverine (wetlands associated with rivers, streams, and drainage features), estuarine (non-oceanic wetlands influenced by tidal flows), palustrine (fresh water wetland systems), and lacustrine systems (open fresh water systems).

The field delineation efforts mapped 4.71 acres of estuarine wetlands in the vicinity of the Bayside Picnic Parking Area and 0.80 acre of estuarine and interdunal palustrine wetlands within the vicinity of the South Ocean Beach Parking Area. These delineated wetlands are depicted in figures 2 and 3 in appendix D.

Clean Water Act jurisdiction was applied over certain wetlands within the project area in accordance with *Joint EPA and USACE Guidance: Clean Water Act Jurisdiction Following the U. S. Supreme Court's Decision in* Rapanos v. United States *and* Carabell v. United States (EPA and USACE 2007). A summary of the joint Environmental Protection Agency and U.S. Army Corps of Engineers guidance is included below:

- Clean Water Act jurisdiction is always applied over waters that are (1) traditional navigable waters; (2) wetlands adjacent to traditional navigable waters; (3) non-navigable tributaries of traditional navigable waters that are perennial streams with permanent or seasonal flows; or (4) wetlands that directly abut such tributaries.
- Clean Water Act jurisdiction is applied on a case-by-case basis evaluating if a significant nexus exists with a traditional navigable water for waters that are (1) intermittent non-navigable tributaries; (2) intermittently flooded wetlands adjacent to intermittent tributaries; or (3) wetlands adjacent to but do not directly abut a perennial non-navigable tributary.
- Clean Water Act jurisdiction is not applicable over the following waters: (1) swales or erosional features, such as small washes characterized by low volume, infrequent, or short duration flow; or (2) ditches, including roadside ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

Sources of water for the wetlands observed in the project area are variable. Interdunal wetlands typically receive water from groundwater conditions. Wetlands along the northern shoreline at the Bayside Picnic Parking Area location are intertidal, with apparent little influence from sheetflow or precipitation. Sheet flow from the existing parking area does not appear to contribute inflows to the wetlands in this vicinity. The direction of flow from precipitation events

likely flows to the south and west, not towards the wetlands along the northern shoreline. Within the South Ocean Beach Parking Area, wetlands receive water from overwash, salt spray, groundwater, sheetflow, precipitation, and tidal influences. The interdunal wetlands near the South Ocean Beach Parking Area likely receive additional surface inflows from sheetflow and channeled/ditched flow originating from existing impervious cover. After precipitation events, water appears to flow and settle in these interdunal locations, and may be equally important to maintaining wetlands functions as groundwater seepage. Interdunal wetlands (non-jurisdictional) are not static, and shift along with dune movement.

Hydrological and ecological factors that may establish a significant nexus to navigable waters (thereby establishing Clean Water Act jurisdiction) include the following: (1) volume, duration, and frequency of flow; (2) proximity to a traditional navigable water and watershed size; (3) average annual rainfall; (4) potential of tributaries to carry flood waters to navigable waters or to trap and filter pollutants or flood waters; and, (5) maintenance of water quality and aquatic habitat in traditional navigable waters. All of the wetlands located in the vicinity of the Bayside Picnic Parking Area are likely jurisdictional under Section 404 of the Clean Water Act. These wetlands have tidal connections with Chincoteague Bay. This connectivity establishes the wetlands as adjacent to a traditional navigable water—one of the criteria for establishing a wetland as jurisdictional under Section 404 of the Clean Water Act. In the vicinity of the South Ocean Beach Parking Area, 0.41 acre of estuarine wetlands has a tidal connection with Chincoteague Bay, and therefore, is also jurisdictional under Section 404 of the Clean Water Act. Wetlands scientists identified 0.39 acre of interdunal palustrine wetlands that do not show connectivity with traditional navigable water, and are therefore not assumed to be jurisdictional under Section 404 of the Clean Water Act. These interdunal wetlands, however, are special ecological features that meet the definition of wetlands used by the Department of Interior and the National Park Service.

Climate Change / Sea-level Rise

Climate related changes are described in the coastal processes section of this chapter.

IMPACT ANALYSIS METHODS

Regulatory Framework

Current regulations and policies associated with wetlands include the following:

- Executive Order 11990 (*Protection of Wetlands*)
- NPS Director's Order #77-1 (*Protection of Wetlands*)
- NPS *Management Policies 2006*
- Clean Water Act

A wetlands statement of findings was written in compliance with Executive Order 11990 and NPS Director's Order #77-1 and is included as appendix B.

Geographic Analysis Area

The geographic area within the national seashore evaluated for effects for wetlands is more broadly defined because the wetlands identified within the project areas are part of a larger complex of wetland systems on Assateague Island. For wetlands, the geographic area evaluated for effects is defined as the area within and adjacent to (within 100 feet) the existing and proposed locations of the Bayside Picnic and South Ocean Beach Parking Areas, the Life of the Dunes Nature Trail Parking Area, and the trail to South Ocean Beach from the parking area.

ALTERNATIVE A: NO ACTION / CONTINUE CURRENT MANAGEMENT

Impact Analysis

No disturbance to wetlands would occur under alternative A because there would be no new construction-related actions and no changes to the existing parking areas. Wetlands would continue to provide ecological services, such as supporting natural communities and various water quality and hydrological functions (e.g. flood severity reduction, sediment retention, nutrient cycling, and shoreline stabilization), and natural processes would continue to influence or disturb existing wetlands. Alternative A would leave in place the asphalt pavement, which is smooth and impermeable. The National Park Service would continue to maintain this surface. This surface would continue to convey sheetflow into surrounding areas during precipitation events relatively faster than natural highly permeable, sandy, ground cover. Higher rates of sheetflow could increase the risk of sedimentation and erosion, but any adverse impacts to area wetlands would likely be negligible. In the South Ocean Beach Parking Area vicinity, conveyance of sheetflow from the existing paved surface is channeled into interdunal wetlands through culverts and ditches. This results in clogged culverts (primarily sand) and filling of depressional and interdunal wetlands with sediment which may slightly decrease water storage capacity but would be considered negligible.

Cumulative Impacts

Past, present, and reasonably foreseeable actions that have the potential to impact wetlands in the project area include past repairs associated with storm damage response, and continued NPS policies to protect wetlands. Repair activities are likely to continue into the future as storm events will continue to occur. NPS repair activities remove sand and sediment from parking areas and restore pre-storm event contours. By doing so, these repair activities occur in upland (non-wetland) areas and would likely have long-term minor beneficial impacts on jurisdictional wetlands. Interdunal wetlands are not static, and may shift as the dunes shift. The National Park Service would continue its “no net loss of wetlands” policy and not cause adverse impacts to wetlands, with long-term moderate beneficial impacts for the national seashore.

When the negligible adverse impacts of alternative A are combined with the long-term, minor beneficial and long-term, negligible adverse impact of past, present and future plans, projects and activities affecting wetlands at the national seashore, the resulting cumulative impacts would be long-term, minor, and beneficial and long-term, negligible, and adverse. Alternative A would have a slight adverse contribution to the cumulative impacts.

Conclusion

Alternative A would have some negligible, adverse impacts associated with continued maintenance of the paved parking areas and would contribute a negligible adverse increment to the overall cumulative impacts that would be long-term, minor, and beneficial and long-term, negligible, and adverse. None of the adverse impacts associated with alternative A would be considered significant because of the limited extent and short duration of any increased sedimentation or decrease in water storage capacity.

ALTERNATIVE B: RELOCATE THE BAYSIDE PICNIC PARKING AREA AND SOUTH OCEAN BEACH PARKING AREA AND CORRESPONDING VISITOR AMENITIES

No wetlands would be filled or otherwise removed under alternative B; therefore, no wetland permitting would be required through the U.S. Army Corps of Engineers regulatory framework. Wetlands would continue to provide ecological services, such as supporting natural communities and various water quality and hydrological functions (e.g. flood severity reduction, sediment

retention, nutrient cycling, and shoreline stabilization). In addition, the National Park Service would continue to meet its "no net loss policy" for wetlands at the national seashore, with long-term, moderate beneficial impacts.

The proposed new parking area surfaces (sea shell clam aggregate mixed with clay) would continue to convey sheetflow into surrounding areas during precipitation events, but at a much slower rate compared to a paved asphalt surface under alternative A. Therefore, wetlands adjacent to parking facilities would receive sheetflows at lower rates, reducing the risk of sedimentation and erosion. This in turn would better maintain wetland functional values. Implementation of alternative B would have negligible adverse impacts because some sediment would likely still be carried into adjacent wetlands; however, the reduced rate of sheetflow would likely result in long-term moderate beneficial impacts to wetlands. In addition, the relocation of the parking would increase the size of natural buffer areas surrounding the new parking areas relative to open water, which would have additional long-term, moderate benefits to wetlands.

Removing the parking area at South Ocean Beach would allow natural processes to prevail, including where water would settle once the paved parking area is removed and recontoured to match the surrounding geomorphic conditions. Removing the paved parking area at South Ocean Beach would allow natural shifting of the interdunal wetlands. This would also have long-term, moderate beneficial effects. Overall, alternative B would likely result in long-term, moderate beneficial impacts on wetlands.

Cumulative Impacts

As with alternative A, past, present, and reasonably foreseeable actions that have the potential to impact wetlands in the project area include repairs associated with storm damage response. Past repairs would have the same impact as described for alternative A.

When the long-term, moderate beneficial impacts of alternative B are combined with the impacts of past, present and future plans, projects and activities affecting wetlands at the national seashore, the resulting cumulative impacts would remain long-term, moderate, and beneficial. Alternative B would contribute a moderate increment to the overall cumulative impact.

Conclusion

Alternative B would likely have long-term, moderate beneficial impacts to wetlands because it would enhance wetlands functions by slowing sheetflow during precipitation events, enhance the ability of wetlands to absorb these flows by decreasing the inflow rate, increase the size of natural buffer areas surrounding the new parking locations relative to open water, and restore natural processes to the areas currently occupied by the existing parking lots. Alternative B would also contribute a moderate beneficial increment to the overall beneficial cumulative impacts. However, the beneficial impacts of alternative B on wetlands would not likely be significant because the enhancement of wetland functions, increase in the size of buffers, or restoration of natural processes would be highly localized and would not likely result in any large-scale changes in wetland functions and values.

VISITOR USE AND EXPERIENCE AND RECREATIONAL RESOURCES

AFFECTED ENVIRONMENT

Assateague Island National Seashore is open year-round and is one of the few publicly accessible points along the east coast of the United States where visitors can enjoy seashore values such as clean ocean water and beaches, undeveloped bay and marshlands, natural sounds free of man-made disturbances, seashore viewsheds, night skies, and wildlife viewing. The park's proximity to Washington D.C., Baltimore, and Philadelphia metropolitan areas draws many visitors. Although the summer months receive the greatest number of visits, attractions such as migratory bird watching and hunting contribute to visitation during what were once considered non-traditional visitation periods in the fall and spring.

Before entering the island on Route 611 in Maryland, visitors are encouraged to stop at the Barrier Island Visitor Center located just before the Verrazzano Bridge. Beachcombing exhibits, educational brochures, nature films, and a marine aquarium are on display to inform visitors about the natural and cultural resources of the island. Maryland Route 611 connects to the park via Bayberry Drive. Bayberry Drive takes visitors through Assateague State Park and then into the National Seashore, where it serves as the main park road.

The park receives over two million visitors annually with more than 65% of those visiting between May and August, which is considered the peak season (NPS 2013a). The park's visitation consists largely of family groups arriving by private vehicles. A growing number of motor coaches, well over 100 per year, bring senior citizens to the area, and 9,000 students arrive by school bus each year for scheduled educational programs. Currently, the park provides curriculum-based educational materials and kits to schools, on-and off-site programs, and teacher workshops. Public programs, exhibits, electronic media, and publications such as site bulletin boards, brochures, and park newspapers are routinely used to get information to the public. Self-guided trails also exist to interpret three different barrier island habitats.

Visitors to the national seashore can enjoy a variety of activities including camping, canoeing and kayaking, biking, birding, hiking, shell collecting, shellfishing, surf fishing, swimming, and surfing. The Bayside Picnic, South Ocean Beach, and Life of the Dunes Nature Trail Parking Area provide access to a variety of these activities. The parking areas and adjacent visitor amenities are ADA-accessible, as discussed in chapter 2. Available visitor amenities and condition of existing parking areas at each location are listed under the description of alternative A in chapter 2.

Under the park's existing general management plan and current general management planning efforts, the Bayside Picnic, South Ocean Beach, and Life of the Dunes Nature Trail Parking Areas all fall within a developed management zone. These areas are managed to offer interpretive, educational, and management programs that provide a range of services to visitors.

The Bayside Picnic Parking Area is directly adjacent to the Chincoteague Bay shoreline and visitor amenities located there. Assateague Island falls within the Atlantic migratory flyway and birding is a popular activity at the Bayside Picnic Area and throughout the park during the fall and spring. Migratory birds frequently converge along the eastern shore of Sinepuxent Bay near the northwest portion of Assateague Island National Seashore during fall and spring migrations. The Bayside Picnic Area is popular with the birding community because it provides access to view this convergence from the picnic area, parking area, and along the shoreline of the Chincoteague Bay. Two other nearby trails also provide access for birders to witness the convergence of migratory birds near the Bayside Peninsula. They include the Life of the Marsh Nature Trail (also on the Bayside Peninsula) and the Life of the Forest Nature Trail (just south of the peninsula).

A bicycle and pedestrian trail runs parallel to Bayberry Drive and terminates at the Life of the Dunes Nature Trail Parking Area. The parking area provides access to both the bicycle/pedestrian trail and the Life of the Dunes Nature Trail, but also serves as overflow parking

for South Ocean Beach during the peak season summer months. Both the South Ocean Beach and Life of the Dunes Nature Trail Parking Areas are typically full during the peak season and visitors begin parking in undesignated areas along Bayberry Drive. Visitors who park at Life of the Dunes Nature Trail Parking Area and along Bayberry Drive need to cross the road in order to access South Ocean Beach. Visitors cross the road along the bicycle path, along Bayberry Drive, or across various social trails that go through the dunes between the parking areas and Bayberry Drive.

Climate Change / Sea-level Rise

Climate change could alter the timing of visits and activities at the park. As discussed above, most visitation to the national seashore occurs from May to August when temperatures are warmest and water-based activities are most frequent. Visitor numbers currently tend to dip in the fall and winter months. Higher temperatures and rising ocean levels associated with climate change could shift park visitation toward cooler seasons and could also alter visitor access to portions of the national seashore. An increase in the number and severity of storms could affect visitor experiences, ability to access the national seashore, availability, and condition of visitor services and facilities. Specific impacts to the national seashore are as yet unknown.

IMPACT ANALYSIS METHODS

Regulatory Framework

Current regulations and policies associated with visitor use and experience include the following:

- Americans with Disabilities Act;
- Architectural Barriers Act;
- Director's Order #42 *Accessibility for Visitors with Disabilities in National Park Service Programs and Services*;
- Draft Final Accessibility Guidelines for Outdoor Developed Areas (2009);
- 1998 Executive Summary to Congress;
- National Parks and Recreation Act of 1978;
- NPS *Management Policies 2006* (NPS 2006);
- National Park Service Organic Act; and
- Rehabilitation Act of 1973.

Geographic Analysis Area

The geographic area analyzed for impacts to visitor use and experience and recreational resources is more broadly defined because of the tendency for visitors to move within a larger area when visiting the national seashore. For this reason, the geographic area evaluated for effects is defined as the general Bayside Picnic, South Ocean Beach, and Life of the Dunes Trailhead Areas. This includes both the parking areas, access to the features at these locations, and the immediate vicinity.

ALTERNATIVE A: NO ACTION / CONTINUE CURRENT MANAGEMENT

Impact Analysis

There would be no change in the fundamental nature and quality of visitor experience or recreational opportunities at the Bayside Picnic, South Ocean Beach, or Life of the Dunes Nature Trail Parking Areas under the no action alternative. The parking areas would remain open in their current condition (see chapter 2 for description) and visitors would continue to have access to the areas and resources they service. The parking areas and adjacent amenities would remain ADA-accessible. There would be adverse impacts on visitor use and experience because damage caused by Hurricane Sandy would not be fully addressed, and there would be a slight reduction in parking spaces available for visitors at the Bayside Picnic Parking Area. The Bayside Picnic and South Ocean Beach Parking Areas would remain susceptible to damage during future storm events. Following storm events, clean up and maintenance projects could require temporary closures, which would inconvenience visitors. The Bayside Picnic Parking Area would likely continue to shrink in size as a result of erosion caused by the shifting shoreline. The potential for extended parking area closures would increase, especially at the South Ocean Beach Parking Area where sand would continue to accumulate during storm events. Parking area conditions could deteriorate to the point that the quality of the visitor experience would be diminished for visitors that favor those areas. Adverse impacts on visitor use and recreation resources under the no action alternative would be long-term, and could range from negligible to moderate, depending on the severity and season of future storm events.

Cumulative Impacts

Visitors to Assateague Island National Seashore are positively affected by a wide range of opportunities and facilities within the park. Visitors engage in popular activities, including camping, canoeing and kayaking, biking, hiking, shell collecting, shellfishing, surf fishing, swimming, and surfing.

Conditions also exist in the park that result in adverse impacts on visitor experience. High levels of visitation to national parks results in crowding and dissatisfaction (Gramann 2002). Other activities that have the potential to adversely affect visitor experience include facility maintenance, temporary closures, and the use of machinery and equipment for resource management. These conditions can have short-term, minor-to-moderate, adverse impacts on visitor experience.

The park manages the impacts of these conditions through development of management plans and implementation of subsequent actions to improve the experience of visitors. Implementation of past, present and future management plans that affect visitor use and experience within the park include the Resource Management Plan (NPS 1999), and current general management planning, including transportation planning. These plans and actions altered or will alter conditions, with varied moderate beneficial and short-term, adverse effects on visitor experience. Long-term effects on visitor experience would be moderate and beneficial.

The park has also conducted on-going repairs to facilities (such as trail work and other visitor amenities) related to storm effects of Hurricane Sandy in order to maintain visitor access and recreational use. Current and future traffic within the parking areas would also accelerate the deterioration of the Bayside Picnic and South Ocean Beach Parking Areas. The need for long-term maintenance and repair to the asphalt parking areas would increase, leading to temporary closures, which would diminish the visitor experience.

Overall, when the cumulative impacts of other past, ongoing, and future plans, projects, and activities affecting visitor use and experience are combined with the expected impacts of alternative A, the resulting cumulative impacts would likely be adverse due to short-term crowding and inconvenience through temporary closures which would diminish the experience for some visi-

tors. The adverse impacts would be offset to some degree by planning and management of visitor use that attempts to avoid and minimize such problems. The adverse effects of alternative A would contribute a moderate adverse increment to the overall cumulative impacts.

Conclusion

Alternative A would have adverse impacts on visitor use and experience from the increased potential for temporary parking area closures associated with clean-up and deterioration of the parking areas following future storm events that would gradually reduce the number of spaces, inconveniencing visitors and possibly diminishing their overall experience of the park, especially those visitors that favor these areas. When all of the past, present, and future actions affecting the park are added to the impacts of alternative A the cumulative impacts would likely be adverse and long-term. The adverse impacts of alternative A would contribute a moderate increment to the overall adverse cumulative impact. The adverse impacts of alternative A would likely range from negligible to moderate, depending on the season and severity of storms and resulting damage to the parking areas. The adverse impacts would not likely be considered significant because the parking areas would continue to serve their intended functions for the majority of park visitors.

ALTERNATIVE B: RELOCATE THE BAYSIDE PICNIC PARKING AREA AND SOUTH OCEAN BEACH PARKING AREA AND CORRESPONDING VISITOR AMENITIES

Impact Analysis

Relocating the Bayside Picnic and South Ocean Beach Parking Areas would improve the visitor experience by providing more predictable parking facilities because they would be in locations less susceptible to future storm damage. The relocated parking areas and additional boardwalks to the adjacent amenities would be ADA-accessible and would continue to provide low-impact public access. Long-term maintenance requirements and temporary closures would likely decrease because the new parking areas would be located in areas less prone to damage and sand deposition during future storm events. This would mean fewer times that visitors would be inconvenienced because they would be unable to park in these areas. Additionally, at the Bayside Picnic Area the additional boardwalk and the open area that would result from the removal of the existing asphalt could provide additional access for visitors interested in watching migratory birds in the area. Thus, the long-term impacts on visitor use and experience from the removal and relocation action would be expected to be moderate and beneficial.

Traffic control measures would be established during construction and could result in a temporary inconvenience for visitors; however, visitors would still be able to park during construction because the existing parking areas would not be removed until construction of the new parking areas was complete. Pedestrian access to Chincoteague Bay and South Ocean beach would be rerouted to provide safe entrance for visitors during construction. Construction of the new parking areas and removal of the existing parking areas would occur during the off season when visitation levels are lower. Some adverse impacts on visitor use and experience and recreational resources would occur during construction from potential noise, traffic delays, temporary closures, and alternative access routes. The impacts associated with potential noise from construction would be greater at the Bayside Picnic Area due to the close proximity of construction to visitors along the shoreline area; however, adverse impacts from construction would be minor and short-term.

The use of use of sea shell clam aggregate mixed with clay would require monthly grading by park staff during the peak season and occasional resurfacing with clam shells. Routine maintenance of the parking areas could result in temporary closures of the parking areas. However, these tasks would be scheduled during non-peak visitation hours to the extent practicable. Ad-

verse impacts to visitor use and experience as a result of maintenance would be minor, and short-term. The use of the sea shell clam aggregate material rather than asphalt would provide long-term benefits to visitor use and experience because temporary closures due to routine maintenance would be shorter than those required to repair the existing asphalt parking areas.

Additional amenities, including additional picnic tables and grills, a potential pavilion or shade structure, potential additional restrooms and a shower / foot wash station at the Bayside Picnic Parking Area, and potential changing stations at the South Ocean Beach Parking Area would improve the visitor experience. The increased amenities would result in a long-term, moderate beneficial impact to visitor use and experience and recreational resources.

Under alternative B, the new parking area locations would require an increase in the distance visitors would need to travel to both the Bayside Picnic Area and South Ocean Beach. However, any adverse impacts on visitors would be minor because during the peak season, visitors currently have to walk longer distances to these locations once parking areas are full and people begin parking along the road such that this would not be much different than existing conditions. Some of the adverse impacts would be minimized by the addition of a loading / unloading zone which would also be accessible at the Bayside Picnic Parking Area. The increased distance between the parking areas and the visitor destination would result in short-term, negligible to minor adverse impacts to visitor use and experience.

Cumulative Impacts

The cumulative impacts on visitor use and experience would be the same as described in alternative A and would be long-and short-term, minor, and adverse. Implementation of alternative B would have long-term, moderate beneficial impacts, as well as short-term, negligible to minor adverse impacts on visitor use and experience. Impacts of this alternative, in combination with the impacts of other past, present, and reasonably foreseeable future actions, would result in a long-term, moderate beneficial cumulative impact. The beneficial impacts of alternative B would contribute a moderate increment to reduce the adverse cumulative impact.

Conclusion

Alternative B would have long-term, moderate beneficial impacts as a result of reduced potential for inconveniences due to closures to repair storm damage plus the provision of additional visitor amenities. Alternative B would also result in short-term, negligible to minor adverse impacts due to inconveniences during construction activities and future maintenance. Due to the nature of mostly beneficial impacts, this alternative, in combination with other actions, plans, and policies, would result in long-term, moderate beneficial cumulative impacts, to which, the beneficial impacts of alternative B would contribute a moderate increment to offset some of the adverse cumulative impacts. Although positive, the impacts of alternative B would not likely be considered significant because the primary result is that visitors' expectations continue to be met because visitors can continue use these areas and associated facilities to experience the park as intended.

PUBLIC HEALTH AND SAFETY

AFFECTED ENVIRONMENT

Public and employee health and safety are affected throughout the park by the interactions of people with the natural environment, with other people, and with park operations and activities. Past, present, and future actions of the National Park Service are directed toward meeting statutory and regulatory health and safety requirements and managing risks to the public and employees. The types of public health and safety concerns identified in relationship to this project include those associated with storm-related damage, traffic, and pedestrian access. During, and immediately following storm events, areas of the park that are deemed unsafe for visitors are temporarily closed until they can be cleared and/or repaired, or until conditions are deemed safe. As discussed in the floodplains statement of findings included in appendix C, Assateague Island National Seashore has a hurricane and flooding plan that would direct emergency actions and evacuations in the event of flooding. At the appropriate time, visitors would be removed from the site and the site would be closed until potentially hazardous conditions subsided.

One health and safety concern within the project area is the potential for incidents between vehicles and pedestrians. Currently, visitors to South Ocean Beach can park at the South Ocean Beach Parking Area which is immediately adjacent to the beach and does not require any road crossings. Once the parking area is full, visitors often park at the Life of the Dunes Nature Trail Parking Area and need to cross Bayberry Drive in order to access South Ocean Beach (see figure 9). Additionally, once both parking areas are full, which happens frequently during summer months, visitor's park along Bayberry Drive and walk to South Ocean Beach.

The portion of Bayberry Drive between the current South Ocean Beach and the Life of the Dunes Nature Trail Parking Areas is near the access point for the over-sand vehicle zone in the park. During the summer months, maximum vehicle limits are often reached, especially during weekends and holidays, and traffic backs up while drivers wait their turn to enter. Additionally, the two parking areas are immediately south of a traffic circle. While the main health and safety concern in this area is the potential for pedestrian/vehicle accidents, the conditions mentioned above result in slow traffic speeds and there have not been any recorded incidents between vehicles and pedestrians in this area of the park. The flat terrain, lack of dense vegetation, and road layout currently allow for a line of site that enables good visibility. However, the variety of park users, the eagerness of visitors to get to the beach, and the confusion of the traffic circle all have the potential to distract the attention of drivers.

The Bayside Picnic Parking Area is immediately adjacent to the Chincoteague Bay and the visitor facilities located in the area. While visitors need to be careful while walking through the parking area, they do not need to cross any roadways in order to access amenities in this area.

In addition to pedestrian / vehicle conflicts, other potential environmental safety hazards within the project areas include the following:

- Mosquitoes, biting flies, gnats, and ticks from spring through autumn. Exposure to Lyme and other tick borne diseases is possible. Mosquitoes may also transmit West Nile virus.
- Exposure to weather, including sun, hot and humid weather in the summer, and cold and damp weather in the winter, thunderstorms, high winds, and lightning.
- Risks associated with encountering wildlife, including feral horses.
- Risks associated with water activities, including drowning.
- Risks associated with walking and wading on uneven terrain both on the sand and in the water.

Climate Change / Sea-level Rise

Climate change, sea-level rise, and associated coastal storms could put Maryland's people and property at risk. These changes will affect the way health-related infrastructure and programs are maintained and managed in the future. Access to clean and adequate water, proper disposal of waste water, and safety from coastal flooding and vector-borne illnesses are components of public health and safety that could be impacted by climate change and sea-level rise. A projected population increase in Maryland, mostly in coastal areas, will increase state and government responsibility for protecting human health and safety (Maryland Department of Land and Natural Resources 2008).

IMPACT ANALYSIS METHODS

Regulatory Framework

Current regulations and policies associated with health and safety include the following:

- Director's Order #50 and *Reference Manual 50, Safety and Health*;
- Director's Order #83 and *Reference Manual 83, Public Health*;
- Director's Order #51 and *Reference Manual 51, Emergency Medical Services*;
- Director's Order #30 and *Reference Manual 30, Hazard and Solid Waste Management*;
- NPS *Management Policies 2006* (NPS 2006); and
- Occupational Safety and Health Administration regulations in 29 *Code of Federal Regulations*.

Geographic Analysis Area

The geographic area analyzed for impacts to public health and safety is more broadly defined because of the tendency for visitors to move within a larger area when visiting the national seashore. For this reason, the geographic area evaluated for effects is defined to include the parking areas, access ways between parking and the features they serve, and their immediate vicinity.

ALTERNATIVE A: NO ACTION / CONTINUE CURRENT MANAGEMENT

Impact Analysis

Under alternative A, some visitors would continue to be able to park immediately adjacent to the beach at the existing South Ocean Beach Parking Area and would not need to cross Bayberry Drive on foot. Once the lot was full, visitors would continue to park first at the Life of the Dunes Nature Trail Parking Area and then along Bayberry Drive and proceed to walk along and across Bayberry Drive. Visitors at the Bayside Picnic Parking Area would continue to walk through the parking area to access the adjacent amenities. Parking area congestion during the peak season would continue to occur. There would be no expected change in public health and safety due to the range of visitor services. Accident rates would not be expected to increase substantially. During, and immediately following storm events, areas of the park that were deemed unsafe for visitors would continue to be temporarily closed until conditions were deemed safe for visitors. The impact of alternative A on health and safety would be long-term, minor, and adverse.

Cumulative Impacts

Past, present and future congestion during peak summers months would be expected to continue with the potential for pedestrian and vehicle conflicts, with long-term, minor adverse effects on health and safety. Past, present and future traffic management activities, such as directing cars at busy parking areas and intersections during times of peak visitation, would continue to be successful to avoid safety incidents, resulting in current and future, short-term, moderate beneficial impacts. Future implementation of transportation management efforts could address peak season congestion, traffic, and transportation safety, with moderate beneficial, long-term effects.

The long-term, minor adverse impacts of alternative B, in combination with the long-term, moderate beneficial and long-term, minor adverse impacts of other past, present, and reasonably foreseeable future actions, would result in long-term, minor adverse cumulative impacts. The adverse impacts of alternative A would contribute a slight increment to the overall adverse cumulative impacts.

Conclusion

Alternative A would have long-term, minor, and adverse impacts from the continued presence of pedestrians along Bayberry Drive once the South Ocean Beach Parking Area is full, in addition to pedestrian and vehicle conflicts and would contribute a slight adverse increment to the overall adverse cumulative impact. The impacts of alternative A would not be considered significant because there would be no change from existing conditions and any adverse impacts would be expected to remain minor.

ALTERNATIVE B: RELOCATE THE BAYSIDE PICNIC PARKING AREA AND SOUTH OCEAN BEACH PARKING AREA AND CORRESPONDING VISITOR AMENITIES

Impact Analysis

Under alternative B, the South Ocean Beach Parking Area would be relocated to the west side of Bayberry Drive eliminating all parking adjacent to South Ocean Beach. The National Park Service would take precautionary measures during the construction phase to provide safe conditions for visitors, by using fencing, signs, and other physical means to exclude visitors from construction areas and equipment. Adverse impacts from construction would be considered negligible, and would be short-term.

The relocation of the South Ocean Beach Parking Area would likely increase the number of pedestrians crossing Bayberry Drive. Under alternative B, there would be no expected growth in visitation related to the proposed changes in visitor services. Visitors are accustomed to slow traffic speeds and pedestrians crossing the road, and therefore no change in existing conditions would be anticipated from moving the parking area across Bayberry Drive. Traffic speeds in the area would not be expected to increase and the removal of the existing South Ocean Beach roundabout turnoff could reduce some driver confusion. Visitors would be encouraged to use the pedestrian walkways and cross at one of the two marked cross walks. As a result, alternative B would likely have some adverse impacts to public health and safety at the South Ocean Beach Parking Area but these would be expected to range from negligible to minor.

At the Bayside Picnic Parking Area, a pedestrian walkway would be constructed from the new parking area to the Chincoteague Bay and nearby amenities. The walkway would separate pedestrians from incoming traffic. This separation would result in a long-term, moderate beneficial impact to public health and safety at the Bayside Picnic Parking Area. Adverse impacts during construction would be addressed through safe construction practices and would be short-term and considered negligible.

Under alternative B, there would be no change from alternative A regarding temporary closures to ensure visitor safety during, and immediately following storm events. Therefore, there would be no impact to public health and safety relative to alternative A.

Cumulative Impacts

The cumulative impacts on public health and safety would be the same as described in alternative A and would be short-term, negligible, and adverse. Implementation of alternative B would have long-term, moderate beneficial impacts, as well as short- and long-term, negligible to minor, adverse impacts on public health and safety. When the impacts of alternative B are combined with the impacts from past, present and future actions, the overall cumulative impacts would be primarily moderate, beneficial and long term, these being offset to a small degree by short-and long-term, negligible adverse impacts. Alternative B would contribute a small increment to both the beneficial cumulative impacts and the adverse cumulative impacts.

Conclusion

Alternative B would have long-term, negligible to minor, adverse impacts on public health and safety from the increase of pedestrians crossing Bayberry Drive at the South Ocean Beach Parking Area. At the Bayside Picnic Parking Area, alternative B would result in long-term, moderate beneficial impacts to public health and safety from the installation of a pedestrian walkway going directly from the parking area to visitor amenities at the Bayside Picnic Area. Alternative B would contribute a small increment of both beneficial and adverse impacts to overall cumulative impacts that would be primarily beneficial but offset by some adverse impacts. The adverse impacts of alternative B would not likely be significant because even with some expected increase in pedestrians from the South Ocean Beach Parking Area, existing conditions with regard to traffic speed and movement would remain the same; thus, no increase in the risk to pedestrians would be likely. Similarly, although the pedestrian walkway at the Bayberry Drive Parking Area would increase pedestrian safety by a clear separation of pedestrians and vehicle traffic, there have been no reported incidents as a result of the current situation; thus, while the increased safety factor of the separate walkway is certainly desirable to further reduce risk to pedestrians, it does not represent a significant change over current conditions.

PARK OPERATIONS

AFFECTED ENVIRONMENT

Park operations include the protection of physical, natural, and cultural resources within the park and provision of visitor services and facilities. Management of Assateague Island National Seashore is organized into five divisions: Administration, Resource Management, Interpretation / Education, Facility Management, and Resource Protection. All divisions are overseen by the park superintendent. Staff throughout the park manage visitors, resources, activities, and facilities. Major park visitor facilities include two visitor centers and a ranger station / campground office. As of 2012, park staff consisted of approximately 124 employees, with 47 permanent and term employees and 77 seasonal employees. The park also benefitted from approximately 125 volunteers in 2012 (Hulslander pers. comm. 2013). Divisions directly related to this project are Facility Management, and Resource Protection.

Facility Management

The Facility Management Division employs 27 staff members (9 permanent and 18 seasonal). They are responsible for general upkeep of the park, including maintenance of park roads, park vehicles, and park facilities. Their primary tasks include care of park buildings (plumbing, painting, carpentry, electrical), maintenance of utility systems, repair and maintenance of park roads and parking areas, and maintenance of trails. The facility management division provides project support for numerous infrastructure improvement projects in the park.

Within the project areas, clean-up crews assess conditions of the parking areas on a routine basis and following any storm events. Crews provide routine maintenance, including cleaning drainage control structures such as ditches, and culverts where possible; removing debris; and trimming/pruning vegetation as necessary. Crews maintain the South Ocean Beach Parking Area and Bayside Picnic Parking Area by periodically removing sand accumulation, re-striping parking spots, and hiring outside crews to repair asphalt as possible due to storm damage and normal vehicle use.

Resource Protection

The Resource Protection and Visitor Management division employs 22 staff members (14 seasonal and 8 permanent). These employees protect park resources and the safety of park visitors. Law enforcement rangers are commissioned officers who police the park (including poaching, traffic control, and automobile accidents) and also provide education on the park's resources.

IMPACT ANALYSIS METHODS

Regulatory Framework

Current laws and policies associated with park operations include the following:

- NPS *Management Policies 2006* (NPS 2006)
- *OSHA 29 CFR*
- Director's Order #30 and *RM-30: Hazard and Solid Waste Management*
- Director's Order #50 and *RM-50: Safety and Health*

Geographic Analysis Area

The geographic area analyzed for impacts to park operations is more broadly defined because park staff operate throughout the entire park. For this reason, the geographic area evaluated for effects is defined to include all of Assateague Island National Seashore.

ALTERNATIVE A: NO ACTION / CONTINUE CURRENT MANAGEMENT

Impact Analysis

All of the existing operational demands on National Park Service personnel with regard to the maintenance, clean-up and repair of the Bayside Picnic and South Ocean Beach Parking Areas following storm events would continue or worsen over time under alternative A. Operation and maintenance activities for existing facilities would continue unchanged, with some facilities not being repaired or re-opened. Impacts would include an increasing maintenance workload following storm events because of the increasingly vulnerable position and deterioration of the parking areas and associated facilities identified in chapter 2. Park staff do not have the equipment to make any repairs to asphalt and necessary repairs would continue to be outsourced.

Emergency responses to post-storm clean-up activities would continue to disrupt the scheduling of park labor sources as response personnel were drawn from their planned activities. The response staff may work long hours or weekends depending on the season, other staff may be pulled from their assignments to cover the normal duties of the response team, and less-critical jobs may not be accomplished during these timeframes. The long-term, adverse impacts on park operations would be minor to moderate, depending on the intensity, duration, and timing of future storm events.

Cumulative Impacts

Past repairs and clean up efforts to the Bayside Picnic and South Ocean Beach Parking Areas have resulted in short-term, minor to moderate adverse effects on park operations as park employees focused their efforts to restore the functionality of the parking areas in order to provide visitor access and use, and other facilities to restore other services (restrooms, trails, etc). These types of repairs would likely continue to be required in the future depending on the nature and severity of expected future storms. Current and future traffic within the parking areas would also accelerate the deterioration of the Bayside Picnic and South Ocean Beach Parking Areas requiring increased routine activities for asphalt maintenance.

Additionally, park staff from all divisions would implement existing and future plans and actions throughout the park while operating the park and protecting its resources. These plans and actions would result in improved resource conditions and improved effectiveness of park staff over the long term.

The Resource Management Division staff would continue to organize and conduct monitoring and management actions identified in the Resource Management Plan, such as exotic plant management, prescribed burns, and monitoring of wildlife and horses (as past, present, and future activities). The public would not likely notice any changes in park staff duties, but park staff would be aware of any fluctuations in duties necessary to help address resource concerns in the vicinity of the project areas in the future. This may include addressing impacts associated with the redistribution of asphalt and other storm debris subsequent to storm events. Therefore, past, present, and future staff and resource commitments for these resource management efforts represents a long-term, minor, adverse effect on park operations.

The Facilities Management Division would continue to be responsible for regular and planned facility construction and maintenance. Roads, access points, and parking areas would continue to be maintained and repaired according to transportation planning and management plans.

Continued routine asphalt maintenance requirements would be met by park staff and contractors. The long-term impact to park operations would be minor and adverse.

Implementation of these past, present, and foreseeable future actions all represent increased duties for the park staff, with overall long-term, minor to moderate adverse impacts.

When the long-term, minor to moderate adverse impacts of alternative A on park operations are combined with the minor to moderate adverse impacts of other past, present and future plans, projects and activities the result would be a long-term, minor to moderate adverse cumulative impact. Alternative A would contribute a moderate increment to the overall cumulative impacts.

Conclusion

Alternative A would have long-term, minor to moderate and adverse impacts on park operations from the potential for continued and increasing maintenance, repair, and clean-up of the Bayside Picnic and South Ocean Beach Parking Areas in their current locations. Alternative A would also contribute a moderate adverse increment to the overall adverse cumulative impacts. The adverse impacts on park operations would not likely be significant because staff time and efforts would continue to be allocated according to the park's needs and priorities, whether it was an increased effort to repair and maintain the two parking areas or directed at other tasks.

ALTERNATIVE B: RELOCATE THE BAYSIDE PICNIC PARKING AREA AND SOUTH OCEAN BEACH PARKING AREA AND CORRESPONDING VISITOR AMENITIES

Impact Analysis

This alternative would relocate both the Bayside Picnic and South Ocean Beach Parking Areas further inland to more stable and less exposed areas. A project manager from the Federal Highway Administration would be assigned to oversee the contractors' work in the park. The new locations would not be as vulnerable to damage and deposition from future storm events, and would therefore not likely require the same level of post-storm activity when compared to alternative A. Additionally, the new parking areas would be constructed with a sea shell clam aggregate mixed with clay. This surfacing material would require monthly grading by park staff during the peak season and occasional resurfacing with clam shells. These would be performed by park staff who already perform these duties in other areas of the park. This would eliminate the need to maintain asphalt in the two parking areas, thereby reducing staff time and contracting costs to address such routine needs. These actions would have short- and long-term, moderate benefits for park operations.

Following future storm events, the new locations would reduce the potential for extensive clean-up and repair to the parking areas, and the associated extended closures. Managers could schedule staff resources with confidence that personnel would not be pulled away to address extensive post-storm clean-up and management activities at the two parking areas. In addition, there would no longer be asphalt debris present subsequent to storm events and therefore park staff would not be required to address these types of resource related concerns. This would result in minor to moderate beneficial impacts to park operations.

The monthly surface grading requirements of the new parking areas would result in adverse impacts to park operations but the magnitude would be negligible due to the fact that park staff are already performing these tasks in other areas of the park. Overall, the relocation of the Bayside Picnic and South Ocean Beach Parking Areas would result in long-term, minor to moderate beneficial impacts on park operations.

Cumulative Impacts

The cumulative impacts on park operations would be the same as described in alternative A and would be long-term, minor to moderate, and adverse. Implementation of alternative B would have short-term, negligible adverse impacts and long-term, minor to moderate beneficial impacts on park operations. Impacts of this alternative, in combination with the long-term, minor to moderate adverse impacts of other past, present, and reasonably foreseeable future actions, would result in long-term adverse cumulative impacts; however, alternative B would contribute a large beneficial increment to help reduce the overall adverse cumulative impacts.

Conclusion

Alternative B would have primarily minor to moderate, long-term beneficial impacts on park operations from the relocation of the Bayside Picnic and South Ocean Beach Parking Areas and the subsequent reduction in maintenance, repair, and clean-up along with some negligible adverse impacts from the need to schedule monthly regrading activities. Alternative B would also contribute a large beneficial increment that would help offset overall adverse cumulative impacts. However, the beneficial impacts of alternative B would not likely be significant for the same reasons as stated under no action; i.e., staff time and efforts are directed according to the park's needs and priorities, which are subject to change depending on a variety of factors that cannot always be predicted. Thus, while operations would benefit from the relocation of these parking areas, it would not likely be a substantial enough change from existing conditions to represent a significant beneficial impact.

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Chapter 4: Consultation and Coordination

SCOPING

Scoping is an early and open process to determine the breadth of environmental issues and alternatives to be addressed in an environmental assessment. Assateague Island National Seashore conducted both internal scoping with appropriate NPS staff and external scoping with the public and interested and affected groups and agencies.

INTERNAL SCOPING

A formal internal scoping meeting was held at Assateague Island National Seashore on June 4, 2013. Participants included NPS staff, the Federal Highway Administration Eastern Federal Lands Highway Division, members from the design team, and representatives from the NPS Denver Service Center and the consultant preparing the environmental assessment. Products included the clarification of the project scope and features, definition of the action alternatives, determination of the relevant impact topics, and identification of issues.

EXTERNAL SCOPING

The following actions were taken to inform agencies and the public about the intent to prepare a National Environmental Policy Act environmental assessment on this project. Internal and external scoping period was from June 1 through August 29, 2013.

- A press release was distributed to the local media on July 8, 2013.
- Scoping letters or notices were sent to the approximately 85people and organizations on the NPS' core mailing list. These included local, state, and federal agencies; organizations; and individuals.
- The scoping notice was made available electronically on the NPS Planning, Environment, and Public Comment website at <http://parkplanning.nps.gov/ASIS>.

Public scoping produced 24 responses, as follows.

- The State of Maryland Critical Area Commission Chesapeake and Atlantic Coastal Bays sent a letter to the Integrated Policy and Review Unit of the Maryland Department of Natural Resources in regards to the proposed project. They stated their requirement to review the proposed action for consistency under the Maryland Coastal Zone Management Act and included a checklist providing submittal details in order to do a thorough review. These details will be submitted to the program in conjunction with this environmental assessment.
- Twenty three responses came from members of the public. They identified concerns regarding the rationale and relocation of the South Ocean Beach Parking Area, maintaining ADA accessibility, the potential to affect migratory bird habitat, and the relocation of the canoe, bike, and kayak rental stand at the Bayside Picnic Parking Area.

The agency response letters are provided in appendix A. All of the concerns identified in public scoping were addressed in this environmental assessment.

CONSULTATION

Agencies, organizations, and experts who were consulted in the process of preparing this environmental assessment are listed below. Individual agency response letters are included in appendix A.

- Assateague Island Alliance
- Assateague State Park
- Chincoteague National Wildlife Refuge
- City of Pocomoke
- Federal Emergency Management Agency
- Maryland Coastal Bays Program
- Maryland Critical Area Commission
- Maryland Department of Environmental Quality
- Maryland Department of Natural Resources
- Maryland Department of Natural Resources – Coastal Zone Management Program
- Maryland Department of Transportation
- Maryland Emergency Management Agency
- Maryland Park Service
- Maryland State Historic Preservation Office
- National Oceanic and Atmospheric Administration
- Town of Berlin, Maryland
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Environmental Protection Agency, Region 3
- U.S. Fish and Wildlife Service U.S. Geological Survey
- U.S. Natural Resource Conservation Association
- Worcester County, Maryland

Letter responses were received from the Maryland State Historic Preservation Officer on July 9, 2013. The letter provided concurrence of no adverse impacts to historic properties as a result of the proposed action.

LIST OF PREPARERS

The people identified in table 3 were primarily responsible for preparing this environmental assessment.

Table 3: Preparers

National Park Service, Assateague Island National Seashore	
Ishmael Ennis	Chief of Maintenance
Randy Hartz	Maintenance Supervisor
Bill Hulslander	Chief, Resource Management
National Park Service, Denver Service Center	
Connie Chitwood	Natural Resource Specialist
Mike Tomkosky	Project Manager
Lee Turzis	Contracting Officer's Representative
Federal Highway Administration	
Lisa Landers	Environmental Specialist
John Wilson	Highway Design Project Manager
Parsons	
Alyse Getty	Project Manager
Taylor Houston	Wetland / GIS Specialist
Rachael Mangum	Cultural Resource Specialist
Alexa Miles	Environmental Scientist
Cheryl Quaine	Environmental Scientist

LIST OF RECIPIENTS

Elected Officials

Maryland Delegate Michael McDermott

Maryland Delegate Norman Conway

Maryland Senator James Mathias

Maryland Senator Lowell Stoltzfus

U.S. Congressman Andy Harris

U.S. Senator Barbara Mikulski

U.S. Senator Benjamin Cardin

Federal Agencies

Chincoteague National Wildlife Refuge

Federal Emergency Management Agency

National Oceanic and Atmospheric Administration

U.S. Army Corps of Engineers

U.S. Coast Guard

U.S. Environmental Protection Agency, Region 3

U.S. Fish and Wildlife Service

U.S. Geological Survey

U.S. Natural Resource Conservation Association

State and Local Agencies

Assateague State Park

Maryland Coastal Bays Program

Maryland Critical Area Commission

Maryland Department of Environmental Quality

Maryland Department of Natural Resources

Maryland Department of Natural Resources, Fisheries Service

Maryland Department of Transportation

Maryland Emergency Management Agency

Maryland Historical Trust

Maryland Natural Resource Police

Maryland Park Service

Pocomoke City

Town of Berlin

Town of Ocean City

Worcester County Commission

Worcester County Department of Development Review and Permitting

Other Agencies and Organizations

Adventure LLC

Andrew Nock Photography

Assateague Coastal Trust

Assateague Island Alliance

Assateague Mobile Sportfisherman's Association

Audubon Society Maryland – DC

Back Bay Tours, Inc.

Baycreek Paddling Ctr., Inc.

Carolina Tailwinds, Inc.

Coastal Camper Rental, LLC

Coastal Camper Rental, LLC

Coastal Kayak

Dana Marie Photography

Delmlarva Board Sport Adventures

Dr. Shred's Surf Adventures, LLC

Ducks Unlimited

Jennifer Seay Photography

Ka-Motion, LLC

Lucky Break

Maryland Coast Dispatch

Molokia, Inc

North American Association for Environmental Education

Ocean City Weddings Pastor

Osprey Kite Sports

Paddle House Outfitters

Rehoboth Beach Surf Shop

Rox Enterprises, LLC
Super Fun Ecotours, LLC
Surfrider Foundation
T'ae' Pung Hapkido, MAA
Talbot Street Watersports
The Nature Conservancy, MD/DC Chapter
Walk on Water, LLC
Wilderness Society

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APPENDIX A: SCOPING LETTERS

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JUL 23 2013 AM 7:45

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS
1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

July 17, 2013

Mr. Roland Limpert
Integrated Policy and Review Unit
Department of Natural Resources
Tawes State Office Building
580 Taylor Avenue
Annapolis, Maryland 21401

Re: Assateague Island National Seashore Parking Relocation; Scoping Notice; Coastal Zones Consistency

Dear Mr. Limpert:

Thank you for providing information on the above-referenced application. As a Federal project in the Critical Area, this office is required to review the proposal for consistency under the Maryland Coastal Zone Management Act. The application is requesting a permit to relocate two parking areas to nearby locations. The South Ocean Beach site appears to be in or adjacent to an area of intense development. The proposed Bayside Picnic parking Area appears to not be an area of intense development.

I have enclosed a checklist that provides submittal details that this office will need to provide a thorough review. Based on the limited information received we are unable to determine if this project is consistent with the Coastal Zones Management Act and the Critical Area Law and Criteria. Please have the National Park Service provide more details on the proposed sites as they become available so that we can properly review the application. Thank you for coordinating with us on this project. If you have any questions, please contact me at (410) 260-3468.

Sincerely,

Roby Hurley
Natural Resources Planner
RH/jjd
Enclosure: Project Application Checklist
cc: Mr. Elder Ghigarelli, MDE
Mr. Justin Unger, National Park Service

United States Department of the Interior
NATIONAL PARK SERVICE
Assateague Island National Seashore
7206 National Seashore Lane
Berlin, MD 21811
Tel: (410) 641-1441

JUL 25 2013 PM12:45

RECEIVED
JUL 0 9 2013

BY:----------

F
NPS
EJL/JES

July 8, 2013

Mr. J. Rodney Little, State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
3rd Floor
Crownsville, MD 21032-2023

201303054

Subject: *Scoping Notice – Environmental Assessment, Assateague Island National Seashore, Emergency Relief for Federally Owned (ERFO) Roads and HR41 Hurricane Sandy Relief, Projects to Repair Damage from Hurricane Sandy, Bayside Parking Area and South Beach Parking Area Relocation, Worcester County, Maryland*

PMIS 194834, 194874

The Maryland Historical Trust has determined that this undertaking will have no adverse effect on historic properties.
Date 7/22/13

Dear Mr. Little,

The National Park Service (NPS), in cooperation with the Federal Highway Administration, will be preparing an environmental assessment (EA) in support of the proposed Bayside Picnic and South Ocean Beach Parking Areas Relocation project for Assateague Island National Seashore, Worcester County, Maryland. Federal emergency declarations stemming from the damage suffered along the Atlantic Coast during Hurricane Sandy entitle eligible projects to receive relief through the Emergency Relief for Federally Owned (ERFO) Roads program. In response to the immediate need to repair damage from the hurricane and to reestablish visitor services, the national seashore proposes to relocate the Bayside Picnic and South Ocean Beach Parking Areas. See attached figure for an overview of the proposed project area.

The purpose of the proposed project is to relocate the Bayside Picnic and South Ocean Beach Parking Areas to locations that are more sustainable as a result of being less exposed to the elements and less susceptible to damage from future storm events in order to provide continued visitor access to these areas of the national seashore. The proposed project is needed because:

- The existing parking lot locations are vulnerable to reoccurring storm activity and susceptible to damage.
- The necessary clean up and repair to the parking areas required after reoccurring storm events places a burden on park operations.
- Prolonged parking area closures limit the national seashore's ability to provide high quality resource-based recreational opportunities to the public.
- The continued erosion and encroachment of asphalt and boardwalk materials at the Bayside Picnic Parking Area serves as a source of manmade debris into the Chincoteague Bay, the Atlantic Ocean, and along the surrounding shoreline.

Archeo: IA BC 7/16/13 No inventoried sites / [illegible]

2nd JES 7/22/13

- Maintaining the current location of the South Ocean Beach Parking Area is altering the geomorphology of the island by preventing the natural inland migration of the adjacent sand dunes.

An EA will be prepared in compliance with the National Environmental Policy Act (NEPA) to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet project objectives, 2) evaluates issues and impacts to NPS resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts.

In accordance with 36 CFR §800.3(c), we take this opportunity to formally initiate the Section 106 consultation process with you. We are currently in the scoping phase of this project, and invite you to submit your written comments online at the NPS Planning, Environment, and Public Comment website at http://parkplanning.nps.gov/asis. You may also submit written comments to the Acting Superintendent at the address below.

We would appreciate your comments by August 9, 2013. If you have questions about the project or would like more information, please contact Bill Hulslander, Chief of Resource Management, at 410-629-6061 or bill_hulslander@nps.gov.

Written comments can be sent to:

Assateague Island National Seashore
ATTN: Bayside Picnic and South Ocean Beach Parking Areas Relocation EA Comments
7206 National Seashore Lane
Berlin, MD 21811

Sincerely,

Justin Unger

Justin Unger
Acting Superintendent

Attachments: Project Area Map

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

August 9, 2013

Mr. Bill Hulslander, Chief of Resource
Management
National Park Service
Assateague Island National Seashore
7206 National Seashore Lane
Berlin, MD 21811

RE: Comments on the Scoping Notice for the Assateague Island National Seashore, MD Bayside Picnic Parking Area and the South Beach Parking Area Relocation Environmental Assessment

Dear Mr. Hulsander:

The U.S. Environmental Protection Agency (EPA) has received and reviewed your July 8, 2013 letter regarding the Environmental Assessment (EA) being prepared for the Assateague Island National Seashore, MD Bayside Picnic Parking Area and the South Beach Parking Area Relocation project. The project is being proposed to relocate the Bayside Picnic Area and the South Ocean Beach Parking Area to a location that are more sustainable, less exposed to the elements and less susceptible to damage from future storm events. EPA has reviewed your letter and associated materials in conjunction with our responsibilities under the National Environmental Policy Act (NEPA), the Clean Water Act (CWA) and Section 309 of the Clean Air Act. As limited information is provided in your letter, we are able to provide only some general recommendations at this time.

Information regarding the purpose and need, alternatives analyzed, avoidance and minimization of resources, and cumulative effects for the proposed project should be included in the environmental document. The EA should include a clear and robust justification of the underlying purpose and need for the proposed action. The purpose and need statement is important because it helps explain why the proposed action is being undertaken and what objectives the project intends to achieve. The purpose of the proposed action is typically the specific objective of the activity. The need should explain the underlying problem for why the project is necessary. Alternatives analysis should include the suite of other activities or solutions that were considered and the rationale for not carrying these alternatives forward for detailed study. It is also suggested that the EA include a discussion of any mitigation, restoration efforts along with any stormwater management measures associated with the project.

Thank you for coordinating with EPA on this project. We look forward to working with you on this project as more information becomes available. If you have any questions and would like to discuss our comments, the staff contact for this project is Mr. Kevin Magerr; he can be reached at 215-814-5724.

Sincerely,

Barbara Rudnick
NEPA Team Leader
Office of Environmental Programs

---------- Forwarded message ----------
From: **Winship, Pam** <PWinship@dnr.state.md.us>
Date: Tue, Aug 20, 2013 at 3:11 PM
Subject: FW: 14 MIS 006 NPS Assateague Island Picnic & Parking Relocation_ DNR Response
To: "Bill_Hulslander@nps.gov" <Bill_Hulslander@nps.gov>

Bill:

My email to you bounced back as I left the first L in your last name out.

Pam Winship
Environmental Review Unit
Maryland Dept. of Natural Resources
580 Taylor Ave., B-3
Annapolis, MD 21401

tel: 410.260.8332 fax: 410.260.8339
cell: 410.279.0068

From: Winship, Pam
Sent: Tuesday, August 20, 2013 1:54 PM
To: 'justin_unger@nps.gov'; 'Bill_Huslander@nps.gov'
Subject: 14 MIS 006 NPS Assateague Island Picnic & Parking Relocation_ DNR Response
Importance: High

Justin & Bill:

Attached please find the scanned response. As we discussed Justin, I managed to stuff your envelope with the wrong letter. So sorry for the mix up! Hardcopy is in the mail today and sent to Justin's attention.

If you have any questions, please don't hesitate to contact us.

Pam Winship
Integrated Policy & Review Unit
Maryland Dept. of Natural Resources
580 Taylor Ave., B-3
Annapolis, MD 21401

tel: 410.260.8332 fax: 410.260.8339
cell: 410.279.0068

14 MIS 006 NPS Assateque Island Picnic Parking Relo_DNR RESPONSE.pdf

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Martin O'Malley, *Governor*
Anthony G. Brown, *Lt. Governor*
Joseph P. Gill, *Secretary*
Frank W. Dawson III, *Deputy Secretary*

14-MIS-006

5 August 2013

Mr. Justin Unger, Acting Superintendent
Assateague Island National Seashore
7206 National Seashore Lane
Berlin, MD 21811

ATTN: Bayside Picnic and South Ocean Beach Parking Areas Relocation EA Comments

Dear Mr. Unger:

This letter is in response to your request for information and comments to aid you in the preparation of an environmental assessment of the proposed Bayside Picnic Parking Area and South Ocean Beach Parking Area Relocation project for Assateague Island National Seashore in Worcester County, Maryland. The Department has reviewed the materials that you had submitted to us and we can provide the comments and concerns to be used in developing the draft Environmental Assessment (EA) for this project:

1. The letter mentions that the existing parking areas may be a source of manmade material/debris (asphalt and boardwalk) entering the Chincoteague Bay or Atlantic Ocean, but does not indicate what will be done to the old parking areas if the new parking areas are constructed. The EA should address the disposal of the removed parking lot materials and the restoration of the old parking lots to preferably a more natural landscape.

2. The National Park Service (NPS) should consider using suitable pervious pavement and nonstructural stormwater management (e.g., rain gardens) in the design and construction of the new parking areas to improve groundwater recharge and reduce runoff and erosion. This project also provides a highly visible opportunity to educate the public about the importance of conserving habitat, using ecological design, and controlling stormwater runoff and pollution.

3. Given the recent news about the likely sea level rise in the Mid-Atlantic region, what are NPS's long-term plans for adapting to the increasing climate- and storm-related risks? Staff in the Department's Chesapeake and Coastal Services Unit would welcome the opportunity to work with NPS on designing and implementing a coast-smart strategy that involves all key stakeholders. This process may prove helpful in developing or refining alternatives included in the Environmental Assessment. For additional information you may contact Mr. Joe Abe at (410) 260-8740 or jabe@dnr.state.md.us .

4. The scoping request letter mentions the need for a Federal Consistency Determination. Please contact Mr. Joe Abe at 410-260-8740 or jabe@dnr.state.md.us to help expedite this process while also ensuring consistency with Maryland's enforceable policies to the maximum extent practicable.

5. The review information did not provide any details regarding the size or the parking capacity of the lots to be relocated and the lot sizes and number of parking spaces to be constructed at the two relocation sites. Will the number of parking spaces remain the same, increase or decrease? Has the NPS conducted a demand study to determine the number of parking spaces needed to meet future projected visitor demand and how will that factor into the configuration of the proposed parking lot designs?

6. The State's Forest Conservation Act requires that before the issuance of a grading or sediment control permit, the applicant shall have an approved Forest Conservation Plan and Forest Stand Delineation (Nat. Res. Art. 5-1601–5-16122, Annotated Code of Maryland). The Maryland Forest Service recommends that the forest stand delineation and forest conservation plan be submitted to our office for review and approval. The Act provides for the retention of forested areas in sensitive areas on the subject property as one method of mitigation. For additional information regarding the Forest Conservation Act please contact Ms. Marian Honeczy in the Department's Forest Service at (410) 260-8511 or mhoneczy@dnr.state.md.us .

7. Based on the limited information provided for our review we are unable to determine if this project is consistent with the State's Critical Area Law and Criteria. As a Federal project in the Critical Area, the State's Critical Area Commission is required to review the proposed project for consistency under the Maryland Coastal Zone Management Act. Additional information regarding the information required to allow a through review of the proposed project by the Critical Area Commission can be obtained from Mr. Roby Hurley at the Commission. Mr. Hurley can be reached at (410) 260-3460.

8. The Department's Fisheries Service reports that they have a stationary sampling station north of the Bayside Picnic Parking Area that is sampled every year. Additional information regarding the sampling can be obtained from Ms. Carrie Kennedy at (410) 260-8295.

9. The Department is currently involved in the development of a water trail for Assateague Island and the Coastal Bays which includes the National Seashore and Assateague State Park. For additional information on this planning process please contact Ms. Lisa Gutierrez at (410) 260-8778 or lgutierrez@dnr.state.md.us .

Thank you the opportunity to provide comments and we look forward to continuing to work with the National Park Service in the development of Environmental Assessment for this project. If you have any questions regarding these comments please feel free to contact Roland Limpert of my staff at (410) 260-8333.

Sincerely,

Gregory Golden
Environmental Review

APPENDIX B: COASTAL ZONE MANAGEMENT ACT CONSISTENCY DETERMINATION

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COASTAL ZONE MANAGEMENT ACT CONSISTENCY DETERMINATION

This document provides the State of Maryland with the National Park Service (NPS) Consistency Determination under Coastal Zone Management Act section 307(c)(1) and 15 Code of Federal Regulations (CFR) Part 930, subpart C for the Assateague Island Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation project. The information in this Consistency Determination is provided pursuant to 15 CFR § 930.39. The National Park Service certifies that the proposed activity complies with the enforceable policies of Maryland's Coastal Zone Management Program and will be conducted in a manner consistent with the Maryland Coastal Zone Management Program.

BACKGROUND

In October, 2012 Hurricane Sandy affected 24 states from Florida to New England causing hundreds of millions of dollars of damage to property. In response to the immediate need to repair damage from the hurricane and to reestablish visitor services, preliminary damage survey reports were prepared by the National Park Service to identify and document specific work items to be completed at Assateague Island National Seashore. The purpose of this project is to remove and relocate the Bayside Picnic and South Ocean Beach Parking Areas (see figure 2 in the environmental assessment) to locations that are less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore.

PROJECT DESCRIPTION

The National Park Service has prepared an environmental assessment to analyze the effects of removing and relocating the Bayside Picnic and South Ocean Beach Parking Areas. Project descriptions for the two parking areas are below. Additional information can also be found in chapter 2 of the environmental assessment.

BAYSIDE PICNIC PARKING AREA

The Bayside Picnic Parking Area is located on Chincoteague Bay, just west of the Bayside Camping Area, and at the terminus of Bayside Drive (see figure 2 in the environmental assessment). Bayside Drive turns west off of Bayberry Drive approximately ¼ mile south of the national seashore entrance station. The parking area provides access to various activities on Chincoteague Bay including boating, shellfishing, sunbathing, and picnicking, to name a few. The Bayside Picnic Parking Area would be removed and relocated further inland to the north of the existing parking area (see figure 8 in the environmental assessment). The new parking area would be constructed from sea shell clam aggregate mixed with clay. Due to the surfacing material, parking spots would not be delineated with paint. The new parking area would be designed to accommodate approximately 87 vehicles, including 12 oversize vehicles.

The National Park Service evaluated several different surface materials and determined that sea shell clam aggregate mixed with clay is the optimum choice for surfacing the parking areas. This is based on previous experience, site specific conditions with sand surface, local weather, and site wash over during storm events. Pervious pavers have been tried in the past, and were not highly successful. The types of pervious pavers do not remain anchored during storm events and would end up becoming storm debris. In addition, windblown sand covers the pavers, rendering them ineffective. The use of reinforced turf would not be highly successful in this island environment due to sandy conditions and lack of water to keep turf alive. Turf would also become covered in sand and would be difficult to maintain. The clay and shell aggregate alternative has been successful in other coastal environments and is proposed for the parking areas. The debris

that would be generated during storm events would be of natural materials, and require less clean up.

Construction of the new parking area would require the use of mechanized equipment and could require the need to import fill (from within the Park's boundary) in order to recontour the new parking area accordingly. Staging for construction would be located in the existing Bayside Picnic Parking Area and/or other nearby parking areas in the national seashore. Construction would take place during the off season when visitation is comparatively lower. The new Bayside Picnic Parking Area would be constructed before removal of the existing parking area commenced in order to minimize closure of the area to visitors.

Following construction of the new parking area, the northwestern portion of the existing parking area would be removed and restored. Existing asphalt would be disposed of properly offsite. Restoration would include filling and recontouring the area to meet existing grade. Any fill not available on site would be imported from the park's existing stock pile of natively sourced fill. Portions of the restored area would then be allowed to naturally revegetate. Maintenance of the aggregate mix would require monthly grading by park staff during the peak season and occasional resurfacing with clam shells. While the remaining portion of the existing Bayside Picnic Parking Area would remain asphalt, no asphalt would be used in the new parking area.

SOUTH OCEAN BEACH PARKING AREA

The South Ocean Beach Parking Area (see figure 2 in the environmental assessment) is located approximately 1 ¼ miles south of the national seashore entrance station to the southeast of the roundabout. The parking area provides access to South Ocean Beach and the paved bike path along Bayberry Drive. The Life of the Dunes Nature Trail Parking Area is located approximately 1 ¼ miles south of the national seashore entrance and to the southwest of the roundabout. The parking area provides access to the Life of the Dunes Nature Trail and the bike path. This parking area also serves as overflow for South Ocean Beach during peak visitation.

The Life of the Dunes Nature Trail Parking Area would be removed and the South Ocean Beach Parking Area would be relocated and reconstructed further inland in its place (see figure 9 of the environmental assessment). The new parking area would be constructed from sea shell clam aggregate mixed with clay. Due to the surfacing material, parking spots would not be delineated with paint, but the new parking area would be designed to accommodate approximately 76 vehicles, including two oversize vehicles.

Construction of the new parking area would require the use of mechanized equipment and could require the need to import or export fill (within the park's boundary) in order to recontour the new parking area accordingly. Staging for removal of the Life of the Dunes Nature Trail Parking Area and construction of the new South Ocean Beach Parking Area would be located in the existing South Ocean Beach Parking Area and/or other nearby parking areas in the national seashore. Construction would take place during the off season when visitation is comparatively lower. The new South Ocean Beach Parking Area would be constructed before removal of the existing parking area commenced in order to minimize closure of the area to visitors.

Following construction of the new parking area, the existing South Ocean Beach Parking Area would be removed and restored. Existing asphalt would be disposed of properly offsite. Restoration would include filling and recontouring the area to meet existing grade. Portions of the restored area would then be allowed to naturally revegetate. As mentioned above, maintenance of the aggregate mix would require monthly grading by park staff during the peak season and occasional resurfacing with clam shells. No asphalt would be used at the South Ocean Beach Parking Area.

RELEVANT ENFORCEABLE POLICIES OF THE MARYLAND COASTAL ZONE MANAGEMENT PROGRAM

The National Park Service reviewed the Maryland Coastal Zone Management Program to identify enforceable policies relevant to the proposed action (Maryland Department of the Environment 2011). Policies were evaluated for their relevance based first on whether the proposed action is similar to the type of activity mentioned in the policy. For example, policies directed at activities on the Outer Continental Shelf were found not relevant to this proposed action.

Secondly, policies were evaluated based on whether the proposed action could have an impact on the coastal use or resource identified in the policy. For example, in preparation for the environmental assessment, the National Park Service conducted a wetlands delineation and Phase I Archeological Survey in both parking areas. The wetlands delineation determined the proposed action would not impact jurisdictional or non-jurisdictional wetlands (see the wetlands section in chapter 3 and appendix D of this environmental assessment). Pedestrian reconnaissance and subsurface testing of the project areas during the phase I archaeological survey did not identify any subsurface features or new archeological sites and determined no further work is recommended for the proposed parking area locations. For these reasons, policies related to wetlands and archaeological resources were determined to be not relevant to the proposed action. The policies of the Maryland Coastal Management Program that are relevant to the proposed action are described in the paragraphs that follow.

A listing of the policies and their relevant/non-relevant relationship to the proposed action is provided at the end of this section.

Core Policy 1

It is State policy to maintain that degree of purity of air resources which will protect the health, general welfare, and property of the people of the State. MDE (C9) Md. Code Ann., Envir. §§ 2-102 to -103.

Emissions of particulates that could affect air quality could temporarily increase during preparation, installation, and the subsequent removal of the parking areas from the use of motorized equipment at the site and from exhaust from gasoline- or diesel-powered vehicles and equipment. This equipment would also temporarily emit air pollutants. However, activities requiring the use of machinery would not be expected to be long-term. Because of the short-term and localized nature of the operation, preparation, installation, and the subsequent removal of the parking areas would not affect the attainment status of the airshed that encompasses Assateague Island National Seashore, would not affect the airshed designation, and would not violate air quality standards. Further, none of the air quality impacts would impact the health, general welfare, or property of the people of Maryland. The NPS actions would be consistent to the maximum extent practicable with Core Policy 1.

Core Policy 2

The environment shall be free from noise which may jeopardize health, general welfare, or property, or which degrades the quality of life. MDE (C9) COMAR 26.02.03.02.

Noise would be generated during the preparation, installation, and the subsequent removal of the parking areas from the use of motorized equipment at the site. However, activities requiring the use of machinery would be expected to be short-term. Because of the short-term and localized nature of the operation, preparation, installation, and the subsequent removal and relocation of the parking areas, the health, general welfare, property, or quality of life of the area around Assateague Island National Seashore would not be jeopardized. The project would also be in compliance with NPS *Management Policies 2006* (NPS 2006) which specifically designate

natural soundscape resources management as a resource worth preserving in national parks. As stated in the management policy:

> "The frequencies, magnitudes, and durations of acceptable levels of unnatural sound will vary throughout a park, being generally greater in developed areas. In and adjacent to parks, the Service will monitor human activities that generate noise that adversely affects park soundscapes, including noise caused by mechanical or electronic devices. The Service will take action to prevent or minimize all noise that through frequency, magnitude, or duration adversely affects the natural soundscape or other park resources or values, or that exceeds levels that have been identified through monitoring as being acceptable to or appropriate for visitor uses at the sites being monitored."

The NPS actions would be consistent to the maximum extent practicable with Core Policy 2.

Core Policy 6

The natural character and scenic value of a river or waterway must be given full consideration before the development of any water or related land resources including construction of improvements, diversions, roadways, crossings, or channelization. MDE/DNR (C7) Md. Code Ann., Nat. Res. § 8-405; COMAR 26.17.04.11.

Consideration has been given to the natural character and scenic value of the project area and adjacent areas by removing asphalt in the two existing parking areas and constructing new parking areas using sea shell clam aggregate mixed with clay. In addition, after the existing parking areas are removed, the areas would be allowed to naturally revegetate.

The project would also comply with NPS Director's Order #87A which states that park roads are constructed only where necessary to provide access for the protection, use, and enjoyment of the natural, historical, cultural, and recreation resources that constitute our national park system. Park roads should enhance the visitor experience while providing safe and efficient accommodation of park visitors and to serve essential management action needs. Park roads are designed with extreme care and sensitivity with respect to the terrain and environment through which they pass—they are laid lightly onto the land. The NPS actions would be consistent to the maximum extent practicable with Core Policy 6.

Core Policy 9

Activities which will adversely affect the integrity and natural character of Assateague Island will be inconsistent with the State's Coastal Management Program, and will be prohibited. MDE/DNR (B1) Md. Code. Ann., Nat. Res. §§ 5-209, 8-1102.

The project may affect the integrity and natural character of Assateague Island, however, not adversely. Consideration has been given to the integrity and natural character of the project area and adjacent areas by removing asphalt in the two existing parking areas and constructing the new areas using sea shell clam aggregate mixed with clay. Further, after the existing parking lots are removed, the areas would be allowed to naturally revegetate.

The project would also comply with NPS Director's Order #87A which states that park roads are constructed only where necessary to provide access for the protection, use, and enjoyment of the natural, historical, cultural, and recreation resources that constitute our national park system. Park roads should enhance the visitor experience while providing safe and efficient accommodation of park visitors and to serve essential management action needs. Park roads are designed with extreme care and sensitivity with respect to the terrain and environment through which they pass—they are laid lightly onto the land. The NPS actions would be consistent to the maximum extent practicable with Core Policy 9.

Core Policy 11

Soil erosion shall be prevented to preserve natural resources and wildlife; control floods; prevent impairment of dams and reservoirs; maintain the navigability of rivers and harbors; protect the tax base, the public lands, and the health, safety and general welfare of the people of the State, and to enhance their living environment. MDA (C4) Md. Code Ann., Agric. § 8-102(d).

Best management practices would be in place during the planning and conduct of parking area removal and relocation activities to prevent soil erosion including: preparing a storm water pollution prevention plan; specifying site-specific measures to reduce and control erosion, sedimentation, and compaction that could degrade water quality; planning and maintaining buffers between areas of soil disturbance and wetlands or waterways; and using soil erosion best management practices such as sediment traps, erosion check screen filters, and hydro mulch to prevent the entry of sediment into waterways.

The relocation of the parking areas results in a total of 88,505 square feet of asphalt being removed, and the addition of 88,725 square feet of clay and clamshell surfaced area and 5,190 square feet of asphalt to create islands. The project would result in a net increase of 5,410 square feet of impervious area. The topography of the project area is relatively flat. Erosion and sediment control would be accomplished through the use of perimeter controls, such as silt fencing. With these measures in place, soil erosion would be prevented to preserve natural resources and wildlife; control floods; prevent impairment of dams and reservoirs; maintain the navigability of rivers and harbors; protect the tax base, the public lands, and the health, safety and general welfare of the people of Maryland, and to enhance their living environment.

The project would be implemented in accordance with Executive Order 13508 (*Chesapeake Bay Protection and Restoration*) which calls for the reduction of water pollution from federal lands and facilities and provides for tools and practices that reduce water pollution including practices available for use by federal agencies. The NPS actions would be consistent to the maximum extent practicable with Core Policy 11.

Water Quality Policy 8

Any development or redevelopment of land for residential, commercial, industrial, or institutional purposes shall use small-scale non-structural stormwater management practices and site planning that mimics natural hydrologic conditions, to the maximum extent practicable. MDE (C9) Md. Code Ann., Envir. § 4-203; COMAR 26.17.02.01, .06.

Best management practices would be in place during the planning and conduct of these activities, including: preparing a storm water pollution prevention plan; specifying site-specific measures to reduce and control erosion, sedimentation, and compaction that could degrade water quality; and planning and maintaining buffers between areas of soil disturbance and wetlands or waterways. The project would use small-scale non-structural stormwater management practices and site planning to mimic natural hydrologic conditions and restore the areas to a natural state. Stormwater would be treated with infiltration trenches at the perimeter of the parking area. Infiltration trenches would be utilized in order to minimize the impact footprint. The NPS actions would be consistent to the maximum extent practicable with Water Quality Policy 8.

Flood Hazard Policy 1

Projects in coastal tidal and non-tidal floodplains which would create additional flooding upstream or downstream, or which would have an adverse impact upon water quality or other environmental factors, are contrary to State policy. MDE (C2) Md. Code Ann., Envir. § 5-803; COMAR 26.17.05.04A.

The entirety of Assateague Island is within the 100-year floodplain, as shown on Federal Emergency Management Agency Flood Insurance Rate Map (FIRM) number 2400830200C (FEMA 1992). There are two 100-year floodplain zones within the Assateague Islands National Seashore. The first zone, labeled A-12 on Federal Emergency Management Agency maps, has a 100-year floodplain at 8.0 feet National Geodetic Vertical Datum of 1929 (NGVD29). This zone constitutes most of the bayside area on the island, and covers the Bayside Picnic Parking Area. The major source of flooding in this area is overwash from Chincoteague Bay. In the immediate vicinity of the parking area project, estuarine wetlands, particularly along the northern shoreline of the peninsula provide shoreline stabilization function and reduce flood potential (by allowing for water storage during surges).

The second zone on the Federal Emergency Management Agency mapping is zone V-7, a zone where floodplain elevation is known to be influenced by wave action. This zone is isolated to the dune and beach area along the ocean side of the island and has a 100-year floodplain at 12.0 feet NGVD29 (FEMA 1992). The South Ocean Beach Parking Area is within zone V-7. The primary source of flooding at this location is from the ocean, with potential for minor flooding from Chincoteague Bay. The bayside of the South Ocean Beach Parking Area, however, is protected by several hundred feet of forested and scrub-shrub intertidal estuarine wetlands and estuarine emergent marshes. Within the immediate vicinity of the proposed parking relocation area, interdunal palustrine wetlands are found which may help ameliorate overwash conditions.

The National Park Service has adopted a policy of preserving floodplain values and minimizing potentially hazardous conditions associated with flooding (NPS 2003). NPS Director's Order #77-2 states that a statement of findings is required when an action is to occur within a floodplain. The Statement of Findings is included as appendix C of the environmental assessment. The environmental assessment concluded the relocation of the existing parking areas to sites further inland under alternative B would provide additional natural buffer from sheetflow from precipitation events. In addition, the surfaces of the new parking areas would be comprised of a packed clay layer underlying a crushed clam shell surface. Although this surface is not likely permeable, the clam shell surface would increase surface roughness of the parking areas. Roughness is an important variable in measuring a surface's ability to convey water across the surface. A smoother surface will convey water faster than a rough surface.

The natural features that reduce flooding severity (wetlands and coastal topography) would continue to provide floodplain ecological functions. The new parking area surfaces would continue to convey sheetflow into surrounding areas during precipitation events, but at a much slower rate than a paved asphalt surface.

The project would be implemented in accordance with Executive Order 13508 (*Chesapeake Bay Protection and Restoration*) which calls for the reduction of water pollution from federal lands and facilities and provides for tools and practices that reduce water pollution including practices available for use by federal agencies. The NPS actions would be consistent to the maximum extent practicable with Flood Hazard Policy 1.

Coastal Resources Policy 9

In the Critical Area, a minimum 100 foot vegetated buffer shall be maintained landward from the mean high water line of tidal waters, the edge of each bank of tributary streams, and the upland boundary of tidal wetlands. The buffer shall be expanded in sensitive areas

in accordance with standards adopted by the Critical Area Commission. The buffer is not required for agricultural drainage ditches if the adjacent agricultural land has in place best management practices that protect water quality. The buffer is not required if existing patterns of development prevent the buffer from protecting ecological quality and functions, in which case, alternative means of protecting ecological quality and functions are required. CAC (C9) COMAR 27.01.09.01, .01-5, .01-7.

The new parking areas will be less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore. The project has been planned to impose the least amount of impact on the natural environment as practical and would only alter the vegetation in the area to eliminate hazards to property, public safety, or health; or to provide visitor access.

Currently, only a portion of the Bayside Picnic Parking Area is in the 100-foot buffer zone. The proposed action would relocate the parking area inland and out of the buffer zone. Demolition of the current parking area would occur in the buffer zone and would be conducted in accordance with best management practices. The asphalt in the current parking area would be removed and properly disposed. The area would be allowed to naturally revegetate and natural coastal processes would be allowed to take over creating a combination of a vegetated and sandy 100-foot buffer zone. The NPS actions would be consistent to the maximum extent practicable with Coastal Resources Policy 9.

Coastal Resources Policy 10

Disturbance to a buffer in the Critical Area is only authorized for a shore erosion control measure, new development, or redevelopment that is: water-dependent; meets a recognized private right or public need; minimizes the adverse effects on water quality and fish, plant, and wildlife habitat; and, insofar as possible, locates nonwater-dependent structures or operations associated with water-dependent projects or activities outside the buffer. Mitigation of impacts to the buffer and a buffer management plan must be developed in accordance with standards adopted by the Critical Area Commission when a development or redevelopment activity occurs within the buffer. CAC (C9) COMAR 27.01.03.03; COMAR 27.01.09.01, .01-2, .01-3.

The new parking areas will be less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore. The project has been planned to impose the least amount of impact on the natural environment as practical and would only alter the vegetation in the area to eliminate hazards to property, public safety, or health; or to provide visitor access.

Currently, a portion of the Bayside Picnic Parking Area is in the buffer zone and the proposed action would relocate the parking area inland and out of the buffer zone and away from further severe weather damage. Demolition of the current parking area would occur in the buffer zone and would be conducted in accordance with best management practices. Asphalt in the current parking area would be removed and disposed of properly. The area would be allowed to naturally revegetate and natural coastal processes would be allowed to prevail, creating a combination of a vegetated and sandy 100-foot buffer zone. The NPS actions would be consistent to the maximum extent practicable with Coastal Resources Policy 10.

Coastal Resources Policy 11

If a development or redevelopment activity occurs on a lot or parcel that includes a buffer or if issuance of a permit, variance, or approval would disturb the buffer, the proponents of that activity must develop a buffer management plan that clearly indicates that all applicable planting standards developed by the Critical Area Commission will be met and that

appropriate measures are in place for the long-term protection and maintenance of the buffer. CAC (C9) COMAR 27.01.09.01-1, .01-3.

The new parking areas will be less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore. The project has been planned to impose the least amount of impact on the natural environment as practical and would only alter the vegetation in the area to eliminate hazards to property, public safety, or health; or to provide visitor access.

Currently, the Bayside Picnic Parking Area is in the buffer zone and the proposed action would relocate the parking area inland out of the buffer zone and away from further severe weather damage. Demolition of the current parking area would occur in the buffer zone and would be conducted in accordance with best management practices. The asphalt in the current parking area would be removed and the area would be allowed to naturally revegetate and natural coastal processes would be allowed to prevail, creating a combination of a vegetated and sandy 100-foot buffer zone. The National Park Service would be consistent to the maximum extent practicable with Coastal Resources Policy 11.

Coastal Resources Policy 26

A soil erosion and sedimentation control plan shall be required whenever development within the Critical Area will involve any clearing, grading, transporting, or other form of disturbance to land by the movement of earth. This plan shall be appropriately designed to reduce adverse water quality impacts. CAC (C9) COMAR 27.01.02.04.

Currently, the Bayside Picnic Parking Area is in the buffer zone and the proposed action would relocate the parking area inland out of the buffer zone and away from further severe weather damage. Demolition of the current parking area would occur in the buffer zone and would be conducted in accordance with best management practices. The asphalt in the current parking area would be removed and the area would be allowed to naturally revegetate and natural coastal processes would be allowed to prevail, creating a combination of a vegetated and sandy 100-foot buffer zone.

Best management practices would be in place during the planning and conduct of these activities to prevent soil erosion including: preparing a storm water pollution prevention plan; specifying site-specific measures to reduce and control erosion, sedimentation, and compaction that could degrade water quality; planning and maintaining buffers between areas of soil disturbance and wetlands or waterways; and using soil erosion best management practices such as sediment traps, erosion check screen filters, and hydro mulch to prevent the entry of sediment into waterways. The National Park Service would be consistent to the maximum extent practicable with Coastal Resources Policy 26.

Coastal Resources Policy 31

The following policies apply in those portions of the Critical Area that are not areas of intense development.

- **Development shall maintain, and if possible, improve the quality of runoff and ground water entering the Chesapeake and Coastal Bays.**
- **To the extent practicable, development shall maintain existing levels of natural habitat.**
- **All development sites shall incorporate a wildlife corridor system that connects undeveloped vegetated tracts onsite with undeveloped vegetated tracts offsite.**

- **All forests that are cleared or developed shall be replaced on not less than an equal area basis.**
- **If there are no forests on a proposed development site, the site shall be planted to provide a forest or developed woodland cover of at least 15 percent.**
- **Development on slopes equal to or greater than 15 percent, as measured before development, shall be prohibited unless the project is the only effective way to maintain the slope and is consistent with other policies.**
- **To the extent practicable, development shall be clustered to reduce lot coverage and maximize areas of natural vegetation.**
- **Lot coverage is limited to 15 percent of the site.**

  CAC (C9) COMAR 27.01.02.04.

The project is in the Critical Area but it is not an area of intense development. Best management practices would be in place during the planning and conduct of these activities to prevent soil erosion including: preparing a storm water pollution prevention plan; specifying site-specific measures to reduce and control erosion, sedimentation, and compaction that could degrade water quality; planning and maintaining buffers between areas of soil disturbance and wetlands or waterways; and using soil erosion best management practices such as sediment traps, erosion check screen filters, and hydro mulch to prevent the entry of sediment into waterways. Every effort is being made to maintain a relatively equal amount of natural habitat and lot coverage between the new and old parking areas. No forests would be cleared and the area does not contain a slope greater than 15 percent. The NPS actions would be consistent to the maximum extent practicable with Coastal Resources Policy 31.

Forest Policies 5

Roadside trees should not be cut down, trimmed, mutilated, or injured unless the activity will eliminate a hazard to property, public safety, or health; improve or prevent tree deterioration; or improve the general aesthetic appearance of the right-of-way. DNR (C5) COMAR 08.07.02.05.

The project has been planned to impose the least amount of impact on the natural environment as practical and would only alter the vegetation in the area to eliminate hazards to property, public safety, or health; or to provide visitor access. The project would also be in compliance with the 1984 NPS Park Roads Standards which states that roads in national parks serve a distinctly different purpose from most other road and highway systems. Among all public resources, those of the national park system are distinguished by their unique natural, cultural, scenic, and recreational qualities. Park roads are to be designed with extreme care and sensitivity to provide access for the protection, use, and enjoyment of the resources that constitute the national park system. The NPS actions would be consistent to the maximum extent practicable with Forest Policy 5.

Tidal Shore Erosion Control Policy 2

Tidal shore erosion control projects shall not use junk, metal, tree stumps, logs, or other unsuitable materials for backfill. MDE (C1) COMAR 26.24.04.01

Best management practices would be in place during the planning and conduct of these activities. The parking area would be surfaced with a compacted clay and clamshell mix. Construction of the new parking area could require the need to import fill (from within the park's boundary) in order to recontour the new parking area accordingly. No junk, metal, tree stumps, logs, or other unsuitable materials would be used for backfill. The NPS actions would be consistent to the maximum extent practicable with Tidal Shore Erosion Policy 2.

Tidal Shore Erosion Control Policy 4

Improvements to protect property bounding on navigable water against erosion shall consist of nonstructural shoreline stabilization measures that preserve the natural environment, such as marsh creation, except in areas designated by Department of the Environment as appropriate for structural shoreline stabilization measures, including areas of excessive erosion, areas subject to heavy tides, and areas too narrow for effective use of nonstructural shoreline stabilization measures. MDE (C1) Md. Code Ann., Envir. § 16-201.

The new parking areas will be less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore. Best management practices would be in place during the planning and conduct of these activities The NPS actions would be consistent to the maximum extent practicable with Tidal Shore Erosion Policy 4.

Tidal Shore Erosion Control Policy 6

Tidal shore erosion control measures are listed below beginning with measures that are most consistent with State policy and ending with measures that are least consistent with State policy.

- **No action and relocation of structure**
- **Nonstructural shoreline stabilization, including beach nourishment, marsh creation, and other measures that encourage the preservation of the natural environment**
- **Shoreline revetments, breakwaters, groins, and similar structures designed to ensure the establishment and long-term viability of nonstructural shoreline stabilization projects Shoreline revetments**
- **Breakwaters**
- **Groins**
- **Bulkheads**

  MDE (C1) COMAR 26.24.04.01C.

Following construction of the new parking area, the northwestern portion of the existing parking area would be removed and restored. Restoration would include filling and recontouring the area to meet existing grade. Any fill not available on site would be imported from the park's existing stock pile of natively sourced fill. Portions of the restored area would then be allowed to naturally revegetate. The new parking areas will be less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore. The NPS actions would be consistent to the maximum extent practicable with Tidal Shore Erosion Policy 4 and avoiding measures that are least consistent with State policy.

Tidal Shore Erosion Control Policy 7

Tidal shore erosion control projects shall not occur when:

- **There is no evidence of erosion;**
- **Existing tidal wetlands are adequately serving as a buffer against erosion;**
- **Adjacent properties may be adversely affected by the proposed method of erosion control;**
- **Navigation may be adversely affected by the project and the applicant has not made provisions to offset these impacts;**

- **Threatened or endangered species, species in need of conservation, or significant historic or archaeological resources may be adversely affected by the project; or**
- **Natural oyster bars or private oyster leases may be adversely affected by the project.**

MDE (C1) COMAR 26.24.04.01.

There is evidence of erosion under current conditions; there are no existing wetlands that would be affected by the proposed action (see appendix D), no adjacent properties would be adversely affected; there are no threatened or endangered species or species in need of conservation present on the site. There are no significant historic or archaeological resources present, and there are no oyster bars or leases that would be adversely affected by the project. The new parking areas will be less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore. The NPS actions would be consistent to the maximum extent practicable with Tidal Shore Erosion Policy 7.

Development Policy 1

Any development shall be designed to minimize erosion and keep sediment onsite. MDE (C4) COMAR 26.17.01.08.

Erosion and sediment control would be accomplished through the use of perimeter controls, such as silt fencing. The parking area would be surfaced with a compacted clay and clamshell mix. Stormwater would be treated with infiltration trenches at the perimeter of the parking area. Infiltration trenches would be utilized in order to minimize the impact footprint, as the parking areas are located in a national seashore. The project would be implemented in accordance with Executive Order 13508 (*Chesapeake Bay Protection and Restoration*) which calls for the reduction of water pollution from federal lands and facilities and provides for tools and practices that reduce water pollution including practices available for use by federal agencies. Further, it is National Park Service policy to minimize soil excavation, erosion, and offsite soil migration during and after development activities (NPS, 2006). Best management practices would be in place during the planning and conduct of these activities. The NPS actions would be consistent to the maximum extent practicable with Development Policy 1.

Development Policy 2

Development must avoid and then minimize the alteration or impairment of tidal and nontidal wetlands; minimize damage to water quality and natural habitats; minimize the cutting or clearing of trees and other woody plants; and preserve sites and structures of historical, archeological, and architectural significance and their appurtenances and environmental settings. MDE/DNR/CAC (D6) Md. Code Ann., Envir. §§ 4-402, 5-907(a), 16-102(b); Md. Code Ann., Nat. Res. §§ 5-1606(c), 8-1801(a); Md. Code Ann., Art. 66B § 8.01(b); COMAR 26.24.01.01(A).

The new parking areas will be less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore. The project has been planned to impose the least amount of impact on the natural environment as practical.

Best management practices would be in place during the planning and conduct of these activities. Erosion and sediment control would be accomplished through the use of perimeter controls, such as silt fencing. The parking area would be constructed to accommodate approximately 87 vehicles and would be surfaced with a compacted clay and clamshell mix. Stormwater would be treated with infiltration trenches at the perimeter of the parking area. Infiltration trenches were utilized in order to minimize the impact footprint. As stated previously, the project would not impact wetlands or archaeological resources. The project would be implemented

in accordance with Executive Order 13508 (*Chesapeake Bay Protection and Restoration*) which calls for the reduction of water pollution from federal lands and facilities and provides for tools and practices that reduce water pollution including practices available for use by federal agencies. The NPS actions would be consistent to the maximum extent practicable with Development Policy 2.

FINDING

Based on the above information, data, and analysis, the National Park Service finds that Assateague Island Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation project is consistent to the maximum extent practicable with the enforceable policies of the Maryland Coastal Zone Management Program.

Pursuant to 15 CFR §930.41, the Maryland's Coastal Zone Management Program has 60 days from the receipt of this letter in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR §930.41(b). Maryland's concurrence will be presumed if its response is not received by the National Park Service on the 60th day from receipt of this determination. The state's response should be sent to:

Superintendent

Assateague Island National Seashore

7206 National Seashore Lane

Berlin, MD 21811

Relevant – the proposed action may have an impact on the coastal use or resource identified in the policy.

Not relevant – the proposed action is not likely to impact the use or resource identified or the proposed action does not include the type of activity mentioned in the policy.

Table 1: Relevancy of Maryland's Enforceable Policies to the Proposed Action

Enforceable Policy	Relevancy
Core Policy 1. It is State policy to maintain that degree of purity of air resources which will protect the health, general welfare, and property of the people of the State. MDE (C9) Md. Code Ann., Envir. §§ 2-102 to -103.	Relevant.
Core Policy 2. The environment shall be free from noise which may jeopardize health, general welfare, or property, or which degrades the quality of life. MDE (C9) COMAR 26.02.03.02.	Relevant.
Core Policy 3. The unique ecological, geological, scenic, and contemplative aspects of State wild lands shall not be affected in a manner that would jeopardize the future use and enjoyment of those lands as wild. DNR (C7) Md. Code Ann., Nat. Res. §§ 5-1201, -1203.	Not relevant. The proposed action will not impact State wild lands.
Core Policy 4. The safety, order, and natural beauty of State parks and forests, State reserves, scenic preserves, parkways, historical monuments and recreational area shall be preserved. DNR (B1) Md. Code. Ann., Nat. Res. § 5-209.	Not relevant. The proposed action will not impact the preservation of State parks and forests, State reserves, scenic preserves, parkways, historical monuments and recreational areas.
Core Policy 5. Any water appropriation must be reasonable in relation to the anticipated level of use and may not have an unreasonable adverse impact on water resources or other users of the waters of the State. MDE (C9) COMAR 26.17.06.02.	Not relevant. The proposed action does not require a groundwater appropriation or permit.
Core Policy 6. The natural character and scenic value of a river or waterway must be given full consideration before the development of any water or related land resources including construction of improvements, diversions, roadways, crossings, or channelization. MDE/DNR (C7) Md. Code Ann., Nat. Res. § 8-405; COMAR 26.17.04.11.	Relevant.
Core Policy 7. A dam or other structure that impedes the natural flow of a scenic or wild river may not be constructed, operated, or maintained, and channelization may not be undertaken MDE/DNR (C7) Md. Code Ann., Nat. Res. § 8-406; COMAR 26.17.04.11.	Not relevant. The proposed action does not include construction, operation, maintenance, or channelization of a dam or structure development which would impede the natural flow of a scenic or wild river.
Core Policy 8. Permanent structures that do not have a clear environmental benefit are prohibited east of the dune line along the Atlantic Coast. MDE/DNR (B1) Md. Code Ann., Nat. Res. § 8-1102.	Not relevant. The proposed action involves removing an existing parking area near the dune line and creating a new parking area west of the dune line.
Core Policy 9. Activities which will adversely affect the integrity and natural character of Assateague Island will be inconsistent with the State's Coastal Management Program, and will be prohibited. MDE/DNR (B1) Md. Code. Ann., Nat. Res. §§ 5-209, 8-1102.	Relevant.
Core Policy 10. An opportunity for a public hearing shall be provided for projects in non-tidal waters that dredge, fill, bulkhead, or change the shoreline; construct or reconstruct a dam; or create a waterway, except in emergency situations. MDE (A3) COMAR 26.17.04.13A.	Not relevant. The proposed action does not include projects in nontidal waters.
Core Policy 11. Soil erosion shall be prevented to preserve natural resources and wildlife; control floods; prevent impairment of dams and reservoirs; maintain the navigability of rivers and harbors; protect the tax base, the public lands, and the health, safety and general welfare of the people of the State, and to enhance their living environment. MDA (C4) Md. Code Ann., Agric. § 8- 102(d).	Relevant.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Core Policy 12. Controlled hazardous substances may not be stored, treated, dumped, discharged, abandoned, or otherwise disposed anywhere other than a permitted controlled hazardous substance facility or a facility that provides an equivalent level of environmental protection. MDE (D4) Md. Code Ann., Envir. § 7-265(a).	Not relevant. The proposed action does not involve storing, treating, dumping, discharging, abandoning, or disposing of controlled hazardous substances.
Core Policy 13. A person may not introduce in the Port of Baltimore any hazardous materials, unless the cargo is properly classed, described, packaged, marked, labeled, placarded, and approved for highway, rail, or water transportation. MDOT (D3) COMAR 11.05.02.04A.	Not relevant. The proposed action does not involve bringing cargo into the Port of Baltimore.
Core Policy 14. Operations on the Outer Continental Shelf must be conducted in a safe manner by well trained personnel using technology, precautions, and techniques sufficient to prevent or minimize the likelihood of blowouts, loss of well control, fires, spillages, physical obstruction to other users of the waters or subsoil and seabed, or other occurrences which may cause damage to the environment or property, or which may endanger life or health. (B2) Md. Code Ann., Envir. §§ 17-101 to -403; COMAR 26.24.01.01; COMAR 26.24.02.01, .03; COMAR 26.24.05.01.	Not relevant. The proposed action does not involve activities on the Outer Continental Shelf.
Water Quality Policy 1. No one may add, introduce, leak, spill, or emit any liquid, gaseous, solid, or other substance that will pollute any waters of the State without State authorization. MDE (A5) Md. Code Ann., Envir. §§ 4-402, 9-101, 9-322.	Not relevant. The proposed action does not involve adding, introducing, leaking, spilling, or emitting any substance that will pollute any waters.
Water Quality Policy 2. All waters of the State shall be protected for water contact recreation, fish, and other aquatic life and wildlife. Shellfish harvesting and recreational trout waters and waters worthy of protection because of their unspoiled character shall receive additional protection. MDE (A1) COMAR 26.08.02.02.	Not relevant. The proposed action will not impact water contact for recreation, fish, and other aquatic life and wildlife.
Water Quality Policy 3. The discharge of any pollutant which will accumulate to toxic amounts during the expected life of aquatic organisms or produce deleterious behavioral effects on aquatic organisms is prohibited. MDE (A4) COMAR 26.08.03.01.	Not relevant. The proposed action does not involve the discharge of any pollutant.
Water Quality Policy 4. Before constructing, installing, modifying, extending, or altering an outlet or establishment that could cause or increase the discharge of pollutants into the waters of the State, the proponent must hold a discharge permit issued by the Department of the Environment or provide an equivalent level of water quality protection. MDE (D6) Md. Code Ann., Envir. § 9-323(a).	Not relevant. The proposed action does not include activities like constructing, installing, modifying, extending, or altering an outlet or establishment.
Water Quality Policy 5. The use of best available technology is required for all permitted discharges into State waters MDE (D4) COMAR 26.08.03.01C.	Not relevant. The proposed action does not include discharges.
Water Quality Policy 6. Thermal discharges shall be controlled so that the temperature outside the mixing zone (50 feet radially from the point of discharge) meets the applicable water quality criteria or discharges comply with the thermal mixing zone criteria. MDE (D4) COMAR 26.08.03.03C.	Not relevant. The proposed action does not include thermal discharges.
Water Quality Policy 7. Pesticides shall be stored in an area located at least 50 feet from any water well or stored in secondary containment approved by the Department of the Environment. MDA (C4) COMAR 15.05.01.06.	Not relevant. The proposed action does not include pesticide storage.
Water Quality Policy 8. Any development or redevelopment of land for residential, commercial, industrial, or institutional purposes shall use small-scale non-structural stormwater management practices and site planning that mimics natural hydrologic conditions, to the maximum extent practicable. MDE (C9) Md. Code Ann., Envir. § 4-203; COMAR 26.17.02.01, .06.	Relevant.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Water Quality Policy 9. Unless otherwise permitted, used oil may not be dumped into sewers, drainage systems, or any waters of the State or onto any public or private land. MDE (D4) Md. Code Ann., Envir. § 5-1001(f).	Not relevant. The proposed action does not include dumping oil.
Water Quality Policy 10. If material being dumped into Maryland waters or waters off Maryland's coastline has demonstrated actual toxicity or potential for being toxic, the discharger must perform biological or chemical monitoring to test for toxicity in the water. MDE (A5) COMAR 26.08.03.07(D); COMAR 26.08.04.01.	Not relevant. The proposed action does not include dumping of toxic materials into Maryland waters.
Water Quality Policy 11. Public meetings and citizen education shall be encouraged as a necessary function of water quality regulation. MDE (A2) COMAR 26.08.01.02E(3).	Not relevant. This policy is directed at a regulating body of the state.
Flood Hazard Policy 1. Projects in coastal tidal and non-tidal flood plains which would create additional flooding upstream or downstream, or which would have an adverse impact upon water quality or other environmental factors, are contrary to State policy. MDE (C2) Md. Code Ann., Envir. § 5-803; COMAR 26.17.05.04A.	Relevant.
Flood Hazard Policy 2. The following policies apply to projects in non-tidal waters and non-tidal floodplains, but not non-tidal wetlands. Proposed floodplain encroachments, except for roadways, culverts, and bridges, shall be designed to provide a minimum of 1 foot of freeboard above the elevation of the 100-year frequency flood event. In addition, the elevation of the lowest floor of all new or substantially improved residential, commercial, or industrial structures shall also be at least 1 foot above the elevation of the 100-year frequency flood event. Proposed unlined earth channels may not change the tractive force associated with the 2-year and the 10-year frequency flood events, by more than 10 percent, throughout their length unless it can be demonstrated that the stream channel will remain stable. Proposed lined channels may not change the tractive force associated with the 2-year and the 10-year frequency flood events, by more than 10 percent, at their downstream terminus unless it can be demonstrated that the stream channel will remain stable. Category II, III, or IV dams may not be built or allowed to impound water in any location where a failure is likely to result in the loss of human life or severe damage to streets, major roads, public utilities, or other high value property. Projects that increase the risk of flooding to other property owners are generally prohibited, unless the area subject to additional risk of flooding is purchased, placed in designated flood easement, or protected by other means acceptable to the Maryland Department of the Environment. The construction or substantial improvement of any residential, commercial, or industrial structures in the 100-year frequency floodplain and below the water surface elevation of the 100-year frequency flood may not be permitted. Minor maintenance and repair may be permitted. The modifications of existing structures for flood-proofing purposes may be permitted. Flood-proofing modifications shall be designed and constructed in accordance with specifications approved by the Maryland Department of the Environment. Channelization shall be the least favored flood control technique. Multiple purpose use shall be preferred over single purpose use, the proposed project shall achieve the purposes intended, and, at a minimum, project shall provide for a 50 percent reduction of the average annual flood damages.	Not relevant. The proposed action does not include projects in non-tidal waters or non-tidal floodplains.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Flood Hazard Policy 3. Development may not increase the downstream peak discharge for the 100-year frequency storm event in the following watersheds and all their tributaries: Gwynns Falls in Baltimore City and Baltimore County; and Jones Falls in Baltimore City and Baltimore County.	Not relevant. The proposed action will not impact downstream peak discharge in these areas.
Coastal Resources Policy 1. Colonial water bird nesting sites in the Critical Area may not be disturbed during breeding season. CAC (C9) COMAR 27.01.09.04.	Not relevant. The proposed action is not in a colonial water bird nesting site.
Coastal Resources Policy 2. New facilities in the Critical Area shall not interfere with historic waterfowl concentration and staging areas. CAC (C9) COMAR 27.01.09.04.	Not relevant. The proposed action will not interfere with historic waterfowl concentration and staging areas.
Coastal Resources Policy 3. Physical alterations to streams in the Critical Area shall not affect the movement of fish. CAC (C9) COMAR 27.01.09.05.	Not relevant. The proposed action does not involve physical alteration of streams and will not affect the movement of fish.
Coastal Resources Policy 4. The installation or introduction of concrete riprap or other artificial surfaces onto the bottom of natural streams in the Critical Area is prohibited unless water quality and fisheries habitat will be improved. CAC (C9) COMAR 27.01.09.05.	Not relevant. The proposed action does not involve installation of rip rap or artificial surfaces in streams.
Coastal Resources Policy 5. The construction or placement of dams or other structures in the Critical Area that would interfere with or prevent the movement of spawning fish or larval forms in streams is prohibited. CAC (C9) COMAR 27.01.09.05.	Not relevant. The proposed action does not involve placement of dams or other structures in the Critical Area that would interfere with or prevent the movement of spawning fish or larval forms in streams.
Coastal Resources Policy 6. Development may not cross or affect a stream in the Critical Area, unless there is no feasible alternative and the design and construction of the development prevents increases in flood frequency and severity that are attributable to development; retains tree canopy and maintains stream water temperature within normal variation; provides a natural substrate for affected streambeds; and minimizes adverse water quality and quantity impacts of stormwater. CAC (C9) COMAR 27.01.02.04.	Not relevant. The proposed action does not cross or affect a stream in the Critical Area.
Coastal Resources Policy 7. The construction, repair, or maintenance activities associated with bridges or other stream crossings or with utilities and roads, which involve disturbance within the buffer or which occur in stream are prohibited between March 1 and May 15. CAC (C9) COMAR 27.01.09.05.	Not relevant. The proposed action does not involve bridges, stream crossings, utilities, or roads activity between March 1 and May 15.
Coastal Resources Policy 8. Roads, bridges, or utilities may not be constructed in any areas designated to protect habitat, including buffers, in the Critical Area, unless there is no feasible alternative and the road, bridge, or utility is located, designed, constructed, and maintained in a manner that maximizes erosion protection; minimizes negative impacts to wildlife, aquatic life, and their habitats; and maintains hydrologic processes and water quality. CAC (C9) COMAR 27.01.02.03C, .04C, .05C.	Not relevant. The proposed action will not occur in an area designated to protect habitat and is not a road, bridge, or utility.
Coastal Resources Policy 9. In the Critical Area, a minimum 100-foot vegetated buffer shall be maintained landward from the mean high water line of tidal waters, the edge of each bank of tributary streams, and the upland boundary of tidal wetlands. The buffer shall be expanded in sensitive areas in accordance with standards adopted by the Critical Area Commission. The buffer is not required for agricultural drainage ditches if the adjacent agricultural land has in place best management practices that protect water quality. The buffer is not required if existing patterns of development prevent the buffer from protecting ecological quality and functions, in which case, alternative means of protecting ecological quality and functions are required. CAC (C9) COMAR 27.01.09.01, .01-5, .01-7.	Relevant.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Coastal Resources Policy 10. Disturbance to a buffer in the Critical Area is only authorized for a shore erosion control measure, new development, or redevelopment that is: water-dependent; meets a recognized private right or public need; minimizes the adverse effects on water quality and fish, plant, and wildlife habitat; and, insofar as possible, locates nonwater-dependent structures or operations associated with water-dependent projects or activities outside the buffer. Mitigation of impacts to the buffer and a buffer management plan must be developed in accordance with standards adopted by the Critical Area Commission when a development or redevelopment activity occurs within the buffer. CAC (C9) COMAR 27.01.03.03; COMAR 27.01.09.01, .01-2, .01-3.	Relevant.
Coastal Resources Policy 11. If a development or redevelopment activity occurs on a lot or parcel that includes a buffer or if issuance of a permit, variance, or approval would disturb the buffer, the proponents of that activity must develop a buffer management plan that clearly indicates that all applicable planting standards developed by the Critical Area Commission will be met and that appropriate measures are in place for the long-term protection and maintenance of the buffer. CAC (C9) COMAR 27.01.09.01-1, .01-3.	Relevant.
Coastal Resources Policy 12. Public beaches or other public water-oriented recreation or education areas including, but not limited to, publicly owned boat launching and docking facilities and fishing piers may be permitted in the buffer in portions of the Critical Area not designated as intensely developed areas only if adequate sanitary facilities exist; service facilities are, to the extent possible, located outside the Buffer; permeable surfaces are used to the extent practicable, if no degradation of ground water would result; and disturbance to natural vegetation is minimized. CAC (C9) COMAR 27.01.03.08.	Not relevant. The proposed action is not in an area designated as intensely developed, further sanitary facilities are located outside of the buffer.
Coastal Resources Policy 13. Water-dependent research facilities or activities may be permitted in the buffer, if nonwater-dependent structures or facilities associated with these projects are, to the extent possible, located outside the buffer. CAC (C9) COMAR 27.01.03.09.	Not relevant. The proposed action is not a water-dependent research facility or activity.
Coastal Resources Policy 14. Industrial and port-related facilities may only be sited in the portions of areas of intense development that are exempted from buffer designation. CAC (C9) COMAR 27.01.03.05.	Not relevant. The proposed action does not involve industrial or port related facilities.
Coastal Resources Policy 15. Agricultural activities are permitted in the buffer, if, as a minimum best management practice, a 25-foot vegetated filter strip measured landward from the mean high water line of tidal waters or tributary streams (excluding drainage ditches), or from the edge of tidal wetlands, whichever is further inland, is established in trees with a dense ground cover or a thick sod of grass. CAC (C4) COMAR 27.01.09.01-5.	Not relevant. The proposed action does not involve agricultural activities.
Coastal Resources Policy 16. The feeding or watering of livestock is not permitted within 50 feet of the mean high water line of tidal waters and tributaries. CAC (C4) COMAR 27.01.09.01-5.	Not relevant. The proposed action does not involve livestock.
Coastal Resources Policy 17. In the Critical Area, the creation of new agricultural lands shall not be accomplished by diking, draining, or filling of nontidal wetlands; by clearing of forests or woodland on soils with a slope greater than 15 percent or on soils with a "K" value greater than 0.35 and slope greater than 5 percent; by clearing that will adversely affect water quality or will destroy plant and wildlife habitat; or by clearing existing natural vegetation within the 100-foot buffer. CAC (C4) COMAR 27.01.06.02C.	Not relevant. The proposed action does not involve agricultural activities.
Coastal Resources Policy 18. Agricultural activity permitted within the Critical Area shall use best management practices in accordance with a soil conservation and water quality plan approved or reviewed by the local soil conservation district. CAC (C4) COMAR 27.01.06.02G.	Not relevant. The proposed action does not involve agricultural activities.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Coastal Resources Policy 19. Cutting or clearing of trees within the buffer is prohibited except that commercial harvesting of trees by selection or by the clearcutting of loblolly pine and tulip poplar may be permitted to within 50 feet of the landward edge of the mean high water line of tidal waters and perennial tributary streams, or the edge of tidal wetlands if the buffer is not subject to additional habitat protection. Commercial harvests must be in compliance with a buffer management plan that is prepared by a registered professional forester and is approved by the Department of Natural Resources. CAC (C5) Md. Code Ann., Nat. Res. § 8-1808.7; COMAR 27.01.09.01-6.	Not relevant. The proposed action does not involve cutting or clearing trees in the buffer.
Coastal Resources Policy 20. Commercial tree harvesting in the buffer may not involve the creation of logging roads and skid trails within the buffer and must avoid disturbing stream banks and shorelines as well as include replanting or allowing regeneration of the areas disturbed or cut in a manner that assures the availability of cover and breeding sites for wildlife and reestablishes the wildlife corridor function of the buffer. CAC (C5) Md. Code Ann., Nat. Res. § 8-1808.7; COMAR 27.01.09.01-6.	Not relevant. The proposed action does not involve tree harvesting in the buffer.
Coastal Resources Policy 21. Solid or hazardous waste collection or disposal facilities and sanitary landfills are not permitted in the Critical Area unless no environmentally acceptable alternative exists outside the Critical Area, and these facilities are needed in order to correct an existing water quality or wastewater management problem. CAC (C9) COMAR 27.01.02.02.	Not relevant. The proposed action does not involve waste collection or disposal
Coastal Resources Policy 22. All available measures must be taken to protect the Critical Area from all sources of pollution from surface mining operations, including but not limited to sedimentation and siltation, chemical and petrochemical use and spillage, and storage or disposal of wastes, dusts, and spoils. CAC (D5) COMAR 27.01.07.02A.	Not relevant. The proposed action does not involve surface mining.
Coastal Resources Policy 23. In the Critical Area, mining must be conducted in a way that allows the reclamation of the site as soon as possible and to the extent possible. CAC (D5) COMAR 27.01.07.02B.	Not relevant. The proposed action does not involve mining.
Coastal Resources Policy 24. Sand and gravel operations shall not occur within 100 feet of the mean high water line of tidal waters or the edge of streams or in areas with scientific value, important natural resources such as threatened and endangered species, rare assemblages of species, or highly erodible soils. Sand and gravel operations also may not occur where the use of renewable resource lands would result in the substantial loss of forest and agricultural productivity for 25 years or more or would result in a degrading of water quality or a loss of vital habitat. CAC (D5) COMAR 27.01.07.03D.	Not relevant. The proposed action does not involve sand and gravel operations.
Coastal Resources Policy 25. Wash plants including ponds, spoil piles, and equipment may not be located in the 100-foot buffer. CAC (D5) COMAR 27.01.07.03E.	Not relevant. The proposed action does not involve wash plants in the buffer zone.
Coastal Resources Policy 26. A soil erosion and sedimentation control plan shall be required whenever development within the Critical Area will involve any clearing, grading, transporting, or other form of disturbance to land by the movement of earth. This plan shall be appropriately designed to reduce adverse water quality impacts. CAC (C9) COMAR 27.01.02.04.	Relevant.
Coastal Resources Policy 27. All stormwater storage facilities shall be designed with sufficient capacity to eliminate all runoff caused by the development in excess of that which would have come from the site if it were in its predevelopment state. CAC (C9) COMAR 27.01.02.04.	Not relevant. The proposed action does not involve stormwater storage facilities.
Coastal Resources Policy 28. Intense development should be directed outside the Critical Area. Future intense development activities, when proposed in the Critical Area, shall be directed towards the intensely developed areas. CAC (D1) Md. Code Ann., Natural Res. § 8-1807(b); COMAR 27.01.02.02B.	Not relevant. The proposed action does not involve development.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Coastal Resources Policy 29. The following development activities and facilities are not permitted in the Critical Area except in intensely developed areas and only after the activity or facility has demonstrated that there will be a net improvement in water quality to the adjacent body of water. Nonmaritime heavy industry Transportation facilities and utility transmission facilities, except those necessary to serve permitted uses, or where regional or interstate facilities must cross tidal waters Permanent sludge handling, storage, and disposal facilities, other than those associated with wastewater treatment facilities. However, agricultural or horticultural use of sludge when applied by an approved method at approved application rates may be permitted in the Critical Area, but not in the 100-foot Buffer CAC (C9) COMAR 27.01.02.02.	Not relevant. The proposed action does not involve these activities or facilities.
Coastal Resources Policy 30. The following policies apply in those areas of the Critical Area that are determined to be areas of intense development. To the extent possible, fish, wildlife, and plant habitats should be conserved. Development and redevelopment shall improve the quality of runoff from developed areas that enters the Chesapeake or Atlantic Coastal Bays or their tributary streams. At the time of development or redevelopment, appropriate actions must be taken to reduce stormwater pollution by 10%. Retrofitting measures are encouraged to address existing water quality and water quantity problems from stormwater. Development activities may cross or affect a stream only if there is no feasible alternative, and those activities must be constructed to prevent increases in flood frequency and severity attributable to development, retain tree canopy, maintain stream water temperatures within normal variation, and provide a natural substrate for affected streambeds. If practicable, permeable areas shall be established in vegetation. Areas of public access to the shoreline, such as foot paths, scenic drives, and other public recreational facilities, shall be maintained and, if possible, are encouraged to be established. Ports and industries which use water for transportation and derive economic benefits from shore access shall be located near existing port facilities or in areas identified by local jurisdictions for planned future port facility development and use if this use will provide significant economic benefit to the State or local jurisdiction. To the extent practicable, development shall be clustered to reduce lot coverage and maximize areas of natural vegetation. Development shall minimize the destruction of forest and woodland vegetation. CAC (C9) COMAR 27.01.02.03.	Not relevant. The proposed action will not occur in an area of intense development.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Coastal Resources Policy 31. The following policies apply in those portions of the Critical Area that are not areas of intense development. Development shall maintain, and if possible, improve the quality of runoff and ground water entering the Chesapeake and Coastal Bays. To the extent practicable, development shall maintain existing levels of natural habitat. All development sites shall incorporate a wildlife corridor system that connects undeveloped vegetated tracts onsite with undeveloped vegetated tracts offsite. All forests that are cleared or developed shall be replaced on not less than an equal area basis. If there are no forests on a proposed development site, the site shall be planted to provide a forest or developed woodland cover of at least 15 percent. Development on slopes equal to or greater than 15 percent, as measured before development, shall be prohibited unless the project is the only effective way to maintain the slope and is consistent with other policies. To the extent practicable, development shall be clustered to reduce lot coverage and maximize areas of natural vegetation. Lot coverage is limited to 15 percent of the site. CAC (C9) COMAR 27.01.02.04.	Relevant.
Tidal Wetlands Policy 1. Any action which alters the natural character in, on, or over tidal wetlands; tidal marshes; and tidal waters of Chesapeake Bay and its tributaries, the coastal bays adjacent to Maryland's coastal barrier islands, and the Atlantic Ocean shall avoid dredging and filling, be water dependent, and provide appropriate mitigation for any necessary and unavoidable adverse impacts on these areas or the resources associated with these areas. A proponent of an action described above shall explain the actions impact on: Habitat for finfish, crustaceans, mollusks, and wildlife of significant economic or ecologic value; Potential habitat areas such as historic spawning and nursery grounds for anadromous and semi-anadromous fisheries species and shallow water areas suitable to support populations of submerged aquatic vegetation; Marine commerce, Recreation, and aesthetic enjoyment; Flooding; Siltation; Natural water flow, water temperature, water quality, and natural tidal circulation; Littoral drift; Local, regional, and State economic conditions; Historic property; Storm water runoff; Disposal of sanitary waste; Sea level rise and other determinable and periodically recurring natural hazards; Navigational safety; Shore erosion; Access to beaches and waters of the State; Scenic and wild qualities of a designated State scenic or wild river; and Historic waterfowl staging areas and colonial bird-nesting sites. MDE (B2) COMAR 26.24.01.01, COMAR 26.24.02.01, .03; COMAR 26.24.05.01.	Not relevant. Wetlands delineations were conducted as part of this project and determined the proposed action would not impact jurisdictional or non-jurisdictional wetlands.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Non-Tidal Wetlands Policy 1. Removal, excavation, grading, dredging, dumping, or discharging of, or filling a non-tidal wetland with materials of any kind, including the driving of piles and placing of obstructions; changing existing drainage characteristics, sedimentation patterns, flow patterns, or flood retention characteristics; disturbing the water level or water table; or removing or destroying plant life that would alter the character of a non-tidal wetland is prohibited.MDE (C3) COMAR 26.23.01.01; COMAR 26.23.02.04, .06; COMAR 26.23.04.02.	Not relevant. The proposed action does not involve removal, excavation, grading, dredging, dumping, discharging, or filling a non-tidal wetland.
Forest Policies 1. The Forest Conservation Act and its implementing regulations, as approved by NOAA, are enforceable policies. Generally, before developing an area greater than 40,000 square feet, forested and environmentally sensitive areas must be identified and preserved whenever possible. If these areas cannot be preserved, reforestation or other mitigation is required to replace the values associated with them. This policy does not apply in the Critical Area. DNR (C5) Md. Code Ann., Nat. Res. §§ 5-1601 to -1613; COMAR 08.19.01-.06.	Not relevant. The proposed action will not impact a forested of environmentally sensitive area.
Forest Policies 2. Forestry activities shall provide for adequate restocking, after cutting, of trees of desirable species and condition; provide for reserving, for growth and subsequent cutting, a sufficient growing stock of thrifty trees of desirable species to keep the land reasonably productive; and prevent clear-cutting, or limit the size of a tract to be clear-cut in areas where clear-cutting will seriously interfere with protection of a watershed. DNR (C5) Md. Code Ann., Nat. Res. § 5-606.	Not relevant. The proposed action does not involve forestry activities.
Forest Policies 3. When any timber is cut for commercial purposes from five acres or more of land on which loblolly pine, shortleaf pine, or pond pine, singly or together occur and constitute 25 percent or more of the live trees on each acre, the person conducting the cutting or the landowner shall leave uncut and uninjured at least eight well distributed, cone-bearing, healthy, windfirm, loblolly, shortleaf, or pond pine trees on each acre cut for the purpose of reseeding. DNR (C5) Md. Code Ann., Nat. Res. §§ 5-501, -504.	Not relevant. The proposed action does not involve cutting timber for commercial purposes.
Forest Policies 4. Any highway construction project may only cut or clear the minimum amount of trees and other woody plants necessary to be consistent with sound design principles. If over an acre of forest is lost as a result of the project, an equivalent area of publicly owned property shall be reforested. DNR/MDOT (C5) Md. Code Ann., Nat. Res. § 5-103.	Not relevant. The proposed action does not involve highway construction.
Forest Policies 5. Roadside trees should not be cut down, trimmed, mutilated, or injured unless the activity will eliminate a hazard to property, public safety, or health; improve or prevent tree deterioration; or improve the general aesthetic appearance of the right-of-way. DNR (C5) COMAR 08.07.02.05.	Relevant.
Forest Policies 6. A person conducting a forestry activity in non-tidal wetlands shall develop and implement a sediment and erosion control plan. MDE (C3) COMAR 26.23.05.02.	Not relevant. The proposed action does not involve forestry activities.
Historical and Archaeological Sites Policy 1. Unless permission is granted by the Maryland Historical Trust, activities that excavate, remove, destroy, injure, deface, or disturb submerged archaeological historic property are generally prohibited. MDP (C8) Md. Code Ann., State Fin. & Proc. §§ 5A-341, -333.	Not relevant. A Phase I Archaeological Survey was conducted as part of this project. Pedestrian reconnaissance and subsurface testing of the project areas did not identify any subsurface features or new archeological sites and determined no further work is recommended for the proposed parking area locations.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Historical and Archaeological Sites Policy 2. Unless permission is granted by the Maryland Historical Trust, activities that excavate, remove, destroy, injure, deface, or disturb cave features or archeological sites under State control are generally prohibited. MDP (C8) Md. Code Ann., State Fin. & Proc. §§ 5A-342 to -343.	Not relevant. A Phase I Archaeological Survey was conducted as part of this project. Pedestrian reconnaissance and subsurface testing of the project areas did not identify any subsurface features or new archeological sites and determined no further work is recommended for the proposed parking area locations.
Historical and Archaeological Sites Policy 3. Neither human remains nor funerary objects may be removed from a burial site or cemetery, unless permission is granted by the local State's Attorney. Funerary objects may not be willfully destroyed, damaged, or defaced. MDP (C8) Md. Code Ann., Crim. Law §§ 10-401 to -404.	Not relevant. A Phase I Archaeological Survey was conducted as part of this project. Pedestrian reconnaissance and subsurface testing of the project areas did not identify any subsurface features or new archeological sites and determined no further work is recommended for the proposed parking area locations.
Living Aquatic Resources Policy 1. Unless authorized by an Incidental Take Permit, no one may take a State listed endangered or threatened species of fish or wildlife. DNR (A4) Md. Code Ann., Nat. Res. §§ 4-2A-01 to -09; Md. Code Ann., Nat. Res. §§ 10-2A-01 to -09.	Not relevant. The proposed action will not take any state or federally listed species.
Living Aquatic Resources Policy 2. Fisheries shall be sustainably harvested. DNR (A4) Md. Code Ann., Nat. Res. § 4-215.	Not relevant. The proposed action does not involve harvesting fish.
Living Aquatic Resources Policy 3. Any land or water resource acquired by the State to protect, propagate, or manage fish shall not be damaged. DNR (A4) Md. Code Ann., Nat. Res. § 4-410.	Not relevant. The proposed action will not impact fish ponds or hatcheries.
Living Aquatic Resources Policy 4. No activity will be permitted that impedes or prevents the free passage of any finfish, migratory or resident, up or down stream. DNR (A4) Md. Code Ann., Nat. Res. § 4-501 to -502.	Not relevant. The proposed action does not involve stream obstructions.
Living Aquatic Resources Policy 5. All in-stream construction in non-tidal waters is prohibited from October through April, inclusive, for natural trout waters and from March through May, inclusive, for recreational trout waters. In addition, the construction of proposed projects, which may adversely affect anadromous fish spawning areas, shall be prohibited in non-tidal waters from March 15 through June 15, inclusive. MDE (C2) COMAR 26.17.04.11B(5).	Not relevant. The proposed action does not involve in-stream construction.
Living Aquatic Resources Policy 6. Riparian forest buffers adjacent to waters that are suitable for the growth and propagation of self-sustaining trout populations shall be retained whenever possible. MDE (C5) COMAR 26.08.02.03-3F.	Not relevant. The proposed action will not impact riparian forest buffers adjacent to waters suitable for self-sustaining trout populations.
Living Aquatic Resources Policy 7. Projects in or adjacent to non-tidal waters shall not adversely affect aquatic or terrestrial habitat unless there is no reasonable alternative and mitigation is provided. MDE (C2) COMAR 26.17.04.11B(5).	Not relevant. The proposed action will not occur in or adjacent to non-tidal waters.
Living Aquatic Resources Policy 8. The harvest, cutting, or other removal or eradication of submerged aquatic vegetation may only occur in a strip up to 60 feet wide surrounding a pier, dock, ramp, utility crossing, or boat slip to point of ingress in a marina, otherwise the activity must receive the approval of the Department of Natural Resources. No chemical may be used for this purpose, and the timing and method of the activity shall minimize the adverse impact on water quality and on the growth and proliferation of fish and aquatic grasses. MDE (A4) Md. Code Ann., Nat. Res. § 4- 213.	Not relevant. The proposed action does not involve harvest, cutting, or other removal or eradication of submerged aquatic vegetation.
Living Aquatic Resources Policy 9. Natural oyster bars in the Chesapeake Bay shall not be destroyed, damaged, or injured. DNR (A4) Md. Code Ann., Nat. Res. § 4-1118.1.	Not relevant. The proposed action will not destroy, damage, or injure natural oyster bars in the Chesapeake Bay.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Living Aquatic Resources Policy 10. A person, other than the lease-holder, may not willfully and without authority catch oysters on any aquaculture or submerged land lease area, or willfully destroy or transfer oysters on this land in any manner. DNR (A4) Md. Code Ann., Nat. Res. § 4-11A-15(a).	Not relevant. The proposed action does not involve catching oysters.
Living Aquatic Resources Policy 11. An organism into which genetic material from another organism has been experimentally transferred so that the host acquires the genetic traits of the transferred genes may not be introduced into State waters. DNR (A4) COMAR 08.02.19.03.	Not relevant. The proposed action does not involve introducing organisms into state waters.
Living Aquatic Resources Policy 12. Vectors for the introduction of nonnative aquatic organisms must be appropriately controlled to prevent adverse impacts on aquatic ecosystems. DNR (A4) Md. Code Ann., Nat. Res. § 4-205.1.	Not relevant. The proposed action does not involve introducing organisms.
Living Aquatic Resources Policy 13. Except as authorized by federal law, any live snakehead fish or viable eggs of snakehead fish of the Family Channidae may not be imported, transported, or introduced into the State. DNR (A4) COMAR 08.02.19.06.	Not relevant. The proposed action does not involve importing snakehead fish or their eggs.
Living Aquatic Resources Policy 14. Nonnative oysters may not be introduced into State waters. DNR (A4) Md. Code Ann., Nat. Res. § 4-1008.	Not relevant. The proposed action does not involve introducing nonnative oysters.
Mineral Extraction Policies 1-35.	Not relevant. The proposed action does not include any activities that involve mineral extraction.
Electrical Generation and Transmission Policies 1-5.	Not relevant. The proposed action does not include any activities that involve electrical generation and transmission.
Tidal Shore Erosion Control Policy 1. Structural erosion control measures shall be designed to use materials such as stone or broken concrete, wood, metal, plastic, or other similar materials that are of adequate size, weight, and strength to function as intended; free of protruding objects; and selected because they minimize impacts to water quality and plant, fish, and wildlife habitat. MDE (C1) COMAR 26.24.04.01.	Not relevant. The proposed action does not involve structural erosion control measures.
Tidal Shore Erosion Control Policy 2. Tidal shore erosion control projects shall not use junk, metal, tree stumps, logs, or other unsuitable materials for backfill. MDE (C1) COMAR 26.24.04.01	Relevant.
Tidal Shore Erosion Control Policy 3. Beach nourishment projects shall meet the following requirements: The fill material grain size shall be equal to or greater in grain size and character to the existing beach material, or determined otherwise to be compatible with existing site conditions and acceptable to the Department; The fill material shall be relatively free of organic material, floating debris, or other objects; Silt and clay fills that change the sandy nature of the existing beach materials are not acceptable; Gravel fill may be acceptable, if particle sizes are equal to or greater than the existing beach materials; and Fill material shall be placed above the mean high water line before final grading to achieve the desired beach profile, unless site conditions prohibit the placement of fill material above the mean high water line and specific measures are designed to prevent material from washing away from the site. MDE (C1) COMAR 26.24.03.06D.	Not relevant. The proposed action does not involve beach renourishment.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Tidal Shore Erosion Control Policy 4. Improvements to protect property bounding on navigable water against erosion shall consist of nonstructural shoreline stabilization measures that preserve the natural environment, such as marsh creation, except in areas designated by Department of the Environment as appropriate for structural shoreline stabilization measures, including areas of excessive erosion, areas subject to heavy tides, and areas too narrow for effective use of nonstructural shoreline stabilization measures. MDE (C1) Md. Code Ann., Envir. § 16-201.	Relevant.
Tidal Shore Erosion Control Policy 5. Encroachment into state tidal wetlands for shore erosion control shall be limited to that which is structurally necessary. Bulkheads that encroach into tidal wetlands in excess of 3 feet beyond the mean high water line are prohibited, unless a design report verifies the necessity for the encroachment, and that other structural and nonstructural alternatives have been considered and determined to be impractical. The design report shall distinguish between shore erosion and bank stabilization requirements. MDE (C1) COMAR 26.24.04.01.	Not relevant. The proposed action will not encroach into state tidal wetlands for shore erosion control.
Tidal Shore Erosion Control Policy 6. Tidal shore erosion control measures are listed below beginning with measures that are most consistent with State policy and ending with measures that are least consistent with State policy. No action and relocation of structure Nonstructural shoreline stabilization, including beach nourishment, marsh creation, and other measures that encourage the preservation of the natural environment Shoreline revetments, breakwaters, groins, and similar structures designed to ensure the establishment and long-term viability of nonstructural shoreline stabilization projects Shoreline revetments Breakwaters Groins Bulkheads MDE (C1) COMAR 26.24.04.01C.	Relevant.
Tidal Shore Erosion Control Policy 7. Tidal shore erosion control projects shall not occur when: There is no evidence of erosion; Existing tidal wetlands are adequately serving as a buffer against erosion; Adjacent properties may be adversely affected by the proposed method of erosion control; Navigation may be adversely affected by the project and the applicant has not made provisions to offset these impacts; Threatened or endangered species, species in need of conservation, or significant historic or archaeological resources may be adversely affected by the project; or Natural oyster bars or private oyster leases may be adversely affected by the project. MDE (C1) COMAR 26.24.04.01.	Relevant.
Oil and Natural Gas Facilities Policies 1-6.	Not relevant. The proposed action does not include oil and natural gas facilities.
Dredging and Disposal of Dredged Material Policies 1-13.	Not relevant. The proposed action does not include dredging and disposal of dredged material.
Navigation Policy 1. Navigational access projects shall when possible be designed to use piers to reach deep waters rather than dredging. MDE (B2) COMAR 26.24.03.02.	Not relevant. The proposed action does not include navigational access projects.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Navigation Policy 2. Navigational access channels to serve individual or small groups of riparian landowners shall be designed to prevent unnecessary channels. A central access channel with short spur channels shall be considered over separate access channels for each landowner. MDE (B2) COMAR 26.24.03.02.	Not relevant. The proposed action does not include navigational access projects.
Navigation Policy 3. Navigational access channels shall be designed to minimize alteration of tidal wetlands and underwater topography. MDE (B2) COMAR 26.24.03.02.	Not relevant. The proposed action does not include navigational access projects.
Navigation Policy 4. New or expanded facilities for the mooring, docking, or storing of more than ten vessels on tidal navigable waters shall be located on waters with strong flushing characteristics and may not be located in areas where the natural depth is 4.5 feet or less at mean low water, and any of the following will be adversely affected: aquatic vegetation, productive macroinvertebrate communities, shellfish beds, fish spawning or nursery areas, rare, threatened, or endangered species, species in need of conservation, or historic waterfowl staging areas. Expansion of existing facilities is favored over new development. MDE (A1) COMAR 26.24.04.03.	Not relevant. The proposed action does not include new or expanded facilities for the mooring, docking, or storing of vessels.
Navigation Policy 5. The location of buoys for the mooring of boats shall not be located in designated private or public shellfish areas, cable-crossing areas, navigational channels, in other places in where general navigation would be impeded or obstructed, or public ship anchorage. The location of mooring buoys should not obstruct the riparian access of adjacent property owners or hinder the orderly access to or use of the waterways by the general public. DNR (A1) COMAR 08.04.13.02.	Not relevant. The proposed action does not include locating buoys for mooring boats.
Transportation Policy 1. The social, economic, and environmental effects of proposed transportation facilities projects must be identified and alternative courses of action must be considered. MDOT (D8) COMAR 11.01.06.02B.	Not relevant. The proposed action does not include activities relevant to the Action Plan identified in COMAR 11.01.06.02B
Transportation Policy 2. The public must be involved throughout the process of planning transportation projects. MDOT (D8) Md. Code Ann., Transp. § 7-304(a); COMAR 11.01.06.02B.	Not relevant. The proposed action does not include activities relevant to the Action Plan identified in COMAR 11.01.06.02B
Transportation Policy 3. Transportation development and improvement projects must support the integrated nature of the transportation system, including removing impediments to the free movement of individuals from one mode of transportation to another. MDOT (D8) Md. Code Ann., Transp. § 2-602.	Not relevant. The proposed action will not impact the integrated nature of the transportation system.
Transportation Policy 4. Private transit facilities must be operated in such a manner as to supplement facilities owned or controlled by the State to provide a unified and coordinated regional transit system without unnecessary duplication or competing service. MDOT (D8) Md. Code Ann., Transp. § 7-102.1(b).	Not relevant. The proposed action does not involve operating a private transit facility.
Transportation Policy 5. Access to and use of transportation facilities by pedestrians and bicycle riders must be enhanced by any transportation development or improvement project, and best engineering practices regarding the needs of bicycle riders and pedestrians shall be employed in all phases of transportation planning. MDOT (D8) Md. Code Ann., Transp. § 2-602.	Not relevant. The proposed action will not impact pedestrian or bicycle rider access to transportation facilities.
Agriculture Policies 1-5.	Not relevant. The proposed action does not include agriculture or agricultural land management practices.
Development Policy 1. Any development shall be designed to minimize erosion and keep sediment onsite. MDE (C4) COMAR 26.17.01.08.	Relevant.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Development Policy 2. Development must avoid and then minimize the alteration or impairment of tidal and nontidal wetlands; minimize damage to water quality and natural habitats; minimize the cutting or clearing of trees and other woody plants; and preserve sites and structures of historical, archeological, and architectural significance and their appurtenances and environmental settings. MDE/DNR/CAC (D6) Md. Code Ann., Envir. §§ 4-402, 5-907(a), 16-102(b); Md. Code Ann., Nat. Res. §§ 5-1606(c), 8-1801(a); Md. Code Ann., Art. 66B § 8.01(b); COMAR 26.24.01.01(A).	Relevant.
Development Policy 3. Any proposed development may only be located where the water supply system, sewerage system, or solid waste acceptance facility is adequate to serve the proposed construction, taking into account all existing and approved developments in the service area and any water supply system, sewerage system, or solid waste acceptance facility described in the application and will not overload any present facility for conveying, pumping, storing, or treating water, sewage, or solid waste. MDE (C9) Md. Code Ann., Envir. § 9-512.	Not relevant. The proposed action does not require a water supply system, sewerage system, or solid waste acceptance facility.
Development Policy 4. A proposed construction project must have an allocation of water and wastewater from the county whose facilities would be affected or, in the alternative, prove access to an acceptable well and on-site sewage disposal system. The water supply system, sewerage system, and solid waste acceptance facility on which the building or development would rely must be capable of handling the needs of the proposed project in addition to those of existing and approved developments. MDE (D6) Md. Code Ann., Envir. § 9-512.	Not relevant. The proposed action does not require water and wastewater from the county.
Development Policy 5. Any residence or commercial establishment that is served or will be served by an on-site sewage disposal system or private water system must demonstrate that the system or systems are capable of handling the existing and reasonably foreseeable sewage flows or water demand prior to construction or alteration of the residence or commercial establishment. MDE (D6) COMAR 26.04.02.02D.	Not relevant. The proposed action is not a residence or commercial establishment.
Development Policy 6. Proponents of grading or building in the Severn River Watershed must create a development plan and have it approved by the soil conservation district. The plan shall include a strategy for controlling silt and erosion and must demonstrate that any septic or private sewer facility will not contribute to the pollution of the Severn River. MDE (D4) Md. Code Ann., Envir. § 4-308(a).	Not relevant. The proposed action will not occur in the Severn River Watershed.
Development Policy 7. Industrial facilities must be sited and planned to insure compatibility with other legitimate beneficial water uses, constraints imposed due to standards of air, noise and water quality, and provision or availability of adequate water supply and waste water treatment facilities. MDE (D4) Md. Code Ann., Envir. §§ 2-102, 4-402, 9-224(b), 9-512(b); COMAR 26.02.03.02; COMAR 26.11.02.02B.	Not relevant. The proposed action does not involve an industrial facility.
Development Policy 8. Local citizens shall be active partners in planning and implementation of development. MDP (D6) Md. Code Ann., St. Fin. & Proc. §§ 5-7A-01 to -02.	Not relevant. The proposed action does not fall into the definition of development as stated here.
Development Policy 9. Development shall protect existing community character and be concentrated in existing population and business centers, growth areas adjacent to these centers, or strategically selected new centers. MDP (D6) Md. Code Ann., St. Fin. & Proc. §§ 5-7A-01 to -02.	Not relevant. The proposed action will not impact community character and is not new development as implied in the policy.
Development Policy 10. Development shall be located near available or planned transit options. MDP (D6) Md. Code Ann., St. Fin. & Proc. §§ 5-7A-01 to -02.	Not relevant. The proposed action is not new development as implied in the policy.

Table 1: Relevancy of Maryland's Enforceable Policies of the Proposed Action (continued)

Enforceable Policy	Relevancy
Development Policy 11. Whenever possible, communities shall be designed to be compact, contain a mixture of land uses, and be walkable. MDP (D6) Md. Code Ann., St. Fin. & Proc. §§ 5-7A-01 to -02.	Not relevant. The proposed action is not designing a new community.
Development Policy 12. To meet the needs of existing and future development, communities must identify adequate drinking water and water resources and suitable receiving waters and land areas for stormwater management and wastewater treatment and disposal. MDE (D6) Md. Code Ann., Art. 66B § 3.05.	Not relevant. The proposed action is not designing a new community.
Sewage Treatment Policies 1-24.	Not relevant. These policies are specific to agricultural and silvicultural nonpoint source pollution, onsite sewage disposal systems, and underground storage tanks, which are not part of the proposed action.

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APPENDIX C: FLOODPLAIN STATEMENT OF FINDINGS

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National Park Service
U.S. Department of the Interior

Assateague Island National Seashore
Maryland

STATEMENT OF FINDINGS
FOR
EXECUTIVE ORDER 11988 (FLOODPLAIN MANAGEMENT)

Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation
PMIS #194834 & PMIS #194874; NPS Disaster Number MD2013-1-NPS
Assateague Island National Seashore

Recommended:

Superintendent, Assateague Island National Seashore

Certification of Technical Adequacy and Servicewide Consistency

Chief, Water Resources Division

Approved:

Director, Northeast Region

INTRODUCTION

Situated in a dynamic coastal environment that includes rising sea levels, Assateague Island National Seashore is proposing to remove and relocate two parking areas (Bayside Picnic Parking Area and South Ocean Beach Parking Area) to address recent damage associated with Hurricane Sandy in October 2012 and mitigate for long-term environmental effects.

Hurricane Sandy affected 24 states from Florida to New England causing hundreds of millions of dollars of damage to property. Between October 26 and 30, 2012, President Obama issued Major Disaster declarations in the states of New Hampshire, New York, and Connecticut; and Emergency declarations in the states of New Hampshire, Virginia, West Virginia, Delaware, Rhode Island, Pennsylvania, Maryland, Massachusetts, and the District of Columbia. These declarations in the states of New York, New Jersey, and Maryland entitle eligible projects to receive relief through the Emergency Relief for Federally Owned Roads Program which supports the federal response to the disasters and emergencies. Established in 1977, the mission for the Emergency Relief for Federally Owned Roads' Program is to provide funding and engineering services to restore access to public lands.

This statement of findings has been prepared in accordance with Executive Order 11988 (*Floodplain Management*), NPS Director's Order #77-2, and *Floodplain Management and Procedural Manual* #77-2. The statement of findings summarizes the floodplain development associated with actions to relocate the two parking areas within Assateague Island National Seashore. Assateague Island National Seashore and the parking area project locations are shown on figure 1 below. The statement of findings also describes the reasons why encroachment into the floodplain is required to implement the project, the site-specific flood risks involved, and the measures that would be taken to mitigate floodplain impacts.

Proposed Action

The purpose of this project is to remove and relocate the Bayside Picnic and South Ocean Beach Parking Areas to locations that are less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore. A description of the proposed action for each of the parking areas is provided in the paragraphs that follow.

Bayside Picnic Parking Area (PMIS 194834) – The new Bayside Picnic Parking Area would be constructed from sea shell clam aggregate mixed with clay. Due to the surfacing material, parking spots would not be delineated with paint, but the new parking area would be designed to accommodate approximately 87 vehicles, including 12 oversize vehicles. The location of the Bayside Picnic Parking Area project is shown on figure 2.

Construction of the new parking area would require the use of mechanized equipment and could require the need to import or export fill in order to recontour the new parking area accordingly. Potential sources for fill include the park's existing stock piles of natively sourced fill or locally acquired crushed road base. Any excess of native fill would be transported to the park's stock pile for use in future projects. Staging for construction would be located in the existing Bayside Picnic Parking Area and/or other nearby parking lots in the national seashore. Construction would take place during the off season when visitation is comparatively lower. The new Bayside Picnic Parking Area would be constructed before removal of the existing parking area commenced in order to minimize closure of the area to visitors.

Following construction of the new parking area, the northwestern portion of the existing parking area would be removed and restored. Restoration would include filling and recontouring the area to meet existing grade. Any fill not available on site would be imported from the Assateague Island National Seashore / Chincoteague National Wildlife Refuge shared stock piles of natively sourced sand

and dirt fill. The stock piles are located in Virginia, approximately 20 miles south of the South Ocean Beach Parking Area and within the national wildlife refuge. Portions of the restored area would then be allowed to naturally revegetate. Existing park staff (Division of Natural Resources Management) would monitor and manage for any invasive plant species that may occur in the area.

Maintenance of the aggregate mix would require monthly grading by park staff during the peak season and occasional resurfacing with clam shells. While the remaining portion of the existing Bayside Picnic Parking Area would remain asphalt, no asphalt would be used in the new parking area.

South Ocean Beach Parking Area (PMIS 194874) – The initial damage survey reports prepared for this project identified replacement in kind, to include removal of sand, repair pavement and curb, replace curb stops, restore parking islands, and replace pavement markings. However, this 66 car parking area continues to be enveloped by sand as the barrier island is influenced by ocean currents. The national seashore, therefore, proposes the removal of the Life of the Dunes Nature Trail Parking Area and subsequent relocation of the South Ocean Beach Parking Area. In addition, rather than surface the parking area with asphalt, the national seashore proposes to surface the parking area with a sea shell clam aggregate mixed with clay. Due to the surfacing material, parking spots would not be delineated with paint, but the new parking area would be designed to accommodate approximately 76 vehicles, including two oversize vehicles. The location of the South Ocean Beach Parking Area project is shown on figure 3.

Construction of the new parking area would require the use of mechanized equipment and could require the need to import or export fill in order to recontour the new parking area accordingly. As with the Bayside Picnic Parking Area relocation, potential sources for fill include the park's existing stock pile of natively sourced fill or locally acquired crushed road base. Any excess of native fill would be transported to the park's stock pile for use in future projects. Staging for removal of the Life of the Dunes Nature Trail Parking Area and construction of the new South Ocean Beach Parking Area would be located in the existing South Ocean Beach Parking Area and/or other nearby parking areas in the national seashore. Construction would take place during the off season when visitation is comparatively lower. The new South Ocean Beach Parking Area would be constructed before removal of the existing parking area commenced in order to minimize closure of the area to visitors.

Following construction of the new parking area, the existing South Ocean Beach Parking Area would be removed and restored. Restoration would include filling and recontouring the area to meet existing grade. Any fill not available on site would be imported from the park's existing stock pile of natively sourced fill. Portions of the restored area would then be allowed to naturally revegetate. Existing park staff would monitor and manage for any invasive plant species that may occur in the area.

As mentioned above, maintenance of the aggregate mix would require monthly grading by park staff during the peak season and occasional resurfacing with clam shells. No asphalt would be used at the South Ocean Beach Parking Area.

Brief Site Description

Assateague Island National Seashore encompasses a 37-mile long barrier island, adjacent marsh islands and waters in Maryland and Virginia, and the Barrier Island Visitor Center on the Maryland mainland. On September 21, 1965, Public Law 89-195 established Assateague Island National Seashore as a unit of the National Park System to protect the natural resources and recreational values of Assateague Island and adjacent coastal waters. The authorized boundary includes approximately 48,700 acres of land and water in Maryland and Virginia. Of this, 8,400 acres in Virginia are managed as Chincoteague National Wildlife Refuge, and 600 acres are managed as Assateague State Park in Maryland. The mission of the national seashore is to preserve the unique coastal resources of Assateague Island and the natural ecosystem conditions and processes upon which they depend, while providing high quality resource-based recreational and educational opportunities.

The Bayside Picnic Parking Area is located on Chincoteague Bay, just west of the Bayside Camping Area, and at the terminus of Bayside Drive. Bayside Drive turns west off of Bayberry Drive approximately ¼ mile south of the national seashore entrance station. The parking area provides access to various activities on Chincoteague Bay including boating, shellfishing, sunbathing, and picnicking, to name a few.

The South Ocean Beach Parking Area is located approximately 1 ¼ miles south of the national seashore entrance station to the southeast of the roundabout. The parking area provides access to South Ocean Beach and the paved bike path along Bayberry Drive. The Life of the Dunes Nature Trail Parking Area is located approximately 1 ¼ miles south of the national sea-shore entrance and to the southwest of the roundabout. The parking area provides access to the Life of the Dunes Nature Trail and the bike path. This parking area also serves as overflow for South Ocean Beach during peak visitation.

JUSTIFICATION FOR THE USE OF THE FLOODPLAIN

Removal and relocation of the two parking areas within the 100-year floodplain is needed for the following reasons:

- The entirety of Assateague Island falls within the 100-year floodplain and therefore any proposed new parking areas within the national seashore would fall within the floodplain. The proposed locations for the new parking areas, while in the 100-year floodplain, would be less susceptible to the factors listed below.
- The existing parking area locations are vulnerable to reoccurring storm activity and susceptible to damage. Figure 5 shows representative photographs of overwash and storm surge just after Hurricane Sandy in October 2012.
- The necessary clean up and repair to the parking areas required after reoccurring storm events places a burden on park operations.
- Prolonged parking area closures limit the national seashore's ability to provide high quality resource based recreational opportunities to the public.
- The continued erosion and encroachment of asphalt and boardwalk materials at the Bayside Picnic Parking Area serves as a source of manmade debris into Chincoteague Bay, the Atlantic Ocean, and along the surrounding shoreline.
- Maintaining the current location of the South Ocean Beach Parking Area is altering the evolution of landforms on the island by preventing the natural inland migration of the adjacent sand dunes.

FLOOD RISK

Both parking areas are within the mapped 100-year floodplain, as shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) map number 2400830200C. The Federal Emergency Management Agency is currently updating floodplain maps for Worcester County, Maryland and the revised maps are anticipated to be released in the latter half of 2013. The entirety of Assateague Island is within the 100-year floodplain. There are two 100-year floodplain zones within the Assateague Islands National Seashore (see figure 4). The first zone, labeled A-12 on FEMA maps, has a 100-year floodplain at 8.0 feet National Geodetic Vertical Datum of 1929 (NGVD29). This zone constitutes most of the bayside area on the island, and covers the Bayside Picnic Parking Area. The major source of flooding on this side is overwash from Chincoteague Bay. In the immediate vicinity of the parking area project, estuarine wetlands, particularly along the northern shoreline of the peninsula provide shoreline stabilization function and reduce flood potential (by allowing for

water storage during surges) (see figure 2 below). These wetlands would not be impacted by the proposed relocation project.

The second zone on the FEMA mapping is zone V-7, a zone where floodplain elevation is known to be influenced by wave action. This zone is isolated to the dune and beach area along the ocean side of the island and has a 100-year floodplain at 12.0 feet NGVD29 (FEMA 1992). The South Ocean Beach Parking Area is within zone V-7. The primary source of flooding at this location is from the ocean, with potential for minor flooding from Chincoteague Bay. The bayside of the South Ocean Beach Parking Area, however, is protected by several hundred feet of forested and scrub-shrub intertidal estuarine wetlands and estuarine emergent marshes (see figure 3). Within the immediate vicinity of the proposed parking relocation, interdunal palustrine wetlands are found which may help ameliorate overwash conditions. These wetlands would not be impacted or disturbed by the proposed removal and relocation proposed action.

Flooding on the national seashore can range from minor flooding with inundation of the fore dunes and minor erosion to major flooding from hurricanes. Major storms can drive storm surges across the island, removing large sections of the dune line and completely changing the landscape, particularly along the shoreline. Hurricanes can cause severe flooding, wind damage, and extensive beach erosion. Heavy surf and high tides can breach dunes, and inlets may be cut by flood tides trapped in bay areas. Facilities may be severely damaged or destroyed, roads and bridges washed out, and utilities damaged.

Assateague Island National Seashore supports a number of natural features that reduce flooding severity. For example, estuarine wetlands along the western shoreline of the island provide various functions, such as flood flow storage and sediment retention. Dunes along the seashore impede storm surge, and interdunal wetlands and other depressions also function to store water during overwash or large precipitation events. Beach dunes are typically formed through the trapping of sand by dune vegetation, and in the absence of vegetation, dunes may "migrate," moving with the prevailing wind direction. Vegetation such as American beachgrass (*Ammophila breviligulata*), adapted to rapid sand accumulation, sandblast, wind and water erosion, wind temperature fluctuations, and saltspray, , facilitate dune stabilization along Assateague Island. Stabilized, non-migratory dunes provide flood protection services by preventing blowouts and impeding overwash. Dunes are present near the South Ocean Beach Parking Area and appear to be relatively stable. Dunes are not present near the Bayside Picnic Parking Area.

Dynamic and challenging weather conditions are typical for the national seashore. Storms continuously reshape the landscape. The Atlantic hurricane season begins on June 1 and continues through November 30 each year, and these dates encompass over 97% of tropical activity (NOAA 2013). The peak season runs from August through October, with 78% of the tropical storm days, 87% of the minor hurricane days, and 96% of the major storms. The number of tropical storms (sustained winds between 39 and 73 mph) occurring each season may vary from 4 to 12. At Ocean City, Maryland, just north of the park, tropical storms occur on average every 2.8 years, and direct hurricane hits occur about every 16 years. The longest gap between storms was reported between 1904 and 1916, a period of 11 years (Hurricane City 2013). The average sustained winds from hurricanes are 90 miles per hour (Hurricane City 2013). The hurricane of late August 1933 turned the Assateague peninsula into an island (The Assateague Naturalist 2011). Waves greater than 20 feet high swept over the dunes and into the bays on the west side of Assateague Island. An inlet was forged at Ocean City that remains today. After the March 1962 nor'easter, resort development stopped on Assateague Island, and in 1962, it became a national seashore (NPS 2011a). During the 1962 storm, massive waves rushed over the dunes on the island and spilled into Chincoteague Bay (The Assateague Naturalist 2011). The Chincoteague causeway partially blocked the retreat of the flood waters. In 1998, two nor'easters occurred in January and February. During the first storm, the Chincoteague causeway was closed for five hours. During the second storm, Beach Drive, which crosses over the Sheepshead

Creek Bridge, was closed due to flooding and the Chincoteague causeway was again closed for several hours (The Assateague Naturalist 2011). In August 1999, Hurricane Dennis sent large surf to Assateague Island. The island was overwashed in some areas, and the overwash sent water into Swan Cove, which had been nearly empty prior to the storm (The Assateague Naturalist 2011). In September 1999, the eye of hurricane Floyd passed over the area and weakened to a tropical storm (Hurricane City 2013). Hurricane Irene caused minor damage in the area of Ocean City in August, 2011. Hurricane Sandy caused flooding and damage (see also Introduction) with a reported storm surge of 4.33 feet in Ocean City (Hurricane City 2013).

MITIGATION OF RISK TO PEOPLE AND STRUCTURES

The proposed action is within a Class III regulatory floodplain, a designation for High Hazard Areas. Assateague Island National Seashore has a hurricane and flooding plan that would direct emergency actions and evacuations in the event of flooding. At the appropriate times visitors would be removed from the site and the site would be closed until potentially hazardous conditions subsided. Further, structures such as the canoe and kayak rental concession stand located near the Bayside Picnic and Parking Area would be mounted on a towable trailer and moved during storm events. The concession stand would be relocated further east to a more upland location. The structures and parking areas are designed using materials that have the least possible impact to natural resources, property, and human life.

The new parking locations would be located further inland and, therefore, would be less subject to inundation and storm surge effects. For instance, the proposed location of the South Ocean Beach Parking Area is behind a system of stabilized dunes, where the current location is between these dunes and the foredunes of the primary beach area. Therefore, hazard to life and property from flooding would be reduced.

The impacts to the natural resources and functions of the floodplain would be enhanced by the proposed parking area removal and relocations. The floodplain would be enhanced by relocating impervious cover further inland of the existing parking areas. The locations of the proposed parking areas are less subject to natural dynamic coastal processes such as sand migration, sea level rise, shoreline erosion, and over wash because they are further inland. The South Ocean Beach Parking Area would be located in a previously developed area (Life of the Dunes Parking Area). The Bayside Picnic Parking Area, however, would be located in a vegetated / non-developed area. As stated previously, neither project would remove wetlands delineated in May 2013 (see Appendix D: Wetlands Statement of Findings).

SUMMARY

The National Park Service finds that the parking area relocations at Assateague Islands National Seashore are essential for public use and safety, despite the fact that the new locations would be located in flood-prone areas. The National Park Service also finds that in reconstructing the facilities, there are no practicable alternatives for locating the parking areas outside of the floodplain since the entire Assateague Island is within the 100-year floodplain. However, a number of mitigation measures will serve to reduce short-term and long-term impacts of the construction and operation of the parking areas on floodplain resources and functions. These measures include site specific storm water management planning and best management practices, spill prevention and response planning, and avoidance of wetlands during construction. This project is consistent with the policies and procedures of NPS Director's Order #77-2 (Floodplain Management) and Executive Order 11988.

REFERENCES

Assateague Naturalist, The

2011 The Great Hurricane of 1933, the Ash Wednesday Storm of 1962, the 1998 Nor'easters, and Hurricane Dennis (1999). Available on the Internet at <http://www.assateague.com/>.

Federal Emergency Management Agency (FEMA)

1992 Flood Insurance Rate Map for Worcester County, Maryland. Panel 200 of 250, Panel #240083 0200C. Effective date: July 2013.

Hurricane City

2013 Ocean City (including Assateague Island), Maryland's history with tropical storm systems. Available at: http://www.hurricanecity.com/city/oceancity.htm.

National Oceanic and Atmospheric Administration, Atlantic Oceanographic and Meteorological Laboratory

2013 Hurricane Research Division, Frequently Asked Questions. Available on the Internet at <http://www.aoml.noaa.gov/hrd/tcfaq/G1.html. July 16>.

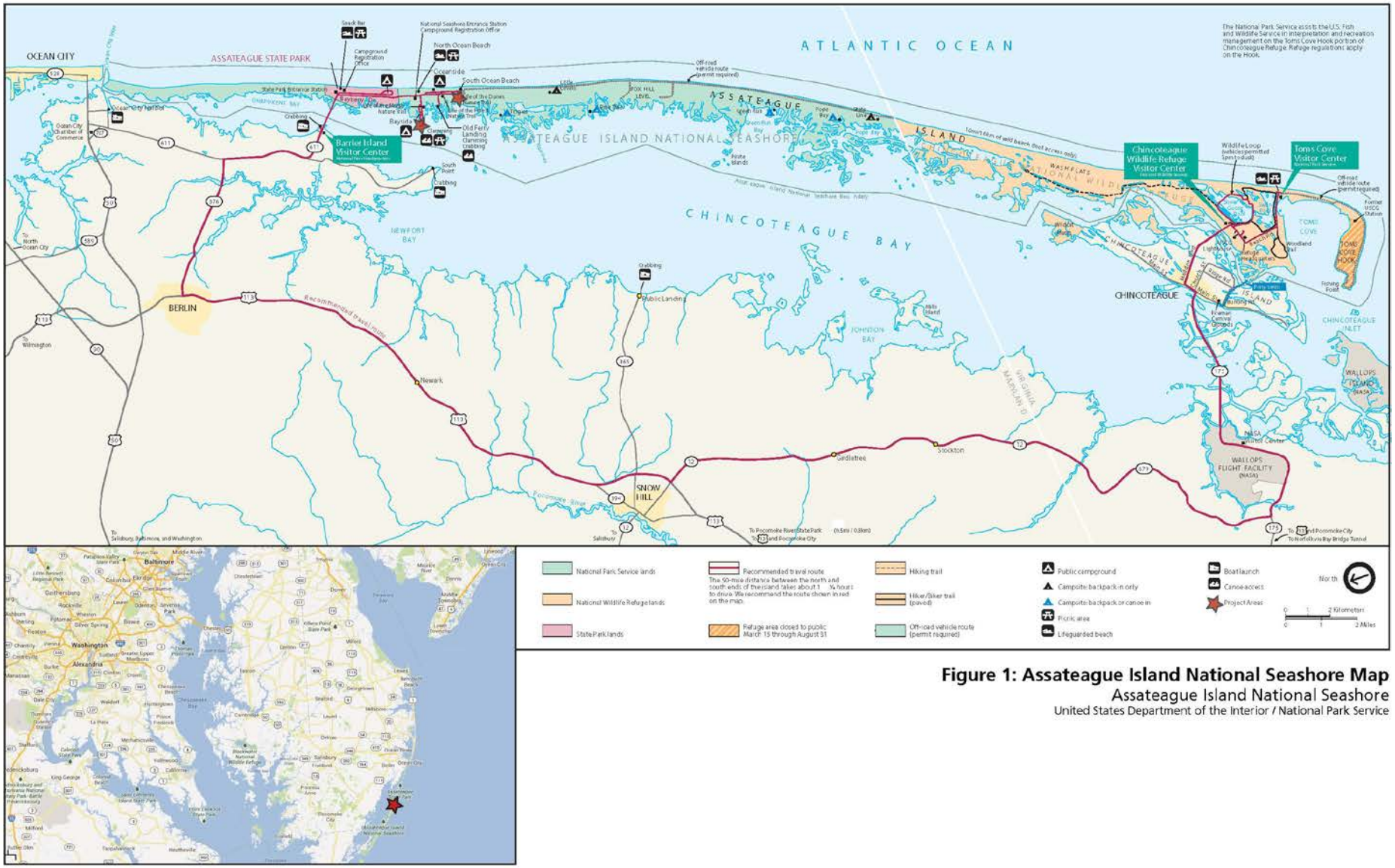

Figure 1: Assateague Island National Seashore Map
Assateague Island National Seashore
United States Department of the Interior / National Park Service

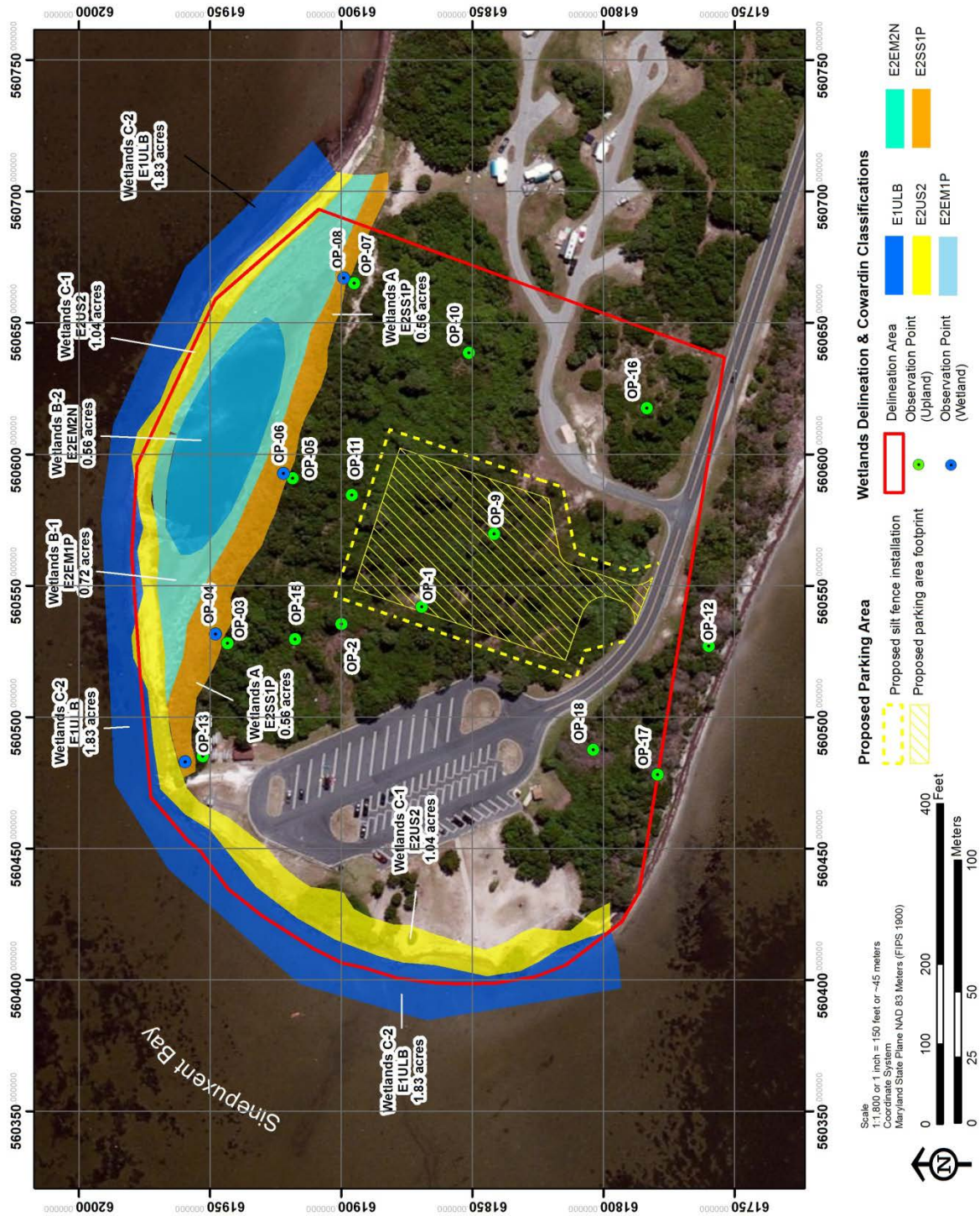

Figure 2: Bayside Picnic Parking Relocation Project

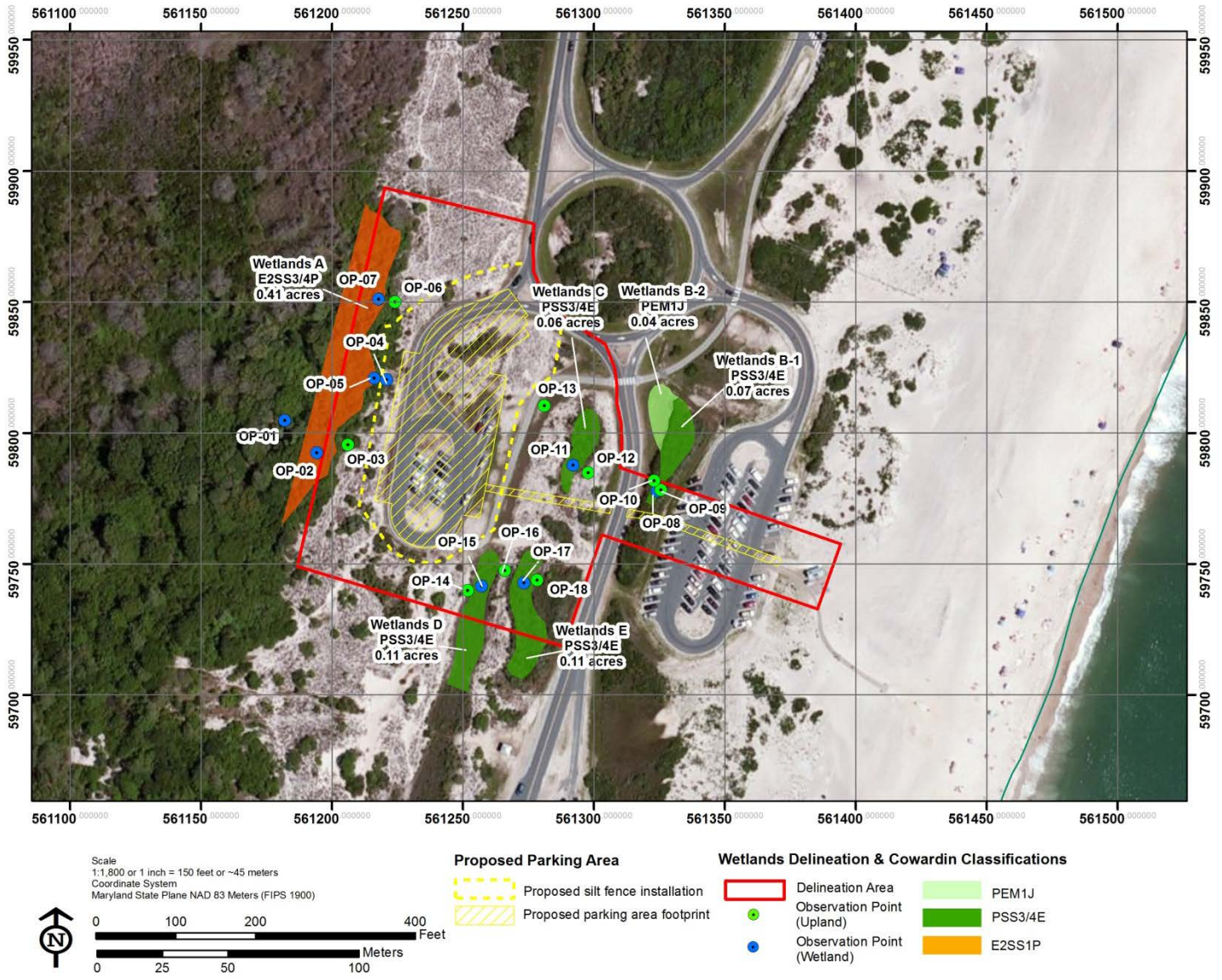

Figure 3: South Ocean Beach Parking Relocation Project

Figure 4: South Ocean Beach Parking Relocation Project

Figure 5: Representative Photographs of Overwash and Storm Surge Effects After Hurricane Sandy

(Left Panel: Existing Bayside Picnic Parking Area inundated with water shortly after Hurricane Sandy. Right Panel: The existing South Ocean Beach Parking Area completely covered with sand.)

APPENDIX D: WETLAND STATEMENT OF FINDINGS

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National Park Service
U.S. Department of the Interior

Assateague Island National Seashore
Maryland

STATEMENT OF FINDINGS
FOR
EXECUTIVE ORDER 11900 (PROTECTION OF WETLANDS)

Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation
PMIS #194834 & PMIS #194874; NPS Disaster Number MD2013-1-NPS
Assateague Island National Seashore

Recommended:

Superintendent, Assateague Island National Seashore

Certification of Technical Adequacy and Servicewide Consistency

Chief, Water Resources Division

Approved:

Director, Northeast Region

INTRODUCTION

Situated in a dynamic coastal environment that includes rising sea levels, Assateague Island National Seashore is proposing to relocate two parking areas (Bayside Picnic Parking Area and South Ocean Beach Parking Area) to repair recent damage associated with Hurricane Sandy in October 2012 and mitigate for long-term environmental effects.

Hurricane Sandy affected 24 states from Florida to New England causing hundreds of millions of dollars of damage to property. Between October 26 and 30, 2012, President Obama issued Major Disaster declarations in the states of New Hampshire, New York, and Connecticut; and Emergency declarations in the states of New Hampshire, Virginia, West Virginia, Delaware, Rhode Island, Pennsylvania, Maryland, Massachusetts, and the District of Columbia. These declarations in the states of New York, New Jersey, and Maryland entitle eligible projects to receive relief through the Emergency Relief for Federally Owned Roads Program which supports the federal response to the disasters and emergencies. Established in 1977, the mission for the Emergency Relief for Federally Owned Roads' Program is to provide funding and engineering services to restore access to public lands.

This statement of findings has been prepared in accordance with Executive Order 11990 (*Protection of Wetlands*) and NPS Director's Order #77-1.

Assateague Island National Seashore and the parking area project locations are shown on figure 1. Both parking areas are located in the northern half of the national seashore within the state of Maryland. The wetlands delineations were completed as part of the planning efforts to avoid, minimize or, if necessary, mitigate for impacts to wetlands located within the vicinity of the proposed project locations. This report includes the findings of the field delineations, along with pre-jurisdictional determinations in accordance with Section 404 Clean Water Act procedures.

Proposed Action

The purpose of this project is to remove and relocate the Bayside Picnic and South Ocean Beach Parking Areas to locations that are less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to these areas of the national seashore.

Bayside Picnic Parking Area (PMIS 194834) – The new Bayside Picnic Parking Area would be constructed using sea shell clam aggregate mixed with clay. Due to the surfacing material, parking spots would not be delineated with paint, but the new parking area would be designed to accommodate approximately 87 vehicles, including 12 oversize vehicles. The location of the Bayside Picnic Parking Area project is shown on figure 2.

Construction of the new parking area would require the use of mechanized equipment and could require the need to import or export fill in order to recontour the new parking area accordingly. Potential sources for fill include the park's existing stock piles of natively sourced fill or locally acquired crushed road base. Any excess of native fill would be transported to the park's stock pile for use in future projects. Staging for construction would be located in the existing Bayside Picnic Parking Area and/or other nearby parking lots in the national seashore. Construction would take place during the off season when visitation is comparatively lower. The new Bayside Picnic Parking Area would be constructed before removal of the existing parking area commenced in order to minimize closure of the area to visitors.

Following construction of the new parking area, the northwestern portion of the existing parking area would be removed and restored. Restoration would include filling and recontouring the area to meet existing grade. Any fill not available on site would be imported from the Assateague Island National Seashore / Chincoteague National Wildlife Refuge shared stock piles of natively sourced sand and dirt fill. The stock piles are located in Virginia, approximately 20 miles south of the South Ocean Beach Parking Area and within the national wildlife refuge. Portions of the restored area would then

be allowed to naturally revegetate. Existing park staff (Division of Natural Resources Management) would monitor and manage for any invasive plant species that may occur in the area.

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The Bayside Picnic Parking Area is located on Chincoteague Bay, just west of the Bayside Camping Area, and at the terminus of Bayside Drive. Bayside Drive turns west off of Bayberry Drive approximately ¼ mile south of the national seashore entrance station. The parking area provides access to various activities on Chincoteague Bay including boating, shellfishing, sunbathing, and picnicking, to name a few.

The South Ocean Beach Parking Area is located approximately 1 ¼ miles south of the national seashore entrance station to the southeast of the roundabout. The parking area provides access to South Ocean Beach and the paved bike path along Bayberry Drive. The Life of the Dunes Nature Trail Parking Area is located approximately 1 ¼ miles south of the national sea-shore entrance and to the southwest of the roundabout. The parking area provides access to the Life of the Dunes Nature Trail and the bike path. This parking area also serves as overflow for South Ocean Beach during peak visitation.

WETLANDS DELINEATIONS

In May 2013, wetlands scientists with the assistance of personnel from the Assateague Island National Seashore Natural Resources Management Division conducted field delineations of wetland features in the general vicinity of the two proposed parking area removal and relocation project The wetlands delineation was conducted in accordance with the *U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual* (Environmental Laboratory 1987), *Regional Supplement to the Corps Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)*, and the *National Park Service Procedural Manual #77-1: Wetland Protection* (National Park Service 2012).

Wetland boundaries were determined by evaluating the presence or absence of wetland indicators at two or more "observation points" (OPs). The boundary was mapped between an OP evaluated as an upland location and an OP evaluated as a wetland. Three criteria must be met for an OP to be considered within a wetland location: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Figures 2 and 3 show the location of observation points for each of the parking areas.

Delineated wetlands were identified using the Cowardin classification system (Cowardin et al. 1979). Under this classification, wetlands may be generally placed into marine (wetlands associated with oceanic environments), riverine (wetlands associated with rivers, streams, and drainage features), estuarine (non-oceanic wetlands influenced by tidal flows), palustrine (fresh water wetland systems), and lacustrine systems (open fresh water systems).

The field delineation efforts mapped 4.71 acres of estuarine wetlands in the vicinity of the Bayside Picnic Parking Area and 0.80 acre of estuarine and interdunal palustrine wetlands within the vicinity of the South Ocean Beach Parking Area. Within the Bayside Picnic Parking Area and South Ocean Beach Parking Area, field delineations show wetlands within these areas are represented by estuarine, palustrine, and marine systems. Five wetland classifications are found within the Bayside Picnic Parking Area and are listed in table 1. Figure 2 shows the delineated wetlands with the appropriate Cowardin classification. Within the South Ocean Beach Parking Area, wetlands scientists identified palustrine wetlands (associated with interdunal features) and estuarine wetlands along the western edge of the project area. These wetlands are listed in table 2 and mapped on figure 3.

PRE-JURISDICTIONAL DETERMINATIONS

Clean Water Act (CWA) jurisdiction was applied over certain wetlands within the project area in accordance with *Joint EPA and USACE Guidance: Clean Water Act Jurisdiction Following the U. S. Supreme Court's Decision in* Rapanos v. United States *and* Carabell v. United States (EPA and USACE 2007). A summary of the joint Environmental Protection Agency and U.S. Army Corps of Engineers guidance is included below:

- CWA jurisdiction is always applied over waters that are (1) traditional navigable waters; (2) wetlands adjacent to traditional navigable waters; (3) non-navigable tributaries of traditional navigable waters that are perennial streams with permanent or seasonal flows; or (4) wetlands that directly abut such tributaries.
- CWA jurisdiction is applied on a case-by-case basis evaluating if a significant nexus exists with a traditional navigable water for waters that are (1) intermittent non-navigable tributaries; (2) intermittently flooded wetlands adjacent to intermittent tributaries; or (3) wetlands adjacent to but do not directly abut a perennial non-navigable tributary.
- CWA jurisdiction is not applicable over the following waters: (1) swales or erosional features, such as small washes characterized by low volume, infrequent, or short duration flow; or (2) ditches, including roadside ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

Hydrological and ecological factors that may establish a significant nexus to navigable waters (thereby establishing CWA jurisdiction) include the following: (1) volume, duration, and frequency of flow; (2) proximity to a traditional navigable water and watershed size; (3) average annual rainfall; (4) potential of tributaries to carry flood waters to navigable waters or to trap and filter pollutants or flood waters; and, (5) maintenance of water quality and aquatic habitat in traditional navigable waters. All of the wetlands located in the vicinity of the Bayside Picnic Parking Area are likely jurisdictional under Section 404 of the Clean Water Act. These wetlands have tidal connections with Chincoteague Bay. This connectivity establishes the wetlands as adjacent to a traditional navigable water—one of the criteria for establishing a wetland as jurisdictional under Section 404 of the Clean Water Act. In the vicinity of the South Ocean Beach Parking Area, 0.41 acre of estuarine wetlands have a tidal connection with Chincoteague Bay, and therefore, are also jurisdictional under Section 404 of the Clean Water Act. Wetlands scientists identified 0.39 acre of interdunal palustrine wetlands that do not show connectivity with traditional navigable water, and are, therefore, not assumed to be jurisdictional under Section 404 of the Clean Water Act. These interdunal wetlands, however, are special ecological features that meet the definition of wetlands used by the Department of Interior and the National Park Service.

FUNCTIONAL ASSESSMENT

The CWA Section 404 program requires that adverse impacts to wetlands (determined to be Waters of the U.S.) be avoided, minimized, or compensated for through mitigation as a condition for issuance of a Section 404 permit. Compensatory mitigation is determined in part by functional impairment of a wetland. According to U.S. Army Corps of Engineers and Environmental Protection Agency, the objective of compensatory mitigation is to provide, at a minimum, full replacement of wetland value (USACE and EPA 1993). Replacement of value requires replacement of underlying wetland functions. As stated previously, no wetlands within the vicinity of either parking area would be impacted, and no compensatory mitigation is required, however, a functional assessment is useful to evaluate the various ecological and hydrological functions that the wetlands provide.

A modified Wetland Evaluation Technique (WET) method was used to assess functional criteria. Under this method, 11 functions and values are assessed. These criteria include: groundwater recharge or discharge potential, flood flow alteration, sediment stabilization, sediment/toxicant retention, nutrient removal/transformation, production export, wildlife habitat assessment, plant habitat assessment; aquatic habitat assessment, recreation, and uniqueness/heritage values (Adamus et al. 1987, Adamus et al. 1991, USACE 2001). To evaluate functional value using the WET method, not all criteria need to be used (USACE 2001).

For the purposes of rapid assessment of wetlands within the Bayside Picnic Parking Area and South Ocean Beach Parking Area, some of the criteria considered in the WET method were grouped into

larger categories to assess functional values. For instance, wildlife habitat assessment, plant habitat assessment, and aquatic habitat assessment criteria were grouped into a "natural communities functional values" category. The qualitative assessment of these functional values was supplemented by providing a percentage of native plant species richness (compared to non-native plant species richness) observed within each delineated wetlands. Similarly, groundwater recharge potential, groundwater discharge, sediment stabilization, sediment/toxicant retention potential, and nutrient removal/transformation potential were grouped into a "water quality/hydrological functional values" category. The qualitative functional assessment of the wetlands identified in this report is provided in table 2.

For the natural communities functional values category, the functions were rated as "high" if the wetland supported a native plant diversity of greater than 80 percent and could support foraging or reproductive habitat. A "medium" rating was applied if the native plant diversity ranged from 50 to 79 percent, and a "low" was applied if the native plant diversity was less than 50 percent.

For the water quality/hydrological functional values category, a "high rating" was applied when the wetland appeared to undisturbed hydrological functions and supported features that are associated with maintaining or enhancing water quality and bank stabilization functions. A "medium" rating was applied when the functions appeared to be altered, and a "low" rating was applied when the functions were absent or highly degraded.

JUSTIFICATION FOR THE USE OF WETLANDS

Based on current designs of the parking area removal and relocation projects, no wetlands (either jurisdictional under Section 404 of the CWA or non-jurisdictional wetlands) will be impacted by the proposed projects.

MITIGATION

No mitigation actions are required because the proposed projects do not require filling in or other direct impacts to wetlands. Silt fencing and other best management practices would be in place to minimize or avoid stormwater runoff during the construction phase of the projects.

SUMMARY

The National Park Service finds that the parking area relocations at Assateague Islands National Seashore are essential for public use and safety, despite the fact that the new locations will be located in flood-prone areas. The National Park Service has avoided impacts to wetlands, and no Section 404 of the Clean Water Act permitting actions are required. This project is consistent with the policies and procedures of NPS Director's Order #77-1 (Protection of Wetlands) and Executive Order 11990.

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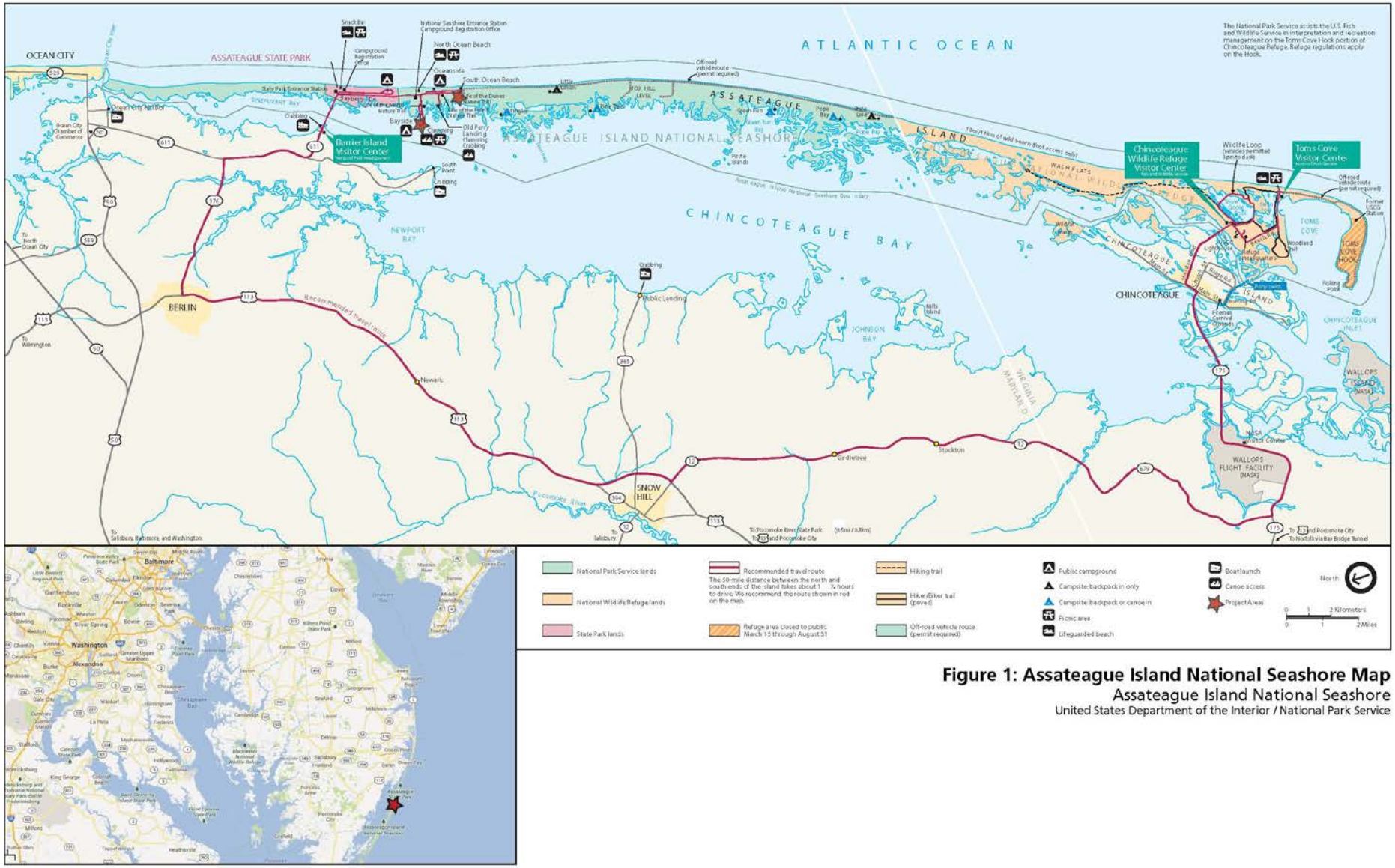

Figure 1: Assateague Island National Seashore Map

Assateague Island National Seashore

United States Department of the Interior / National Park Service

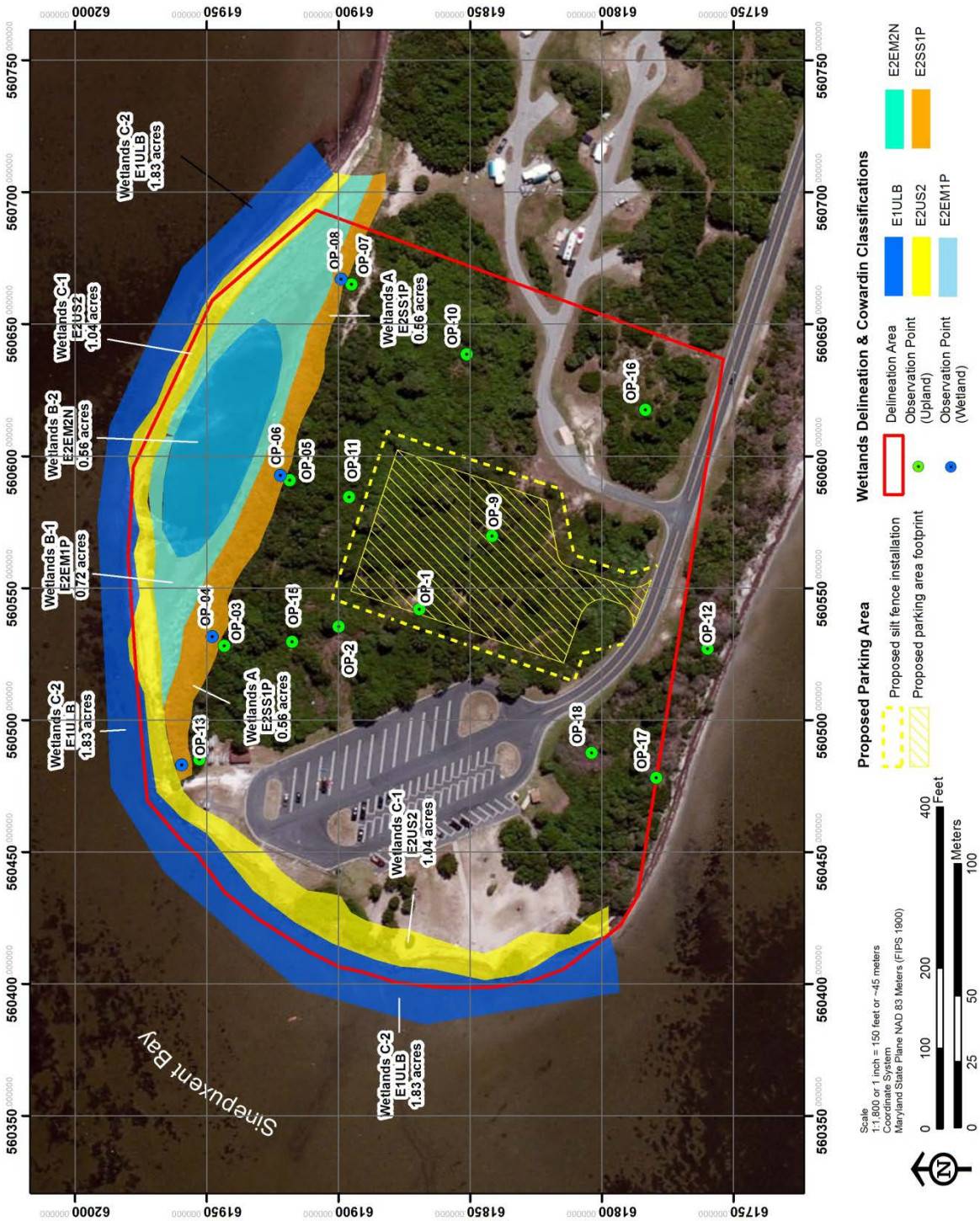

Figure 2: Bayside Picnic Parking Area Relocation Project

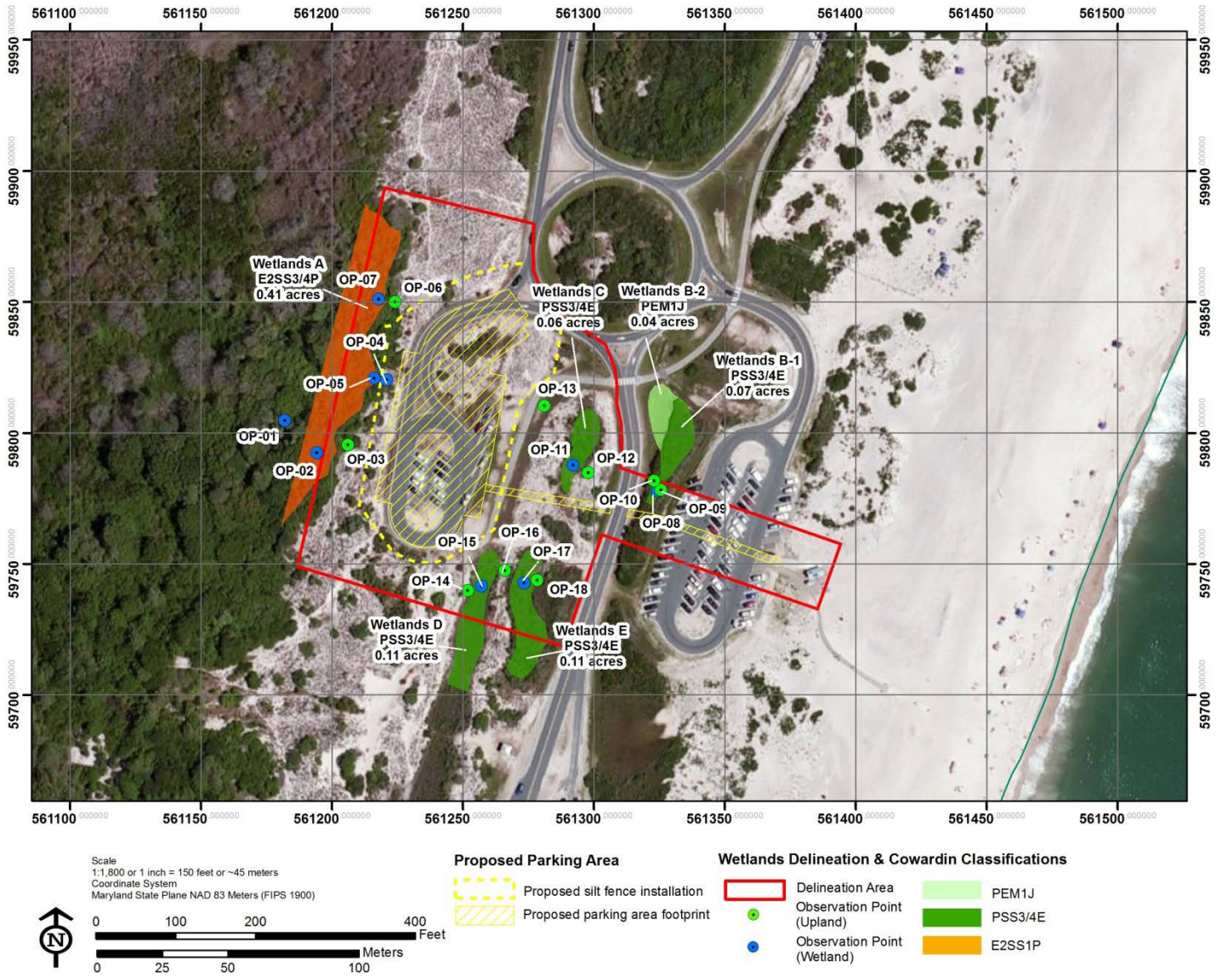

Figure 3: South Ocean Beach Parking Relocation Project

Table 1: Wetlands and Waters of the U.S. Pre-jurisdictional Determinations

Wetlands	Cowardin Classification	Acreage	Wetlands Policy and Regulatory Determinations	
			NPS Definition	Section 404 Clean Water Act Definition
Bayside Picnic Parking Area				
Wetlands A	**E2SS1P:** Intertidal estuarine shrub-scrub dominated by broad-leaved deciduous woody vegetation.	0.56	**Yes**	**Yes.** Wetlands have intertidal surface connectivity with Chincoteague Bay (a traditional navigable water).
Wetlands B-1	**E2EM1P**: Intertidal estuarine emergent marsh dominated by persistent marsh vegetation (present throughout most of the year.	0.72	**Yes**	
Wetlands B-2	**E2EM2N**: Intertidal estuarine emergent marsh dominated by non-persistent marsh vegetation (not present throughout most of the year).	0.56	**Yes**	
Wetlands C-1	**E2USN**: Intertidal estuarine shoreline, beach deposits.	1.04	**Yes**	
Wetlands C-2	**E1ULB**: Subtidal estuarine shoreline, beach deposits.	1.83	**Yes**	**Yes.** Wetlands have tidal surface connectivity with Chincoteague Bay.
Total identified within Bayside Picnic Parking Area		***4.71***	***4.71 acres of jurisdictional waters of the U.S.***	
South Ocean Beach Parking Area				
Wetlands A	**E2SS3/4P**: Intertidal estuarine shrub-scrub dominated by broad-leaved deciduous woody and evergreen vegetation.	0.41	**Yes**	**Yes.** Wetlands have intertidal surface connectivity with Chincoteague Bay (a traditional navigable water).
Wetlands B-1	**PSS3/4E**: Palustrine shrub-scrub dominated by broad-leaved deciduous woody and evergreen vegetation.	0.07	**Yes**	**No.** Wetlands do not have surface connectivity with a traditional navigable water; therefore, are not "adjacent" to waters of the U.S. and appear to not satisfy criteria to establish a "significant nexus" with a traditional navigable water.
Wetlands B-2	**PEM1E/H**: Palustrine emergent marsh dominated by persistent marsh vegetation subject to seasonal flooding and semi-permanent flooding regimes.	0.04	**Yes**	
Wetlands C	**PSS3/4F/H**: Palustrine shrub-scrub dominated by mixed deciduous woody and evergreen vegetation, semi-permanently to permanently flooded.	0.06	**Yes**	
Wetlands D		0.11	**Yes**	
Wetlands E		0.11	**Yes**	
Total identified within South Ocean Beach Parking Area		***0.80***	***0.39 acres of jurisdictional waters of the U.S.***	
TOTAL (BOTH PROJECT AREAS		***5.51***	***5.10 acres of jurisdictional waters of the U.S.***	

Table 2: Wetlands Functional Assessment

Delineated Wetlands and Cowardin Classification	Natural Communities Functional Values	Water Quality / Hydrological Functional Values	Rating
Bayside Picnic Parking Area			
Wetlands C-2 (E1ULB)	Nursery habitat and foraging habitat for marine invertebrates and fish, foraging habitat for seabirds and shorebirds. (95 percent native plants).	Water storage and delay.	Habitat functions rating: **"high"** Water quality/hydrological functions rating: **"high"** ***Overall rating: "high"***
Wetlands A (E2SS1P)	Foraging habitat for shorebirds, Passerine nesting habitat. Supports amphibian habitat and moderate native plant diversity (69.4 percent native plants).	Sediment retention, obstruction of storm surge, shoreline stabilization. Origin of tidal fringe is from dredge spoils.	Habitat functions rating: **"medium"** Water quality/hydrological functions rating: **"medium"** ***Overall rating: "medium"***
Wetlands B-1 (E2EM1P)	Foraging habitat for marine invertebrates, shorebirds, Passerine nesting habitat (e.g. red-winged black birds). Supports amphibian habitat and high native plant diversity.	Water storage and delay (subsurface and surface), sediment retention, nitrate removal and retention, phosphorus retention.	Habitat functions rating: **"high"** Water quality/hydrological functions rating: **"high"** ***Overall rating: "high"***
Wetlands B-2 (E2EM2N)	Foraging habitat for marine invertebrates, shorebirds, Passerine nesting habitat (e.g. red-winged black birds). Supports amphibian habitat and high native plant diversity.	Water storage and delay (subsurface and surface), sediment retention, nitrate removal and retention, phosphorus retention.	Habitat functions rating: **"high"** Water quality/hydrological functions rating: **"high"** ***Overall rating: "high"***
Wetlands C-1 (E2USN)	Foraging habitat for marine invertebrates, seabirds, shorebirds, Supports amphibian and fish nursery habitat, predominantly open-water.	Sediment retention, obstruction of storm surge, shoreline stabilization.	Habitat functions rating: **"high"** Water quality/hydrological functions rating: **"high"** ***Overall rating: "high"***
South Ocean Beach Parking Area			
Wetlands A (E2SS3/4P)	Foraging habitat for marine invertebrates, shorebirds. Nesting habitat for passerines, raptors. Supports amphibian habitat, small mammal habitat, and native plant diversity (92.6 percent native plants).	Water storage and delay (primarily subsurface), sediment retention, nitrate removal and retention, phosphorus retention. No evidence of disturbance of hydrological functions	Habitat functions rating: **"high"** Water quality/hydrological functions rating: **"high"** ***Overall rating: "high"***
Wetlands B-2 (PEM1E/H)	Supports amphibian habitat, native plant diversity, passerine nesting habitat, shorebird foraging habitat (72.5 percent native plants).	Water storage and delay (subsurface and surface), sediment retention, nitrate removal and retention, phosphorus retention, Hydrological function appears to be altered by ditches and adjacent impervious cover.	Habitat functions rating: **"medium"** Water quality/hydrological functions rating: **"medium"** ***Overall rating: "medium"***

Table 2: Wetlands Functional Assessment (continued)

Delineated Wetlands and Cowardin Classification	Natural Communities Functional Values	Water Quality / Hydrological Functional Values	Rating
Wetlands B-1 (PSS3/4E) **Wetlands C** (PSS3/4F/H) **Wetlands D** (PSS3/4F/H) **Wetlands E** (PSS3/4F/H)	Supports amphibian habitat, native plant diversity, passerine nesting habitat, shorebird foraging habitat (85.5 percent native plants).	Water storage and delay (subsurface and surface), sediment retention, nitrate removal and retention, phosphorus retention, groundwater recharge (freshwater). Hydrological function appears to be altered by ditches and adjacent impervious cover.	Habitat functions rating: **"high"** Water quality/hydrological functions rating: **"high"** ***Overall rating: "high"***

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APPENDIX E: RELOCATION OF BAYSIDE PICNIC AND SOUTH OCEAN BEACH PARKING AREAS PLANS

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PMIS NO.	NPS NO.	REG	STATE	PROJECT	SHEET NO.
201455	622 / 120980	SE	MD	MD ERFO 2013-1(3)	M01

N

Remove Existing "No Parking" Signs (4)

Remove Existing "No Parking" Signs (5)

Remove Existing "Do Not Enter" Sign

Remove Existing Concrete Curb, 140 lf

Remove Existing "Reserved Parking" Signs (2)

Sawcut

Remove Existing Concrete Curb, 295 lf

Remove Existing Concrete Curb, 125 lf

Silt Fence

Relocate Existing "Speed Limit" Sign

Remove Existing 15" RCP, 45 lf

LEGEND

Obliteration of Existing Asphalt

Limits of Disturbance

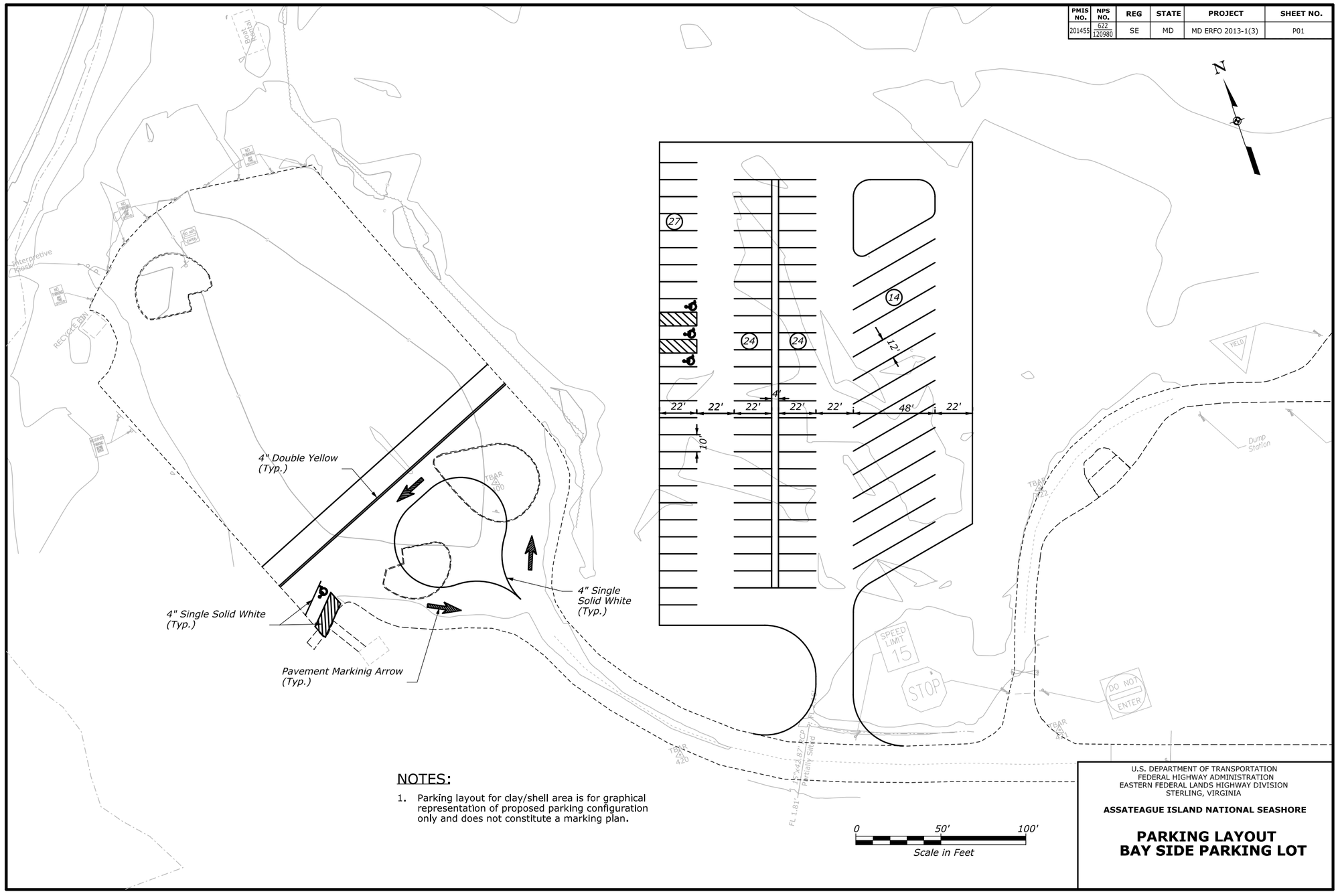
0 50' 100'

Scale in Feet

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

ASSATEAGUE ISLAND NATIONAL SEASHORE

EROSION CONTROL/ DEMOLITION BAY SIDE PARKING LOT


PMIS NO. 201455
NPS NO. 622 120980
REG SE
STATE MD
PROJECT MD ERFO 2013-1(3)
SHEET NO. P01
N
27
24
24
14
12'
4'
22'
22'
22'
22'
22'
48'
22'
10'
4" Double Yellow (Typ.)
4" Single Solid White (Typ.)
4" Single Solid White (Typ.)
Pavement Markinig Arrow (Typ.)
Interpretive Trail
RECYCLE BIN
Dump Station
YIELD
SPEED LIMIT 15
STOP
DO NOT ENTER
0
50'
100'
Scale in Feet
NOTES:
1. Parking layout for clay/shell area is for graphical representation of proposed parking configuration only and does not constitute a marking plan.
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA
ASSATEAGUE ISLAND NATIONAL SEASHORE
PARKING LAYOUT
BAY SIDE PARKING LOT

PMIS NO.	NPS NO.	REG	STATE	PROJECT	SHEET NO.
201455	622 120980	SE	MD	MD ERFO 2013-1(3)	M02

Remove and Dispose Existing Wood Fencing, 45 lf
Remove Existing "Yield" Sign
Existing Asphalt for Bike Path to Remain
Remove Existing Wood Fencing, 60 lf
Remove Existing Concrete Curb, 75 lf
Sawcut
Sawcut
Remove Existing Bike Crossing Signs
Remove and Dispose Existing Wood Fencing, 50 lf
Remove Existing "South Ocean Beach" Sign
Remove Existing Gate, Posts and Appurtenances
Sawcut
Remove Existing "No Parking" Signs (4)
Relocate Existing "Yield" Sign
Remove Existing CMP
Remove Existing "No Parking" Signs (4)
Remove Existing "No Parking" Signs (7)
Remove and Dispose Existing Wooden Split Rail Fence, 800 ft
Remove Existing Signs (9)
Remove Existing Concrete Curb, 70 ft
Silt Fence
Remove and Dispose Existing Concrete Curb Stops (13)

N

LEGEND
Obliteration of Existing Asphalt
Limits of Disturbance

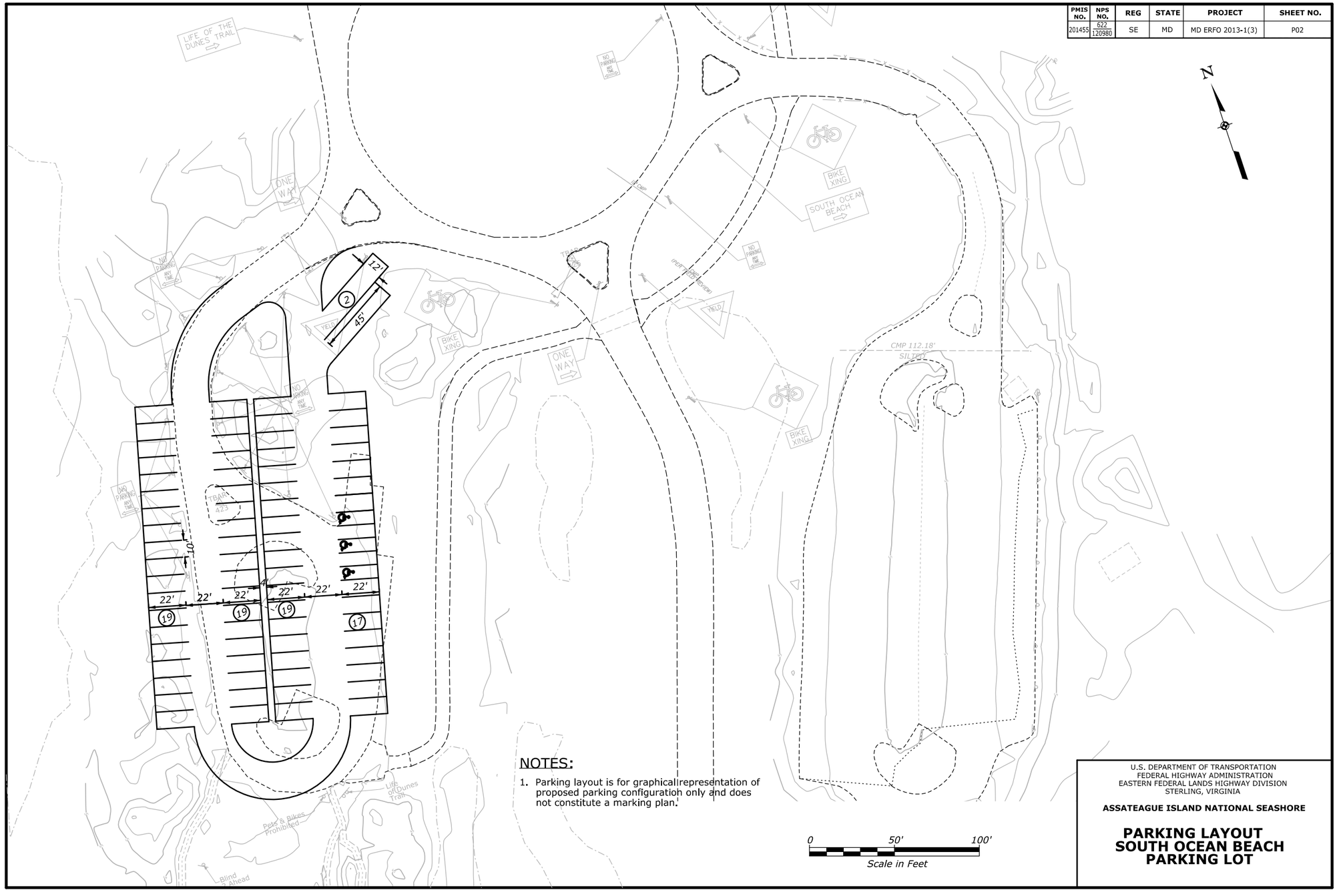
0 50' 100'
Scale in Feet

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

ASSATEAGUE ISLAND NATIONAL SEASHORE

EROSION CONTROL/ DEMOLITION SOUTH OCEAN BEACH PARKING LOT

PMIS NO.	NPS NO.	REG	STATE	PROJECT	SHEET NO.
201455	622 120980	SE	MD	MD ERFO 2013-1(3)	P02



NOTES:

1. Parking layout is for graphical representation of proposed parking configuration only and does not constitute a marking plan.

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FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

ASSATEAGUE ISLAND NATIONAL SEASHORE

PARKING LAYOUT
SOUTH OCEAN BEACH
PARKING LOT

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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.

NPS 622/122053 August 2013