



# Assateague Island National Seashore Maryland



## Bayside Picnic and Parking Area Relocation Environmental Assessment September 2015



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**Bayside Picnic and Parking Area Relocation  
Environmental Assessment  
ASSATEAGUE ISLAND NATIONAL SEASHORE**

September 2015

The National Park Service (NPS) at Assateague Island National Seashore has prepared this environmental assessment to analyze the effects of relocating the Bayside Picnic and Parking Area, located in Assateague Island National Seashore in Maryland. The purpose of the project is to plan for the relocation of the Bayside Picnic and Parking Area to a site less susceptible to damage from future storm events, minimize the impact to natural resources, and allow for sustained visitor access and recreational use of this area of the national seashore.

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

**Alternative 1, No Action / Continue Current Management:** Alternative 1 represents a continuation of the existing situation, including reconstruction of the parking area as described in the finding of no significant impact for the *Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation Environmental Assessment* (NPS 2014a). There would be no changes to the current footprint or location of the Bayside Picnic and Parking Area.

**Alternative 2:** Under alternative 2, the new parking area would be constructed adjacent to Bayside Drive, between the road and Loop C of Bayside Campground. The southern end of the existing parking area would be converted into a drop off and roundabout to include universally accessible parking spaces and a short-term loading/unloading zone for recreational use. Following construction, use of the remainder of the existing Bayside Parking Area beyond the roundabout would be phased out and some limited filling and grading and site cleanup could be necessary to return disturbed areas to more natural contours and conditions.

**Alternative 3:** Under alternative 3, two new smaller parking areas would be constructed east of the existing parking area. One parking area would be located southwest of Loop C of Bayside Campground between the campground and Bayside Drive. The second parking area would be located just east of the Loop B campground access road. The southern end of the existing parking area would be converted into a drop off and roundabout to include universally accessible parking spaces and a short-term loading/unloading zone for recreational use. Following construction, use of the remainder of the existing Bayside Parking Area beyond the roundabout would be phased out and some limited filling and grading and site cleanup could be necessary to return disturbed areas to more natural contours and conditions.

**Alternative 4, the NPS Preferred Alternative:** Under alternative 4, Bayside Campground Loop C would be removed and a new parking area would be constructed in its place. Following construction, use of the remainder of the existing Bayside Parking Area would be phased out and some limited filling and grading and site cleanup could be necessary to return disturbed areas to more natural contours and conditions.

**Alternative 5:** Under alternative 5, a new parking area would be constructed to the south of Loop B of Bayside Campground, and a portion of Bayside Drive would be removed and allowed to revert to natural conditions. Following construction, the remainder of the existing Bayside Parking Area would be removed and some limited filling and grading and site cleanup could be necessary to return disturbed areas to more natural contours and conditions. Public vehicular access to the tip of the peninsula would no longer be provided.

## **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 60 days. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. 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 Parking Area Relocation EA  
7206 National Seashore Lane  
Berlin, MD 21811

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# CHAPTER 1:

## Purpose and Need

### INTRODUCTION

The National Park Service (NPS) is planning for the future relocation of the Bayside Picnic and Parking Area to an area less susceptible to damage from storms. In October 2012, Hurricane Sandy affected 24 states from Florida to New England causing hundreds of millions of dollars of damage to property. The Bayside parking area was among the properties damaged at Assateague Island National Seashore. This parking area is located in the northern half of the national seashore within the state of Maryland.

Following Hurricane Sandy, the initial damage survey report identified the need to remove and replace approximately 650 square yards of existing asphalt pavement and to reconstruct a previously existing boardwalk washed away during the storm. As an interim response to repair the 2012 impacts from Hurricane Sandy, the park completed planning and design, and produced an environmental assessment to address damage to the existing Bayside Picnic and Parking Area and damage to the South Ocean Beach Parking Area (NPS 2013a). Reconstruction of the parking area in its current location was part of this previous environmental assessment to address the damages to the asphalt surface inflicted by Hurricane Sandy at this bayside location. A relocation site, to the northeast of the existing site between the existing lot and Loop C of the campground, was suggested for the Bayside Picnic and Parking Area and was carried forward for analysis in the August 2013 *Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation Environmental Assessment*. However, it was not selected for implementation in the decision document because of concerns raised by the public regarding the removal of vegetation, impacts to migratory birds, and other issues. As a result of this prior planning effort, the park is planning to reconstruct the existing Bayside Parking Area within the existing footprint. Work will include removal of the existing asphalt and reconstruction utilizing a clay base with clam shell aggregate. This will protect the bay from asphalt debris that might result from future storm events.

However, reconstruction of the Bayside Picnic and Parking Area in its current location does not address the vulnerability of the picnic and parking facilities. Through this current environmental assessment, the National Park Service embarks on a planning effort to explore all feasible alternatives for the relocation of the Bayside Picnic and Parking Area to an area less susceptible to damage from future storms.

This environmental assessment evaluates five alternatives; a no-action alternative (alternative 1) and four action alternatives (alternatives 2, 3, 4, and 5). The environmental assessment further analyzes the potential impacts these alternatives would have on the natural and human environment. 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).

## PURPOSE OF AND NEED FOR ACTION

The purpose of the project is to plan for the relocation of the Bayside Picnic and Parking Area to a site less susceptible to damage from future storm events, minimize the impact to natural resources, and allow for sustained visitor access and recreational use of this area of the national seashore.

The peninsula on which the Bayside Picnic and Parking Area is located is a previously disturbed area constructed from imported fill in 1962 for a proposed housing development and bridge to the mainland. The development was never completed because of the Ash Wednesday Storm event in 1962 and financial difficulties on the part of the developer. Erosion on the south side of the peninsula is occurring at an average rate of approximately 2 feet per year and at an average rate of 7 feet per year on the west side (NPS 2014c). The existing shoreline and beach area at the Bayside Picnic and Parking Area are susceptible to this shoreline erosion, and the resulting damages may not be repairable. The original parking area, designed to accommodate 75 vehicles (60 passenger cars and 15 oversized vehicles), has been eroding because of storm activity over the past several decades. As a result, this parking area has gradually reduced in size over time.

The proposed project is needed for the following reasons:

- The existing parking lot is vulnerable to recurring storm activity and susceptible to damage from shoreline erosion.
- The necessary clean up and repair to the parking area required after recurring 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 on the bayside of the park.

## GOALS AND OBJECTIVES

Goals and objectives identified for this project include the following:

- Relocate and redesign the Bayside Picnic and Parking Area so it is more sustainable and more resilient to future storm activity.
- Design the parking area to provide visitors safe access and circulation to adjacent areas and maintain compliance with Uniform Federal Accessibility Standards.
- Minimize harm to sensitive natural or cultural resources when relocating the parking area.
- Design for original parking capacity (the capacity of this parking lot prior to erosion from storms) for visitors at the Bayside Picnic and Parking Area.
- Optimize design features to incorporate native materials where possible.

## STUDY AREA DESCRIPTION

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 the adjacent coastal waters. The area included in the authorized boundary

consists of 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 Assateague Island National Seashore is to preserve and protect these unique coastal resources and the natural ecosystem conditions and processes upon which they depend, provide high quality resource based recreational opportunities compatible with resource protection, and educate the public about the values and significance of the area.

Assateague Island National Seashore provides a protected area for complex plant and animal communities, both land- and water-based. The area within the national seashore characterizes the Mid-Atlantic Coast and fully illustrates the natural processes of change that shape the coastal environment.

The Bayside Picnic and Parking Area is located on Sinepuxent 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 is one of only two designated sites within the Maryland portion of the national seashore where visitors have direct access to parking and recreational opportunities along the bay-side of the island. These activities include boating, birding, shellfishing, sunbathing, and picnicking along the shorelines of Sinepuxent Bay.

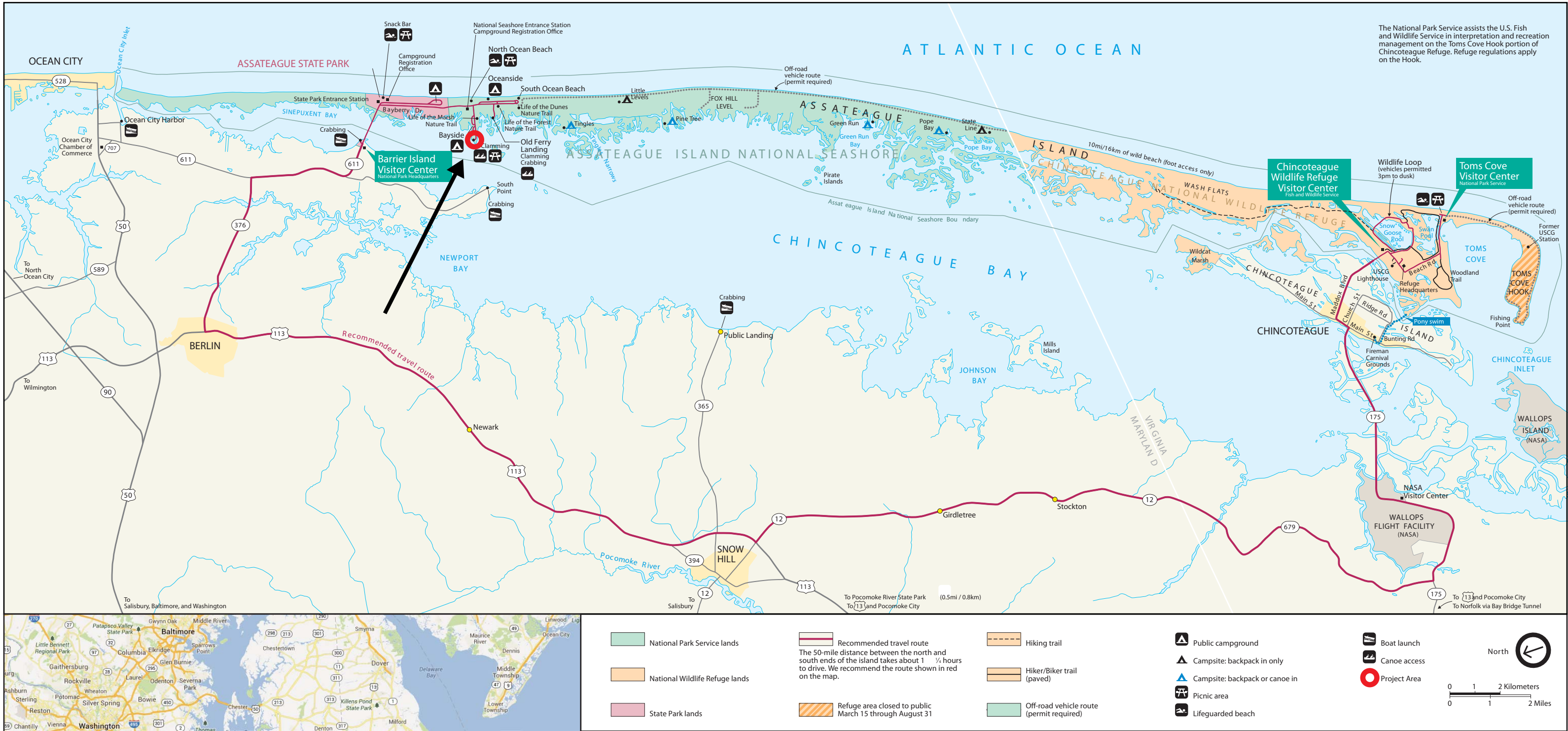
## **HISTORY AND SIGNIFICANCE OF ASSATEAGUE ISLAND NATIONAL SEASHORE**

Evidence seems to indicate that, at the time of European contact in 1524, Native Americans used Assateague Island for fishing and hunting only, while more permanent settlements were located to the west on the mainland (NPS 1982). Beginning in the 1600s, colonists used Assateague Island for grazing horses and other livestock. The bands of wild horses living on Assateague today are descendants of those domesticated animals and remain a powerful force acting on the island's natural systems. At various times in its history, fishing villages, industrial sites, and even a network of lifesaving stations for stranded mariners have all left their mark (NPS 2014b).

As outlined in the park's recent planning foundation document (NPS 2012), Assateague Island National Seashore is nationally significant because:

- The National Seashore is one of the largest and last surviving Mid-Atlantic barrier islands possessing a continuum of intact coastal habitats where the full range of natural processes occur with little or no human interference.
- The 31,000 acres of marine and estuarine waters within the national seashore are a protected vestige of the high quality aquatic ecosystems that once occurred throughout the Mid-Atlantic coastal region of the United States.
- The national seashore's habitats support a broad array of aquatic and terrestrial species, many of which are rare, uniquely adapted to life at the edge of the sea, and dependent on natural ecosystem processes undisturbed by humans.
- Amidst the highly developed Mid-Atlantic region, the national seashore's coastal resources provide unique opportunities for nature-based recreation, education, solitude, and inspiration.

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

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**Figure 2: Project Area Map**  
Assateague Island National Seashore  
United States Department of the Interior / National Park Service

## OTHER APPLICABLE LAWS AND POLICIES

### EXECUTIVE ORDER 11988 – FLOODPLAIN MANAGEMENT

This executive order directs federal agencies to evaluate the potential effects of any actions it may take in a floodplain; to ensure its planning programs and budget requests reflect consideration of flood hazards and floodplain management; and to prescribe procedures to implement the policies and requirements avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

### COASTAL ZONE MANAGEMENT ACT

The National Park Service will comply with the provisions of 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 policies 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 activities would occur within the coastal zone; therefore, a federal consistency determination would be completed in accordance with Maryland's Coastal Zone Management Program and the Coastal Zone Management Act and included as part of the decision document.

## IMPACT TOPICS

Impact topics are resources of concern that could be affected by the range of alternatives presented in this environmental assessment. The topics were identified during scoping and agency consultation, as described in "Chapter 4: Consultation and Coordination."

### IMPACT TOPICS RETAINED FOR ANALYSIS

Impact topics identified and analyzed in this environmental assessment are listed below along with reasons for their selection. Each impact topic is further discussed in detail in "Chapter 3: Affected Environment and Environmental Consequences."

**Floodplains.** According to Federal Emergency Management Agency (FEMA) flood insurance rate maps (community panel number 240083 0200 C), the Bayside Picnic and Parking Area falls within the 100-year floodplain. The proposed alternatives are located within a Class III regulatory floodplain, a designation for High Hazard Areas. Proposed actions include placement of infrastructure within the 100-year floodplain that could cause impacts. Therefore, this impact topic was retained for analysis.

**Wildlife and Wildlife Habitat, Including Vegetation.** During construction there could be a temporary disturbance or displacement of wildlife common to the project area. Additionally, 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 shrub-scrub and wooded areas adjacent to the existing Bayside Picnic and Parking Area provide a resting place for some of these birds. The National Park Service will comply with the provisions of the Migratory Bird Treaty Act of 1918. This act protects migratory birds, their parts, and nests or eggs. There is potential for impacts to wildlife, migratory birds and their habitat to occur; therefore, this impact topic was carried forward for further assessment.

**Visitor Use and Experience and Recreation Resources.** The Bayside Picnic and Parking Area currently serves several different user groups, including birders, campers, picnickers, boaters, and commercial operators. The Bayside Picnic Area is popular with the birding community because it provides access to view the convergence of migratory birds along the eastern shore of Sinepuxent Bay. Parking area relocation activities could affect public access and the visitor experience at this area of the national seashore. Relocation of the parking area could increase the walking distance for some visitors depending on what area of the national seashore they are trying to access. There would be potential safety concerns for people crossing and/or walking along the road, which could affect the potential for accidents and/or collisions. Temporary closures during construction could affect visitors. Therefore, visitor use and experience is addressed as an impact topic in this environmental assessment.

## IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

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 slight impacts on the resource or value.

**Coastal Processes.** Coastal processes at Assateague Island National Seashore are defined by its barrier island dynamics and changing coastline. Coastal processes involve the interaction of water, land, and air through waves/currents, sand, and wind. Coastal processes on either side of the barrier island are different. The ocean shoreline of Assateague Island experiences a longshore transport system and high-energy waves. The bay side shoreline is a lower energy system where circulation patterns and currents within the coastal bays are dependent on proximity to the inlets and wind conditions. Because proposed actions would remove/move parking and other facilities / structures away from the edge of the bay and because the project area is on the bay (low energy) side of the island, there would be no noticeable impact on coastal processes. Therefore, this impact topic was dismissed from further analysis.

**Wetlands.** Wetlands in the vicinity of the project area were delineated in 2014. Several small wetland areas were identified near the tip of the peninsula. These wetlands were considered and avoided during planning and alternative conceptual design. Wetlands would be avoided during any construction activity and a buffer would be established to protect them from construction related impacts during the short term construction timeframe. The National Park Service will comply with the provisions of Executive Order 11990 (Protection of Wetlands) and NPS Director's Order #77-1. Since wetlands have been delineated, avoided during conceptual design, and would have avoidance measures incorporated into mitigation during site construction, adverse impacts would be avoided. Therefore, this impact topic was dismissed from further consideration.

**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 cri-

teria for national natural landmarks. Coastal resources are addressed under floodplains, and wildlife and wildlife habitat, including vegetation. In addition, information regarding the coastal zone consistency determination would be included in a decision document. Therefore, the topic was not retained for further analysis.

**Geological Resources / Soil.** The area in which proposed parking would be relocated is primarily previously disturbed. Research shows that the Bayside peninsula was constructed by man (non-natural) in the early 1960s as a road ingress/egress for connection with a proposed bridge across Sinepuxent Bay. The area is underlain by loamy soils and sandy marine deposits. Bedrock blasting would not be needed to relocate parking facilities. The area disturbed by grading and other construction activity would be limited to the near surface and, therefore, disturbance of soils would be limited and controlled with use of best management practices such as erosion and sediment controls. Therefore, geological resources, including soils, were dismissed from further evaluation.

**Marine or Estuarine Resources.** The National Park Service would increase the setback from the shoreline and increase the buffer of naturally occurring vegetation between the proposed parking area and the high water line in compliance with the Atlantic Coastal Bays Protection Act of 2002 and the Worcester County shoreline protection setback and buffer law. Parking area relocation activities would be conducted on upland environments of the national seashore and appropriate buffers and setbacks would be designated and avoided by construction equipment in compliance with protection of estuarine resources in Maryland. Best management practices would be conducted during parking area relocation activities to prevent any damage to estuarine resources by personnel, vehicles, or use. Best management practices would be implemented to avoid and minimize potential impacts to water quality and hydrology. Impacts to marine or estuarine resources would be negligible and this impact topic was dismissed from further analysis.

**Special Status/Threatened and Endangered 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. Special status species and/or habitat are not known to occur within the vicinity of the Bayside Picnic and Parking Area. Park records and field surveys did not identify any special status species and/or habitat concerns. In early 2015, the red knot (*Calidris canutus rufa*), a shorebird, was listed as threatened under the Endangered Species Act; however, their presence within the national seashore is generally limited to the ocean tidal zone (Hulslander Personal Communication 2015). Red knots are known to feed on horseshoe crab eggs. Optimal horseshoe crab spawning sites are located farther north and have not been observed in the vicinity of Sinepuxent Bay where the project is proposed. National seashore records and field surveys did not identify any special status species and/or habitat concerns. This impact topic is, therefore, dismissed from further analysis.

**Water Quality.** Construction activity during the relocation of the Bayside Picnic and Parking Area would result in a limited amount of ground disturbing activity and the associated potential for soil erosion and stormwater runoff. Best management practices would be implemented to avoid and minimize potential impacts to water quality and hydrology. Aquatic resources in the nearby Sinepuxent Bay would not be adversely impacted because erosion and sediment control measures and best management practices would be used to address runoff. The National Park Service would coordinate with the Maryland Department of Environment with regard to any permit requirements to address stormwater. Materials proposed for the parking area would be

the same as constructed at the existing parking area, consisting of a clay base with clam shell aggregate; other areas may be asphalted depending on location and type of use. The proposed new parking area location would allow for a greater setback from the shoreline and for a 100-foot buffer of naturally occurring vegetation between the proposed parking area and the high water line in compliance with Maryland's Critical Area Program, specifically the Atlantic Coastal Bays Protection Act of 2002 and/or a minimum 25-foot wide vegetation strip within a 50-foot setback in compliance with the Worcester County shoreline protection setback and buffer law. Any impacts to water quality would be expected to be negligible; therefore, this impact topic was not further addressed.

**Cultural Resources.** No historic structures, cultural landscapes, or archaeological resources were identified through archival research or surveys in the project area. There are no Indian Trust resources, sacred sites, nor ethnographic resources identified within the national seashore. The entire project area, encompassing all proposed alternatives, has been previously disturbed through creation of the peninsula/stub landform as a large hydrofill (dredged) causeway for an aborted bridge project in the early 1950s and through prior development, including the construction of a previous campground area, making archeological resources highly unlikely. 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. The National Park Service determined that implementing the proposed action would have no effect on historic properties. The Maryland Historical Trust (the State Historic Preservation Office) concurred with the NPS' findings and the determination of "no historic properties affected" in a letter dated June 15, 2015. Copies of correspondence are included in appendix A. Therefore, this impact topic was dismissed.

**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 proposed alternatives would not appreciably change short- or long-term energy use or conservation practices. Fuel used during parking area relocation 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. Relocation of the Bayside Picnic and Parking Area 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.** The National Park Service strives to minimize the environmental impacts of development and other activities through resource 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 activities under the preferred 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.

**Possible Conflicts with Other Land Use Plans and Policies.** Maryland's Critical Area Program, which includes the Chesapeake Bay and Atlantic Bays Critical Areas, 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. The program protects Maryland's coastal bays by defining Critical Areas as all lands within 1,000 ft. of the Chesapeake Bay or an Atlantic Bay, which includes the Bayside Picnic and Parking Area. Part of this program places an emphasis on local governments to establish their own land use standards to protect the bays. 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 and Parking Area falls within the critical area. Although the National Park Service is not subject to county laws, NPS actions would be consistent with these standards. The National Park Service would also comply with appropriate enforceable policies of the Maryland Coastal Program addressed in the consistency determination submittal to the state, included in the decision document.

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. Thus, this topic was not further evaluated.

**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 used for producing specific high-value food and fiber crops. Both categories require the land be available for farming uses (Council on Environmental Quality 1980). The map of prime and unique agricultural lands and other high-quality farmlands prepared by the American Farmland Trust (2002) show that these high-value resources do not occur in Worcester County, Maryland where the project area of concern is located. 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). Therefore, this impact topic was not further evaluated.

## **CHAPTER 2:**

### **Alternatives**

This environmental assessment evaluates five alternatives: the no-action (alternative 1) and four action alternatives (alternatives 2, 3, 4, and 5). The elements of these alternatives are described in the following sections. In addition, this chapter describes the alternatives considered but dismissed from detailed analysis, identifies the environmentally preferable alternative, and provides a summary of the alternatives and their environmental consequences. Impacts associated with the alternatives are further described in “Chapter 3: Affected Environment and Environmental Consequences.” The National Park Service will identify a preferred alternative subsequent to reviewing public comment on this environmental assessment.

#### **ALTERNATIVES DEVELOPMENT**

The alternatives are schematic designs that present the principal elements of each alternative and emphasize the physical and functional relationships of project components throughout the project area.

After the National Park Service has selected a final alternative, the design process will continue and engineers and designers will develop final designs and construction documents that will specify the full detail for implementing the selected alternative.

The alternatives descriptions include estimated net construction costs for each alternative. Costs were developed for these conceptual designs as order-of-magnitude estimates and included several assumptions about the ways and extent of the work to be conducted. The costs were developed in 2015 dollars using the best available information at the time, and are not intended to represent the cost of the project upon implementation. Rather, they are presented as a means to compare the alternative costs relative to one another.

## **ALTERNATIVE 1: NO ACTION / CONTINUE CURRENT MANAGEMENT**

Under the no-action alternative, the National Park Service will reconstruct the Bayside Parking Area with a clay base with clam shell aggregate with no changes to the current footprint or location as a result of impacts sustained during Hurricane Sandy (see figure 3). This will protect the bay from asphalt debris that might result from future storm events.

Under alternative 1, the Bayside Picnic and Parking Area would remain in the developed management zone, as determined by the existing general management plan and current general management planning. As such, this area would continue to be managed to offer interpretive, educational, and recreational opportunities that provide a range of services to visitors.

Alternative 1 represents a continuation of the existing situation, including the reconstruction of the parking area, with a clay base with clam shell aggregate as described in the finding of no significant impact for the previous environmental assessment (NPS 2014a). Each aspect of the no action alternative is described more fully in the subsections that follow.

### **PARKING AREA**

The existing Bayside Picnic and Parking Area is located adjacent to Sinepuxent Bay, just west of the Bayside Camping Area, and at the terminus of Bayside Drive (see figure 4). The parking area accommodates vehicles and provides access to various activities on Sinepuxent Bay, including boating, swimming, kite surfing, birding, sunbathing, and picnicking.

In 2015, the National Park Service plans to remove the existing asphalt and reconstruct the Bayside Parking Area with a clay base with clam shell aggregate. Because the surfacing material does not allow for painted parking spaces, parking spots will be suggested using a split rail fence down the centerline. The parking area will accommodate approximately 63 vehicles, including 14 oversize vehicles and 3 universally accessible spaces. The parking area will have a footprint of approximately 1.4 acres and the approximate limit of disturbance for the Bayside Picnic and Parking Area would remain approximately 62,350 square feet.

Under alternative 1, the Bayside Picnic and Parking Area would remain in its current location. Maintenance of the clay base with clam shell aggregate would continue to require monthly surface leveling by park staff during the peak season and occasional resurfacing with clam shells.

Stormwater management features at the existing Bayside Picnic and Parking Area include drainage ditches around the perimeter of the parking area and culverts located east of the parking area that direct sheetflow coming off the parking surface. Under alternative 1, these features would be left in place and cleaned and repaired on an as-needed basis. In the event of future storm events, the Bayside Picnic and Parking Area could be temporarily closed and the park staff would clean up and make necessary repairs to keep the parking area functional for as long as feasible; however, as the bayside coastline continues to encroach on the parking area, portions of the parking area would not be replaced and the lot would be expected to shrink in size because of future storm damage.



**Figure 3: Shoreline and asphalt encroachment at the Bayside Picnic and Parking Area resulting from damage sustained during Hurricane Sandy**

## PEDESTRIAN ACCESS AND CIRCULATION

A concrete walkway currently connects the southeastern corner of the parking area to the restroom facilities. Otherwise, access to and around the Bayside Picnic and Parking Area occurs along the sandy shores of Sinepuxent Bay. The parking area and visitor amenities within the Bayside Picnic Area are universally accessible. These conditions would not change under alternative 1. Traffic circulation and parking space locations would continue to be suggested by split rail fencing within the centerline of suggested parking spaces. Signage indicating that back-in parking is not permitted would remain posted.

## VISITOR AMENITIES

Under alternative 1, the following existing amenities at the Bayside Picnic and Parking Area would be maintained as long as feasible. Future storm damage may cause some disruption or removal of certain features.

- The permanent restroom facility would remain in its current location.
- The 10-12 picnic tables would remain in their current locations dispersed along the shoreline adjacent to the bay. Approximately 8-10 additional picnic tables and a picnic pavilion or shade structure could be installed at the Bayside Picnic and Parking Area.
- The 4-9 additional grills could be dispersed among the picnic tables, for a total of 10-15 grills.
- A new shower tower / foot wash may be installed, as well as additional moveable restroom facilities and changing stations adjacent to the parking area and within the existing footprint.
- The following amenities would remain in their current location:
  - Removable trash and recycling receptacles.
  - A canoe, bike, and kayak concession stand operated by a concessioner located adjacent to the parking lot.
  - A bike rack located in front of the concession stand.
  - The 2 drinking water pumps - one in front of the restrooms and one in front of the concession stand.
  - An information kiosk along the shoreline in the northwest corner of the parking area.

Under alternative 1, the following existing amenities at the Bayside Campground would be maintained and no new amenities would be proposed:

- The dump station would remain along the south side of the campground exit road southeast of the existing Bayside Picnic and Parking Area and would continue to have a footprint of approximately 0.14 acres.
- 12 campsites and one restroom facility would remain in Loop C.
- 13 campsites and one restroom facility would remain in Loop B.
- 24 campsites and one restroom facility would remain in Loop A. The campground hosts would continue to be located in campsites 1 and 2.



## **COST**

Estimated net construction cost for the no action alternative was not developed because the alternative would not include any planned additional construction beyond the previously scheduled and funded resurfacing project.



Figure 4: Alternative 1, No Action / Continue Current Management  
Assateague Island National Seashore  
U.S. Department of the Interior / National Park Service

## **ELEMENTS COMMON TO ALL ACTION ALTERNATIVES**

### **PARKING AREAS**

Under all alternatives, in 2015, the National Park Service will remove the existing asphalt and reconstruct the existing Bayside Parking Area in its current location with a clay base with clam shell aggregate. This will protect the bay from asphalt debris that might result from future storm events. The parking area will accommodate approximately 63 vehicles, including 14 oversize vehicles and 3 universally accessible spaces.

Under all action alternatives, the proposed new Bayside Picnic and Parking Area would remain in the developed management zone, as determined by the existing general management plan and current general management planning. As such, this area would continue to be managed to offer interpretive, educational, and recreational opportunities that provide a range of services to visitors.

Each action alternative considers the need to address resiliency in regards to the impacts of sea level rise, storm damage, and the need to continue to provide visitor access. The frequency of future storm events is anticipated to increase as a result of climate change, with a projected increase in storm duration and intensity; however, the timing of these storms cannot be predicted. Under each action alternative, should future storm events damage the existing Bayside Picnic and Parking Area to a point beyond reasonable repairs, the parking area would be moved farther inland. Until such time, the National Park Service would continue to use the existing parking area. Upon moving the parking areas farther inland, the National Park Service would increase the setback from the shoreline and increase the buffer between the proposed parking area and the high water line in compliance with the Atlantic Coastal Bays Protection Act of 2002 and the Worcester County shoreline protection setback and buffer law.

The proposed new parking area(s) would be constructed either with asphalt and/or a clay base with clam shell aggregate. The National Park Service would use a clay base with clam shell aggregate to surface the proposed parking areas wherever practical. Asphalt surfacing would be used for the camping loops, rerouted portions of the road, and could be used for some of the more inland parking areas. If the parking area(s) was constructed with asphalt, parking spots would be delineated with paint. If the parking area(s) was constructed with a clay base and clam shell aggregate, parking spots and traffic circulation would be suggested using a split rail fence down the centerline. 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 to control traffic and discourage off-road parking.

Construction of the new parking area(s) would require the use of mechanized equipment and could require the need to import or export fill to recontour the new parking area accordingly. 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 existing Bayside Picnic and Parking Area and construction of the new parking area would be located in nearby parking areas in the national seashore. Maintenance of the clay base with clam shell aggregate, where appropriate, would require monthly surface leveling by park staff during the peak season and occasional resurfacing with clam shells.

Stormwater management measures at the Bayside Parking Area would be implemented pending coordination with the Maryland Department of Environment and identification of appropriate measures. Site specific stormwater design features could include an infiltration trench around

the perimeter of the parking area(s). 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**

To facilitate traffic flow through and around the proposed parking area location(s) and the campground loops, the existing campground dump station under all the action alternatives would be removed from the south side of the campground exit road off Loop C and relocated to the south side of Bayside Drive just west of the Loop A entrance. Installation of the new dump station would disturb approximately 0.21 acres of upland habitat.

## **VISITOR AMENITIES**

One objective of the project is to phase out or eliminate use of the existing parking area and thereby pull permanent facilities out of the buffer and provide facilities that are more sustainable, and accessible for visitor use. Proposed facilities would be designed to be mobile where possible, with the ability to remove them in advance of a storm. This would include the concession facility, restrooms, information kiosks, picnic tables, and grills. The existing picnic tables, grills, trash and recycling bins, and information kiosk at the tip of the peninsula would be kept in place as long as practical given potential future storm damage. The new picnic amenities proposed under each alternative would be in addition to existing tables and grills maintained at the end of the peninsula. About 10 to 15 grills would be dispersed among the picnic tables. Given that shoreline erosion and the associated loss of vegetation will likely continue, it is anticipated that conditions within the proposed picnic areas will change overtime and that the proposed picnic amenities could be placed within existing openings in the vegetation without the need to remove any trees. If any vegetation clearing was required, it would likely involve clearing vines and other understory species. Additionally, removable trash and recycling receptacles and an information kiosk would be installed at each of the proposed parking areas.

The parking area(s) and visitor amenities would all be universally accessible. Under each action alternative, a new shower tower / foot wash and drinking water pumps would be installed adjacent to the new parking area. Also, under all action alternatives, the existing permanent restroom facility at the Bayside Picnic and Parking Area would remain in place to serve visitors at the end of the peninsula until it was rendered no longer useful as a result of storm damage. At that point, the permanent restroom would be replaced with a moveable facility that would be in addition to the restroom facility being proposed at the new parking area under each action alternative.

## ALTERNATIVE 2

### PARKING AREAS

Under alternative 2, the new parking area would be constructed adjacent to Bayside Drive, between the road and Loop C of the Bayside Campground (see figure 5). The parking area would be designed to accommodate approximately 62 cars, 6 oversize vehicles, and 4 universally accessible spaces and would disturb approximately 1.2 acres of upland habitat. The southern end of the existing parking area would be converted into a drop off and roundabout to include 3 universally accessible parking spaces and a short-term loading/unloading zone for recreational use, which would disturb approximately 0.06 acres of upland habitat. Following construction, use of the remainder of the existing Bayside Parking Area beyond the roundabout would be phased out and disturbed areas would be allowed to revert to natural conditions. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

### PEDESTRIAN ACCESS AND CIRCULATION

Access to and around the proposed new picnic area would occur along the sandy shores of Sinepuxent Bay. A new universally accessible trail would be constructed across the previous location of the Bayside Parking Area to extend from the roundabout to the shoreline of the peninsula.

The proposed parking area would be accessible from Bayside Drive and have an entrance and exit onto the road. A universally accessible path would be constructed between the new parking area, the restroom facilities, the relocated kayak concession stand, and the proposed new picnic area. The proposed trails would disturb approximately 0.12 acres of upland habitat collectively.

### VISITOR AMENITIES

Under alternative 2, the following changes would be made to amenities at the Bayside Picnic and Parking Area:

- A new portable (that can be removed in advance of storm events) comfort station would be installed immediately adjacent to the new proposed parking area. Installation of the comfort station would disturb approximately 0.01 acres of upland habitat.
- The kayak concession stand would be moved to a new location immediately east of and adjacent to the new proposed parking area.
- 10-12 picnic tables would be installed in the proposed new picnic area south of Bayside Drive and along the shore of Sinepuxent Bay.

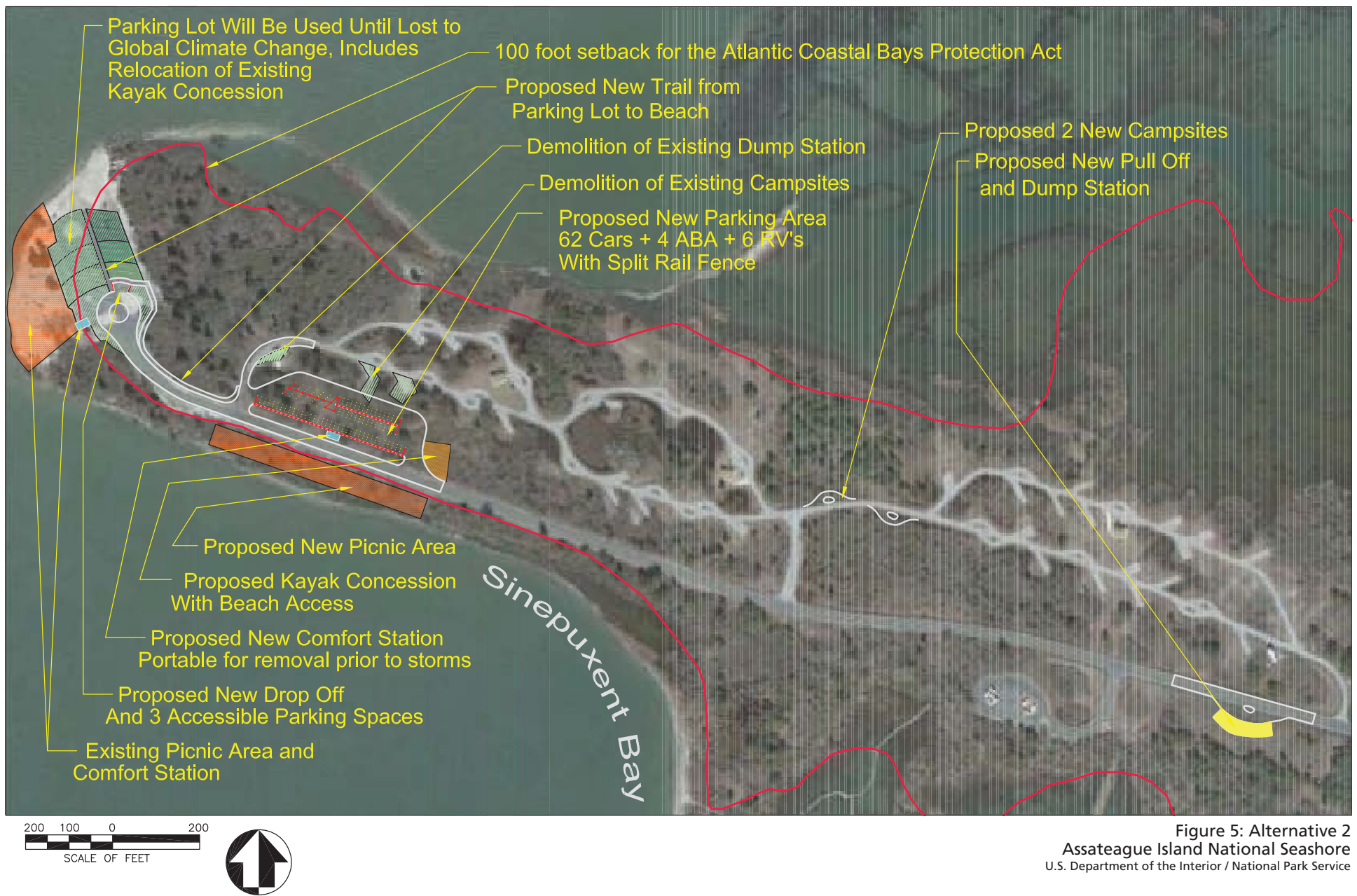
Under alternative 2, the following changes would be made to amenities at the Bayside Campground:

- 2 campsites would be removed from the southern half of Loop C because of their proximity to the new parking area. There would be a total of 10 campsites and one restroom facility in Loop C.

- 13 campsites and one restroom facility would remain in Loop B.
- 24 campsite and one restroom facility would remain in Loop A.
- Between Loops A and B, 2 campsites would be added along the existing road. Installation of these campsites would disturb approximately 0.07 acres of upland habitat.

## **COST**

The estimated net construction cost for alternative 2 would be between \$600,000 and \$725,000 depending on the use of asphalt or a clay base with clam shell aggregate within the proposed parking area, with asphalt being the more expensive option.



## **ALTERNATIVE 3**

### **PARKING AREAS**

Under alternative 3, two new smaller parking areas would be constructed south of the Bayside Campground (see figure 6). One parking area would be located southwest of Loop C of the Bayside Campground between the campground and Bayside Drive. This parking area would be designed to accommodate 20 cars, 2 oversized vehicles, and 2 universally accessible spaces. The second parking area would be located just east of the Loop B campground access road. This parking area would be designed to accommodate approximately 40 cars, 4 oversized vehicles, and 2 universally accessible spaces. Together these parking areas would disturb approximately 1.9 acres of upland habitat. The southern end of the existing parking area would be converted into a drop off and roundabout to include 3 universally accessible parking spaces and a short-term loading/unloading zone for recreational use, which would disturb approximately 0.06 acres of upland habitat. Following construction, use of the remainder of the existing Bayside Parking Area beyond the roundabout would be phased out and disturbed areas would be allowed to revert to natural conditions. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

### **PEDESTRIAN ACCESS AND CIRCULATION**

Access around the proposed new picnic area would occur along the sandy shores of Sinepuxent Bay. A new universally accessible trail would be constructed across the previous location of the Bayside Parking Area to extend from the roundabout to the shoreline of the peninsula.

Bayside Drive would be routed through the proposed western parking area. Campground traffic from Loop C of the Bayside Campground would exit through the western proposed Bayside Parking Area. A universally accessible path would be constructed between the new parking areas, restroom facilities, the relocated kayak concession stand, and the proposed new picnic area. The proposed eastern parking area would be accessible from Bayside Drive and have an entrance and exit onto the road. A new path would be constructed immediately adjacent to the north side of Bayside Drive to connect the two new parking areas. A trail would also be constructed from the eastern parking area to the existing Life of the Marsh parking area. Together, installation of the new trail network would disturb approximately 0.4 acres of upland habitat.

### **VISITOR AMENITIES**

Under alternative 3, the following changes would be made to amenities at the Bayside Picnic and Parking Area:

- A new portable (that can be removed before storm events) comfort station would be installed adjacent to each proposed parking area. Installation of the comfort station would disturb approximately 0.02 acres of upland habitat.
- The kayak concession stand would be moved to a new location south of the entrance to the new western parking area on the waterfront side of Bayside Drive and adjacent to the new proposed picnic area.



- 10-12 picnic tables would be dispersed between existing vegetation and along the shoreline adjacent to the bay and south of the proposed western parking area.

Under alternative 3, the following changes would be made to amenities at the Bayside Campground:

- The Loop C campground traffic would exit through the newly proposed western Bayside Parking Area.
- 12 campsites and one restroom facility would remain in Loop C.
- 13 campsites and one restroom facility would remain in Loop B.
- 24 campsite and one restroom facility would remain in Loop A.

## **COST**

The estimated net construction cost for alternative 3 would be between \$875,000 and \$1,040,000 depending on the use of asphalt or a clay base with clam shell aggregate within the proposed parking areas.



## **ALTERNATIVE 4, THE NPS PREFERRED ALTERNATIVE**

### **PARKING AREAS**

Under the preferred alternative, the Bayside Campground Loop C would be removed and a new parking area would be constructed in its place (see figures 7-9). Installation of the new parking area would disturb approximately 1.5 acres of upland habitat. The parking area would be designed to accommodate approximately 62 cars, 6 oversize vehicles, and 4 universally accessible spaces. The southern end of the existing parking area would be converted into a drop off and roundabout to include 3 universally accessible parking spaces and a short-term loading/unloading zone for recreational use, which would disturb approximately 0.06 acres of upland habitat. Following construction, use of the remainder of the existing Bayside Parking Area would be phased out and disturbed areas would be allowed to revert to natural conditions. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

### **PEDESTRIAN ACCESS AND CIRCULATION**

Access to and around the new picnic area, restroom facilities, and concession stand would be provided with a universally accessible trail. A second universally accessible trail would be constructed across the previous location of the Bayside Parking Area to extend from the southwest corner of the new parking area, along the former Loop C exit road, and provide access to the shoreline of the peninsula.

Bayside Drive would be rerouted north at the Bayside Campground Loop B entrance. A new picnic area and the relocated kayak concession stand would either be provided within a previously disturbed area of Bayside Drive south of the parking area or immediately north of the parking area. A portion of Bayside Drive between the proposed picnic area and the Loop B entrance would be designated for NPS administrative use only. Two new campground loops would be installed; one between Loops B and A, and one to the east of Loop A. The entrance to Loop A would be modified to accommodate the new loop. Installation of the new trail network would disturb approximately 0.37 acres of upland habitat.

### **VISITOR AMENITIES**

Under alternative 4, the following changes would be made to amenities at the Bayside Picnic and Parking Area:

- A new portable (that can be removed before storm events) comfort station would be installed immediately adjacent to the new proposed parking area. Installation of the comfort station would disturb approximately 0.01 acres of upland habitat.
- The kayak concession stand would be moved to one of two proposed locations:
  - Adjacent to the new proposed picnic area along a restored portion of Bayside Drive; or
  - Immediately north of the proposed parking lot on the north side of the peninsula.

- 10-12 picnic tables would be installed in three picnic areas, one north of the proposed parking area, one immediately south of the parking area, and one on a previously disturbed portion of Bayside Drive.

Under the preferred alternative, the following changes would be made to amenities at the Bayside Campground:

- The existing Loop C would be removed and traffic would loop through the newly proposed Bayside Picnic and Parking Area in its place.
- Loop C and the campsites within would be replaced with the new parking area and/or converted into picnic areas.
- Additional picnic areas would be added along the north side of the new parking area.
- 5 campsites along the southern half of Loop B would be removed because of increased traffic along this access point to the parking area. A total of 6 campsites and one restroom facility would remain in Loop B.
- Between Loops A and B, 8 campsites would be added on a newly constructed loop. To the east of Loop A, a new campground loop would be constructed with 15 campsites and one restroom facility. Installation of these campsites, including the loop road, would disturb approximately 1.3 acres of upland habitat.
- In Loop A, 1 campsite would be removed for a total of 23 campsites and one restroom facility in Loop A.

## **COST**

The estimated net construction for alternative 4 would be between \$1,560,000 and \$1,691,000 depending on the use of asphalt or a clay base with clam shell aggregate within the proposed parking area.



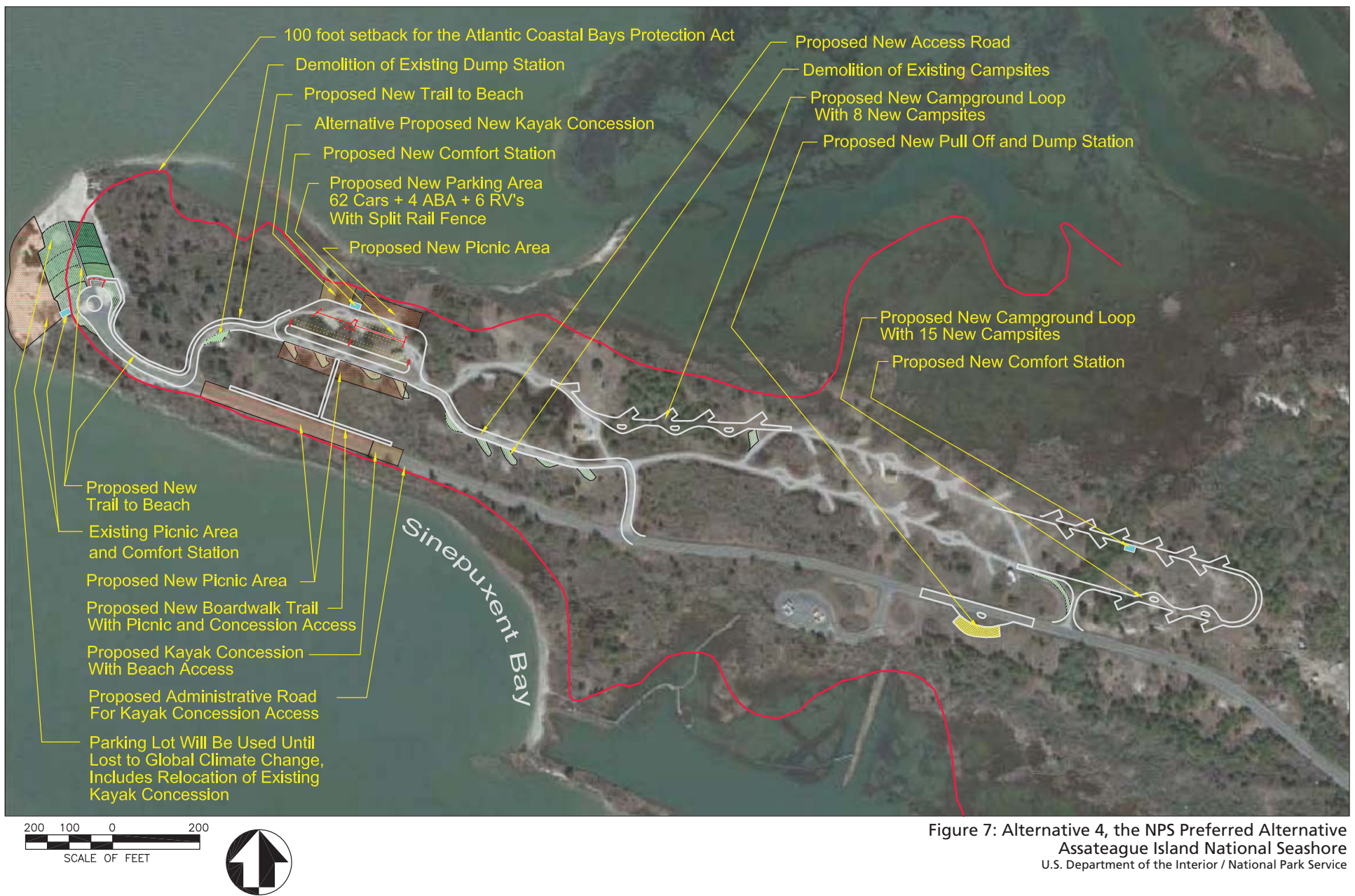


Figure 7: Alternative 4, the NPS Preferred Alternative  
Assateague Island National Seashore  
U.S. Department of the Interior / National Park Service

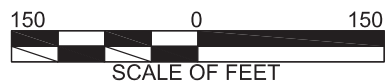
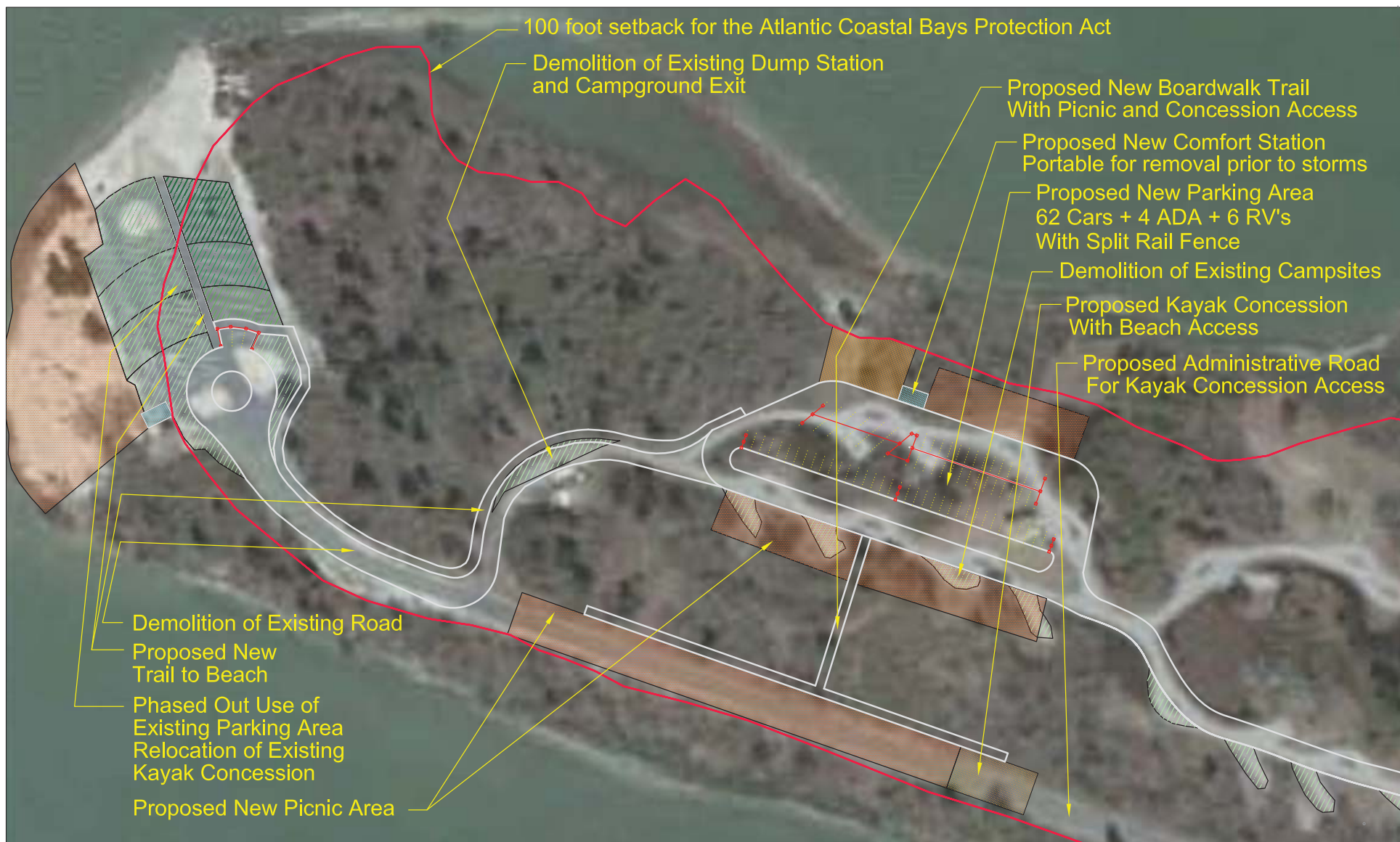


Figure 8: Alternative 4  
Assateague Island National Seashore  
U.S. Department of the Interior / National Park Service



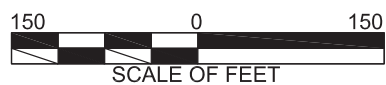
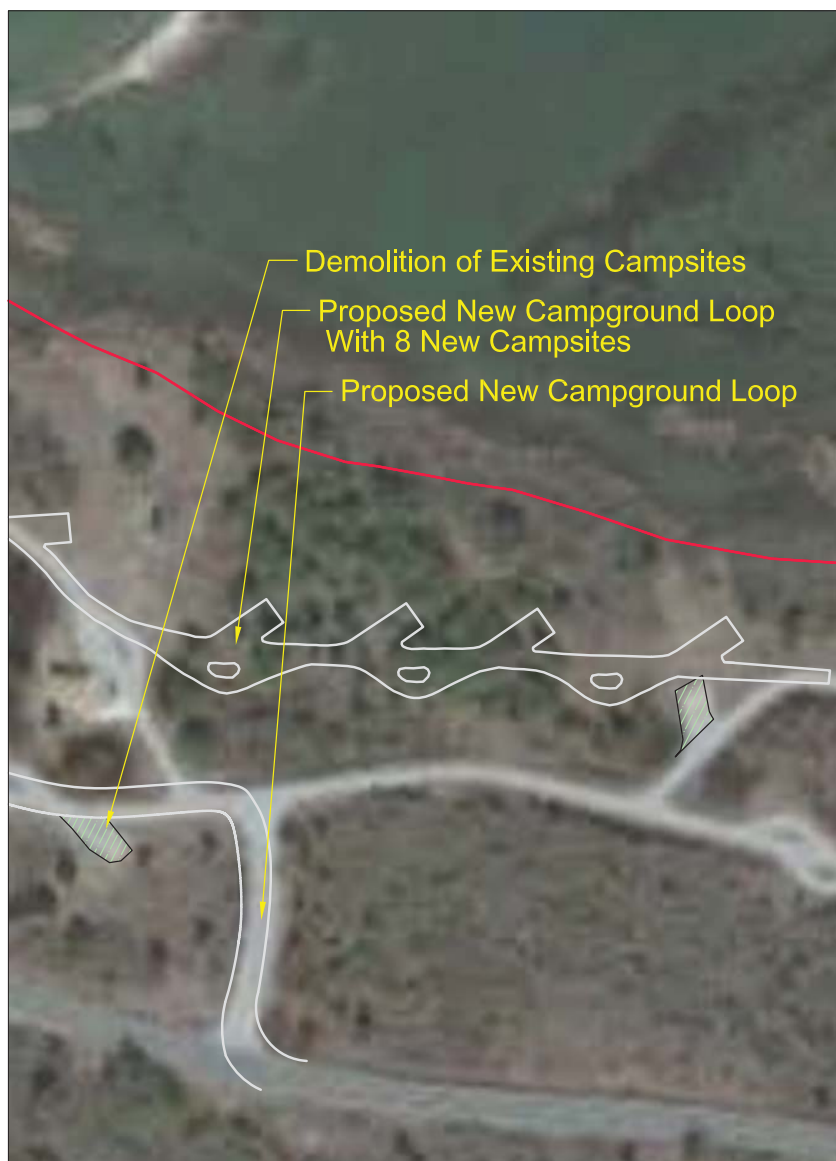


Figure 9: Alternative 4  
Assateague Island National Seashore  
U.S. Department of the Interior / National Park Service

## **ALTERNATIVE 5**

### **PARKING AREAS**

Under alternative 5, a new parking area would be constructed to the south of Loop B of the Bayside Campground, and a portion of Bayside Drive would be removed and allowed to revert to natural conditions (see figure 10). The parking area would be designed to accommodate approximately 60 cars, 12 oversize vehicles, and 4 universally accessible spaces. Installation of the parking area would disturb approximately 1.5 acres of upland habitat. Following construction, the remainder of the existing Bayside Parking Area would be removed and disturbed areas would be allowed to revert to natural conditions. Public vehicular access to the tip of the peninsula would no longer be provided. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

### **PEDESTRIAN ACCESS AND CIRCULATION**

Access to the proposed new picnic area would occur south of the removed portion of Bayside Drive. A new universally accessible trail would be constructed along the removed portions of Bayside Drive and across the previous location of the Bayside Parking Area to extend from the edge of the proposed new parking area to the shoreline of the peninsula.

Bayside Drive would extend to the current entrance to Loop B of the Bayside Campground. The asphalt west of this turn off would be removed and the area would be allowed to revert to natural conditions. Vehicle traffic would be routed north at the Loop B entrance. From there vehicles could go left into the proposed new parking area or right into Loop A of the campground. The natural landscape of the Loop C exit would be allowed to revert to natural conditions and campground visitors would exit Loop C through the proposed new parking area. A universally accessible trail would be constructed between the new parking area, restroom facilities, the relocated kayak concession stand, and the proposed new picnic area.

### **VISITOR AMENITIES**

Under alternative 5, the following changes would be made to amenities at the Bayside Picnic and Parking Area:

- A new portable (that can be removed before storm events) comfort station would be installed immediately adjacent to the new proposed parking area. Installation of the comfort station would disturb approximately 0.01 acres of upland habitat.
- The kayak concession stand would be moved to a new location with beach access between the new proposed parking area and the new proposed picnic area.
- 10-12 picnic tables would be dispersed in the new picnic area between existing vegetation and along the shoreline adjacent to the bay.



Under alternative 5, the following changes would be made to amenities at the Bayside Campground:

- Loop C campground traffic would exit through the newly proposed Bayside Picnic and Parking Area.
- 3 pull in campsites in Loop C would be converted to pull-through campsites. The total number of campsites in Loop C would remain at 12 with 1 restroom facility.
- The southern half of Loop B would be removed for the new parking area and 8 campsites would be removed. 1 campsite would be added to Loop B for a total of 7 campsites and one restroom facility.
- Between Loops A and B, 7 campsites would be added on a newly constructed loop. Installation of all the new campsites would disturb approximately 0.52 acres of upland habitat.
- In Loop A, one campsite would be removed for a total of 23 campsites and one restroom facility in Loop A.

## **COST**

The estimated net construction cost for alternative 5 would be between \$885,000 and \$1,018,000 depending on the use of asphalt or a clay base with clam shell aggregate within the proposed parking area.



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SCALE OF FEET



Figure 10: Alternative 5  
Assateague Island National Seashore  
U.S. Department of the Interior / National Park Service

## MITIGATION MEASURES

Mitigation is used to avoid, prevent, or minimize adverse impacts during construction and implementation of the project. The following mitigation measures would be incorporated into the preferred alternative, 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. Impacts of the preferred alternative presented in chapter 3 were analyzed with these mitigation measures in place, tailored to meet site-specific conditions.

### GENERAL MEASURES

- 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 house-keeping measures to be used.
- 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 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 would 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.

## NATURAL RESOURCES

- To minimize impacts to natural resources under all action alternatives, the National Park Service considered avoidance of wetlands, elimination of permanent structures in the 100 foot setback under the Atlantic Coastal Bays Protection Act, and minimization of impacts to vegetation and wildlife.
- Identify specific provisions in construction contract(s) to prevent stormwater 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 stormwater pollution prevention plan to be prepared for this project.
- Plan and maintain buffers between areas of soil disturbance and wetlands or waterways.
- Delineate protection zones and tree line limits and/or limits of disturbance to protect existing natural resources.
- 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.
- Inspect equipment for leaks of oil, fuels, or hydraulic fluids before and during use to prevent soil and water contamination. 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.
- Previously disturbed areas would be left to regenerate naturally. In limited areas, where vegetative screening would be desired, some upland planting could occur; for example, in areas where campsites were removed.
- Conduct the action to minimize adverse effects on normal movement, migration, reproduction, or health of terrestrial fauna. Time construction seasonally to avoid impacts to migratory and shoreline bird populations.

## **ALTERNATIVES AND ACTIONS CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS**

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 ALTERNATIVE TRANSPORTATION**

Removal of the existing Bayside Picnic and Parking Area and use of a shuttle bus to transport visitors from a remote lot was considered, but would likely not be economically feasible and was therefore not carried forward as a component of an action alternative. This concept would likely only be feasible during high visitation seasons and would therefore fail to meet the purpose of the project to allow for sustained visitor access and recreational use of the area. This option would also fail to meet the project objective to retain the original parking capacity for visitors at the Bayside Picnic and Parking Area. However, the national seashore will continue alternative transportation planning for future alternative transportation options throughout the entire national seashore.

### **ALTERNATIVE CONCEPTS FOR THE PROPOSED BAYSIDE PICNIC AND PARKING AREA**

During initial concept development, alternative locations were considered for new parking area(s). These resulted from park staff and public input during early planning stages. These potential locations and other concepts are described below.

Parallel or angled parking along Bayside Drive was considered, but rejected because of safety concerns for pedestrians walking to and from their cars. This concept was also rejected because it would not be possible to meet the objective of retaining the original parking capacity by using angled parking.

Extending the existing parking area at the Life of the Marsh Trail was considered for the Bayside Picnic and Parking Area. However, this area was previously undeveloped, contains existing wetlands, and falls within the 100-foot setback designated by the Atlantic Coastal Bays Protection Act. Because of these reasons and the potential impacts that would result, this alternative location was not considered further.

Other potential parking area locations in more heavily vegetated areas or areas that impacted wetlands were considered and dismissed because of potential disturbance to wildlife and wetland habitat. A previously presented alternative of moving the Bayside Parking Area farther inland to the east of the existing parking area was considered. This alternative location was not considered further because of the results of analysis presented in the *Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation Environmental Assessment* and concern raised during public scoping regarding adverse impacts on migratory birds and other natural resources as a result of clearing the proposed relocation area.

Public scoping suggestions included considering the incorporation of a living shoreline (oyster bed or oyster castles) and other living erosion control structures to protect the existing parking

lot at the tip of the peninsula. Concerns were raised about the impacts to recreational users from the artificial reef materials and hardened structures. Placement of a living shoreline may not fully protect the parking area from future storm activity, and would still require additional parking area construction to address desired parking capacity to meet visitor needs. Shoreline hardening was suggested and considered; however, hardening or armoring has both positive and negative impacts. Hardening along eroding shores causes a reduction in the beneficial functions and sometimes complete loss of valuable coastal resources, such as beaches and intertidal areas. This results in the loss or alteration of associated marine habitat. In addition, lateral beach access can also be restricted or lost (O'Connell 2010). As a result of the potential physical, biological, and ecological impacts, hardening was not further considered.

## **SUMMARY COMPARISON OF THE ALTERNATIVES AND THEIR ENVIRONMENTAL CONSEQUENCES**

Table 1 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.

**Table 1: Summary of the Impacts of the Alternatives**

| <b>Impact Topic</b>                                 | <b>Alternative 1: No Action / Continue Current Management</b>  | <b>Alternative 2</b>   | <b>Alternative 3</b>   | <b>Alternative 4, the NPS Preferred Alternative</b>  | <b>Alternative 5</b>  |
|---|--|--|--|--|---|
| Floodplains   | Slight and adverse impacts would result from the frequency, duration, and type of flooding that would result from the sheetflow and impervious surface associated with maintaining the parking area in its current location and configuration. In this location there would be no buffer between the Bayside Picnic and Parking Area and the Sinepuxent Bay, and moderate to high-power storm waves would continue to erode the shoreline. | The addition of impervious surface area would result in adverse impacts to the floodplain, but given their inland location these impacts would be slight. Beneficial impacts would result from moving the parking area inland and thereby gradually increasing the size of the natural buffer of the floodplain as the existing parking area is phased out and removed. The proposed location would maintain the ability of wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization. | Impacts to floodplains would be the same as those described under alternative 2. The locations of the proposed parking areas would be farther inland from the exposed tip of the peninsula and the natural buffer area would be gradually increased as the existing parking area was phased out and removed. The proposed locations would maintain the ability of wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization. | Impacts to floodplains would be the same as those described under alternatives 2 and 3. The location of the proposed parking area would be farther inland from the exposed tip of the peninsula and the natural buffer area would be gradually increased as the existing parking area was phased out and removed. The proposed location would maintain the ability of wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization.   | Impacts would be similar to those described under alternative 2. However, demolition of the existing parking area would allow for a return of sandy more permeable conditions that would restore floodplain functions sooner than other proposed action alternatives, and establish a larger buffer upon completion of the demolition process. Demolition of a portion of Bayside Drive would also return this portion of the paved road to more natural and permeable conditions, providing beneficial floodplain impacts. |
| Wildlife and Wildlife Habitat, Including Vegetation | Limited adverse impacts would result from routine maintenance activities. A potential decrease in visitors resulting from continued storm damage in the area may benefit wildlife that are sensitive to human presence. Such a change would likely be seasonal, and would have only a slight impact on wildlife in the vicinity of the Bayside Picnic and Parking Area.  | Adverse impacts would result from development of the proposed new areas. Impacts would be limited as a result of the minimal size of the developed areas, the availability of suitable adjacent habitat, the minimal disturbance time, and the gradual natural revegetation of habitat at the site of the existing parking area once it is removed. Temporary impacts to wildlife could occur during construction activities from increased noise and heavy equipment.   | Impacts would be similar to those described for alternative 2. Some wildlife habitat fragmentation could occur from the need for additional vegetation removal for the two proposed parking areas; however, because adequate wildlife habitat would continue to be available in the immediate area, adverse impacts to wildlife would likely be minimal as a result of fragmentation.  | Impacts would be similar to those described for alternative 2. Alternative 4 utilizes an existing disturbed area for the new parking area and therefore would disturb less contiguous habitat. However, placing the Bayside Picnic and Parking Area in this location places visitors closer to areas where migratory species are reported to congregate, and therefore visitors may disturb migratory species. The addition of a new campground loop under this alternative would expand the overall footprint of day and nighttime use, | Impacts would be similar to those described for alternative 2. Beneficial impacts would result from the immediate demolition and gradual return of habitat at the existing parking area upon completion of construction of the new parking area. By locating the parking area near Bayside Drive and adjacent to camping areas, disturbance to wildlife would be minimized because wildlife in this area may already be accustomed to road noise, and campground use.   |



**Table 1: Summary of the Impacts of the Alternatives (continued)**

| Impact Topic  | Alternative 1: No Action / Continue Current Management  | Alternative 2  | Alternative 3   | Alternative 4, the NPS Preferred Alternative   | Alternative 5   |
|---|---|--|---|--|---|
|   |   |  |   | the human presence, and level of ground disturbing activity farther to the east resulting in adverse impacts to wildlife.  |   |
| Visitor Use and Experience and Recreation Resources | <p>Adverse impacts would result from any temporary and/or eventual permanent closures associated with future storm events, and the resulting damage and erosion. The overall impact could be slight to considerable, individually and cumulatively, depending on the severity and season of future storm events.</p> <p>A slight beneficial impact would result for those visitors seeking a quiet environment with more privacy from the continued separation of campground use and parking and picnic area use afforded by the vegetated area in between these sites.</p> | <p>Adverse impacts would be related to temporary noise and traffic control measures associated with construction of the new parking area location and from the noise and intrusion that would result from the closer proximity of the parking and picnic area activity to campground Loop C.</p> <p>Beneficial impacts would result from increased sustainability of the new parking area, which would allow for extended visitor access to the Bayside Peninsula and visitor amenities located there.</p> | <p>Impacts would be similar to those described for alternative 2.</p> <p>In addition, temporary adverse impacts would result from increased confusion and disruption to traffic associated with the new parking area location and from the increased distance visitors would be required to walk from the new parking area(s) to the tip of the peninsula and some visitor amenities.</p> | <p>Impacts would be similar to those described for alternative 3.</p> <p>The inland location of both parking areas, and especially the most eastern area, would increase the sustainability of the parking areas and provide beneficial impacts by allowing for extended visitor access to the Bayside peninsula.</p> <p>The increased distance visitors would be required to walk from the parking areas would result in minor to moderate adverse impacts depending on which lot visitors parked in and what areas of the peninsula they were trying to access.</p> <p>The increase the distance visitors would need to walk from the eastern parking area in order to access the tip of the peninsula and different amenities and the new parking area configuration could change visitor use patterns on the peninsula during peak season.</p> | <p>Impacts would be similar to those described for alternative 4.</p> <p>This alternative would not include a loading / unloading zone near the tip of the peninsula and therefore visitors who wanted to access the peninsula but could not easily navigate the trail could be adversely impacted by this restriction.</p> |

## **THE PREFERRED ALTERNATIVE AND THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE**

### **THE ALTERNATIVE PREFERRED BY THE NATIONAL PARK SERVICE**

Alternative 4, consisting of removing Bayside Campground Loop C and constructing a new parking area in its place, is the NPS' preferred alternative. This alternative best meets the purpose and need for the project, provides the greatest recreational opportunities for day-use visitors, protects the greatest amount of scrub/shrub habitat of any of the proposed action alternatives, and provides for the greatest life span under most climate change scenarios.

### **THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE**

In accordance with the DO-12 Handbook, the National Park Service 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). Under alternative 1, there would be limited adverse impacts to floodplains and wildlife, habitat, and vegetation as a result of the continued susceptibility of the Bayside Picnic and Parking Area's location to future storm damage at the tip of the peninsula. While each action alternative would be beneficial to floodplains as a result of the gradual increased natural buffer between the parking area and the shoreline, alternative 1 would best protect the existing natural resources in the study area because there would be no new construction and therefore no habitat disturbance and no net increase in impervious surface area. Based on the analysis of environmental consequences of each alternative, described in chapter 3, alternative 1 is the environmentally preferable alternative.

## **CHAPTER 3:**

# **Affected Environment and Environmental Consequences**

This chapter describes the resources that could be impacted by the proposed action. Impact topics are presented in the order they appear in chapter 1.

## **GENERAL METHODS FOR ANALYZING IMPACTS**

In accordance with the Council on Environmental Quality regulations, direct, indirect, and cumulative impacts are described (40 CFR 1502.16) and the impacts are assessed in terms of context and intensity (40 CFR 1508.27). Where appropriate, mitigating measures for adverse impacts are also described and incorporated into the evaluation of impacts.

## **GEOGRAPHIC AREA EVALUATED FOR IMPACTS**

The geographic study area for the assessment of impacts is broadly defined as the peninsula where the Bayside Picnic and Parking Area alternative locations and features are identified (see figures 4-10). The geographic area evaluated for impacts includes the lands within and adjacent to (within 100 feet) each alternative concept. These areas were evaluated when addressing impacts caused by altering the land surface, removing or moving existing infrastructure, and allowing for recovery of disturbed areas to a more natural condition. Graphical images for each alternative concept are provided in chapter 2.

## **TYPE OF IMPACT**

Impacts are discussed by type, as follows (the terms “impact” and “effect” are used interchangeably throughout this document):

- 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.

## **CUMULATIVE IMPACT ANALYSIS METHODS**

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable fu-

ture actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative impacts were determined for each impact topic by combining the impacts of the alternative being analyzed and other past, present, and reasonably foreseeable actions that would also result in beneficial or adverse impacts. Because some of these actions are in the early planning stages, the evaluation of the cumulative impact is based on a general description of the projects. These actions were identified through the internal and external project scoping processes and are summarized below.

## Past, Present, and Reasonably Foreseeable Future Actions

The National Park Service has developed plans and taken actions that could affect or be affected by relocating the Bayside Picnic and Parking Area. 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, alternative transportation planning, and resource management within Assateague Island National Seashore, and coastal zone management plans. The potential relevance of these planning efforts to the proposed action are described further below and considered within the cumulative analysis.

The national seashore is currently in the process of developing a new general management plan / environmental impact statement. These planning efforts, in combination with the existing 1982 *Assateague Island National Seashore General Management Plan* provide management direction for the national seashore. The plans designate management zones within the national seashore that dictate appropriate levels of use and development based on location. Management zoning and other direction provided within the 1982 general management plan and in ongoing general management planning are considered and incorporated into this environmental assessment, as appropriate.

The *Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation Environmental Assessment* and finding of no significant impact were completed in 2013 and 2014 respectively and provided alternatives for relocating the Bayside Picnic and Parking Area. The relocation of the Bayside Picnic and Parking Area was postponed pending additional planning and compliance as documented in this current environmental assessment. Surface materials of the Bayside Picnic and Parking Area are planned to be removed and replaced with a clay base with clam shell aggregate in 2015. Previous alternatives and analysis were considered during the development of this environmental assessment.

**Alternative transportation planning** within the national seashore is considering the potential for future alternative transportation options within the national seashore, such as a shuttle or ferry system. While it is not expected that the use of personal vehicles within the national seashore will be limited, alternative transportation planning will be considered and incorporated into this environmental assessment, as appropriate.

The U.S. Fish and Wildlife Service *Draft Comprehensive Conservation Plan for the Chincoteague and Wallops Island National Wildlife Refuges* is a management plan to guide all aspects of refuge management, including habitat and wildlife, recreation, and administration. The 15-year plan is being completed in compliance with the 1997 National Wildlife Refuge System Improvement Act and is designed to be consistent with sound principles of fish and wildlife management, conservation, legal mandates, and U.S. Fish and Wildlife Service policies. Conservation efforts proposed in the plans for the nearby national wildlife refuges will be considered and incorporated into this environmental assessment, as appropriate.

**The Maryland Coastal Bays Program** serves to protect and conserve the waters and surrounding watershed of Maryland's five coastal bays located behind Ocean City and Assateague Island. The watershed includes more than 189,000 acres of land, 71,000 acres of water, 248 miles of

shoreline, and nearly 35,000 acres of wetlands. A variety of wildlife, including 360 different types of birds and more than 108 rare, endangered, and threatened species, live within its boundaries. Management strategies and conservation needs of the Coastal Bays and their watersheds will be considered and incorporated into this environmental assessment as appropriate.

## FLOODPLAINS

### AFFECTED ENVIRONMENT

Floodplains perform important natural ecological functions, including temporary storage of floodwaters, dissipation of stormwater runoff, moderation of peak flows, groundwater re-charge, prevention of erosion, and maintenance of water quality. In general, natural buffers, such as the sandy beach, wetlands, and vegetation in the vicinity of the study area help maintain the natural ecological functions and values of the floodplain and reduce flooding and erosion severity.

The project site is located to the east of the Chesapeake Bay in the Sinepuxent Bay Watershed. There are several Coastal Bays in the vicinity of the project area and together they form a shallow coastal lagoon system comprised of several individual and distinct water bodies. The Sinepuxent Bay connects to the Atlantic Ocean through the Ocean City Inlet. The project area is a barrier island lying parallel to the mainland and separated from it by Sinepuxent Bay. The area is defined by its barrier island dynamics and changing coastline. The Sinepuxent Bay has a scalloped shoreline from historic tidal inlets and overwash events. Within the Sinepuxent Bay watershed, saltwater from the ocean enters the coastal bays through the Ocean City and Chincoteague Inlets. Water currents are highest around these inlets, but decrease rapidly with distance. 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 adjacent to the Bayside Picnic Parking Area, have a relatively constant water surface area over the full tidal range. This project area is a lower energy system compared to the ocean side, but will still experience storm surge.

Worcester County Department of Comprehensive Planning has reported that 56% of the county's shoreline is receding (table 2) (Worcester County Department of Comprehensive Planning 2006). As stated previously, barrier islands are dynamic so erosion is a natural occurrence. However, in some cases 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 Assateague Island have interfered with coastal processes by inhibiting the natural flows of sediment transport. This is leading to a sediment deficit to the 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. Erosion rates at the project site are less than 2 ft/year as reported by Maryland Department of Natural Resources (<http://dnr.maryland.gov/CoastSmart/pdfs/Worcester.pdf>). Though sea level rise does not contribute to coastal erosion directly, increased storm surges and tide levels would reach farther inland and reduce the sand and sediment budget within a beach (Cooper 2005). The Maryland Commission on Climate Change has predicted sea level rise of 5 mm/year could cause a new inlet to open on Assateague Island south of Ocean City (Maryland Commission on Climate Change 2008).

**Table 2: Miles of coastal accretion and erosion in Worcester County**

| Rate of Change                             | Shoreline Length |     |
|--|------------------|-----|
|  | Miles            | %   |
| <b>Accretion</b>                           | 299              | 43  |
| <b>No change</b>                           | 6                | 1   |
| <b>Slight erosion (0 to -2 ft/year)</b>    | 314              | 45  |
| <b>Low erosion (2 to -4 ft/year)</b>       | 51               | 7   |
| <b>Moderate erosion (-4 to -8 ft/year)</b> | 12               | 2   |
| <b>High erosion (over -8 ft/year)</b>      | 15               | 2   |
| <b>Total</b>                               | 697              | 100 |

Source: Worcester County Department of Comprehensive Planning (2006)

According to the Maryland Department of Natural Resources (2008), the Sinepuxent Bay watershed is 22% developed leaving 78% to undeveloped natural, 11% agriculture, and 67% natural habitats (forest, wetlands, and other natural land types) (see also Chesapeakebay.net 2015). The watershed is also estimated to be composed of 6% impervious surfaces which are impenetrable to rain and floodwaters into the ground (Maryland Coastal Bays Program 2015). Flooding on Assateague Island can range from minor overwash events during 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 and the entire landscape. As storm winds and waves scour sand away from the ocean beaches, sediments are deposited along the bayside, a process that slowly moves the landform to the west. Storm surge, combined with a high tide, can breach the island and create new inlets. Since 1850 (when accurate coastal charts were first made), the bay shoreline of northern Assateague Island has migrated westward into Sinepuxent Bay (while the mainland shoreline has lost very little land to erosion, thereby narrowing the bay by up to 0.6 miles in some places (Thomas et al. 2009; NPS 2011). High waves and water have periodically swept entirely over Assateague Island and flowed into the Chincoteague and Sinepuxent Bays (immediately adjacent to the project area). 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 ecological 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. Protected shores and nearby salt marshes along the Sinepuxent Bay, reduce the rate of erosion when compared to the beaches along the Atlantic Ocean.

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) (see appendix B). 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 flood-plain 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 and Parking Area. The major source of flooding on this side of the island is overwash from Chincoteague and Sinepuxent Bays. In the immediate vicinity of the Bayside Picnic and Parking Area, estuarine wetlands, particularly along the northern shoreline of the peninsula, provide shoreline stabilization functions 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). This area is outside the study area.

Climate change affects sea level, amounts of rainfall, intensity and amount of runoff, the height, duration, and frequency of 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).

Because of its geography and geology, the Chesapeake Bay region is ranked the third most vulnerable area to sea level rise 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 salt-water intrusion into groundwater. Shoreline erosion is a process that occurs naturally within the coastal environment; however, shoreline erosion rates have been accelerated by sea level rise. Assateague Island is highly susceptible to all of these 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, a relative sea level rise of 2.1 feet by 2050 is predicted 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 farther 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 0.018 to 0.157 inches per 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 Intergovernmental Panel on Climate Change reports (IPCC 2007a, b). Maryland is experiencing more of a rise in sea level than other parts of the world, because of naturally occurring regional land subsidence. Land is currently subsiding in the Chesapeake Bay region at a rate of approximately 0.051 inches per year (Boesch 2013).

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).



## **IMPACTS OF ALTERNATIVE 1: NO ACTION / CONTINUE CURRENT MANAGEMENT**

### **Impacts**

Under alternative 1, the Bayside Picnic and Parking Area would remain in its current location, close to the Sinepuxent Bay shoreline. In this location, there would be no buffer between the Bayside Picnic and Parking Area and the Sinepuxent Bay, and moderate to high-power storm waves would continue to erode the shoreline.

There would be no disturbance to the floodplain related to management actions implemented under alternative 1 because there would be no new construction-related actions and no changes made to the location of the existing parking area or other facilities. The frequency, duration, and type of flooding as a result of maintaining the parking lot in the current location and configuration would be expected to continue to cause slight adverse impacts on the floodplain because of the forces of erosion, as the National Park Service would continue its policy of allowing natural processes to prevail.

The parking area would continue to convey sheetflow into surrounding areas during precipitation events relatively faster than natural highly permeable, sandy ground cover. The quantity and quality of stormwater would be the same as it is under existing conditions. Stormwater management features at the existing Bayside Picnic and Parking Area include drainage ditches around the perimeter of the parking area and culverts located east of the parking area. Stormwater would continue to be conveyed off the parking surface. Under alternative 1, these stormwater management features would be left in place and cleaned and repaired on an as needed basis. Over time the size of the parking area and drainage features would likely be reduced as a result of storm damage, yet there would be no measureable changes to floodplain functions. There would be no changes to the natural features that reduce flooding severity in the vicinity of the Bayside Picnic and Parking Area (wetlands and coastal topography); these natural features would continue to provide floodplain functions. The ecological functions of the floodplain, including temporary storage of floodwaters, dissipation of stormwater runoff, moderation of peak flows, groundwater recharge, prevention of erosion, and maintenance of water quality would continue unchanged under this alternative. The natural buffers (sandy beach, wetlands, and vegetation) in the vicinity of the study area would continue to help maintain the natural ecological functions and values of the floodplain and reduce flooding and erosion severity.

### **Cumulative Impacts**

Past, present, and reasonably foreseeable actions with the potential to impact floodplains in the study area include past repairs associated with storm damage response and management plans and actions with impacts within the floodplain. Repair activities are likely to continue into the future as storm events would continue to occur. NPS repair activities remove sand and sediment from the parking area and restore pre-storm event contours. By doing so, these repair activities would likely have minor beneficial impacts on floodplain functions. The intensity of effect would be considered minor because of the relatively limited extent of floodplain affected by the parking area.

Over time, portions of the asphalt in the parking area may erode and would no longer be replaced. This would also contribute slight beneficial impacts to the floodplain as the surface would return to sandy, more permeable conditions once natural flows of sediment transport return. Management activities, where several interests are balanced into one plan for example

the Resource Management Plan (NPS 1999), Maryland Coastal Bays Program, and current general management planning, including transportation planning would continue to have beneficial impacts on the floodplain. These plans and actions have altered or would alter conditions, with varied beneficial effects on floodplains within the national seashore. When the adverse impacts of alternative 1 are combined with the beneficial impacts of past, present and future plans, projects and activities affecting floodplains at the national seashore, the overall cumulative impacts would be beneficial. Alternative 1 would contribute a slight adverse increment to the cumulative impacts.

## Conclusion

The entirety of Assateague Island, including the Bayside Picnic and Parking Area is within the 100-year floodplain. The impact to floodplains associated with alternative 1 would be slight and adverse from maintaining the parking area in its current location, the frequency, duration, and type of flooding, and resulting sheetflow. When the limited extent of the impacts of alternative 1 are considered in the context of floodplain functions and values, these impacts would be considered slightly adverse. Alternative 1 would contribute a slight adverse increment to otherwise beneficial cumulative impacts.

## IMPACTS OF ALTERNATIVE 2

### Impacts

The proposed new parking area would be constructed either with asphalt and/or a clay base with clam shell aggregate. If constructed with asphalt, surface materials would continue to convey sheetflow into surrounding areas during precipitation events. If constructed with a clay base and clam shell aggregate, though not permeable, it 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. The additional acreage of impervious surface area would result in adverse impacts to the floodplain but, given their inland location these impacts would be slight.

Relocation of the existing parking area farther inland from the exposed tip of the peninsula under alternative 2 would gradually increase the natural buffer area as the existing parking area is phased out and removed, thereby improving the amount of pervious surface area and providing an additional natural buffer from sheetflow during precipitation events. Natural features that reduce flooding severity (wetlands and coastal topography) would continue to provide increased floodplain ecological functions. The chosen location and avoidance of wetlands would maintain the ability of wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization. The impact to the floodplain associated with alternative 2 would be beneficial as a result of moving the parking area inland and increasing the size of the buffer areas along the shoreline. Although small in areal extent, these impacts would contribute noticeable benefits to the natural functioning of the floodplains in the vicinity of the existing parking area. Portable, new facilities would be removed prior to storm activity so as not to impede water flow across the peninsula during storm events. Once the existing parking area is phased out, and disturbed areas were allowed to revert to natural conditions, floodplain func-

tions in this area of the peninsula would also be restored. General site cleanup measures would also improve floodplain conditions in this area. Restoring the current parking area to a more naturally vegetated condition would allow natural coastal processes to occur, with beneficial floodplain impacts.

Overall, the ecological functions of the floodplain, including temporary storage of floodwaters, dissipation of stormwater runoff, moderation of peak flows, groundwater recharge, and maintenance of water quality would improve under this alternative. Through time, relocation of the parking area and removal of the existing parking area will return the area to natural flows of sediment transport at the site. The natural buffers (sandy beach, wetlands, and vegetation) in the vicinity of the study area would continue to help maintain the natural ecological functions and values of the floodplain and reduce flooding and erosion severity.

Stormwater management measures 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 new Bayside Picnic and Parking Area. 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.

## **Cumulative Impacts**

As described for alternative 1, repairs associated with storm damage response and management plans have resulted in primarily beneficial cumulative impacts within the floodplain. The beneficial cumulative impacts associated with other management actions at the park, along with the slight adverse and beneficial impacts of alternative 2, would have a beneficial cumulative impact on floodplain functions. Alternative 2 would contribute a slight beneficial increment to the cumulative impacts.

## **Conclusion**

The entirety of Assateague Island is within the 100-year floodplain. The impact to floodplains associated with alternative 2 would be slight and adverse as a result of additional impervious surface area and beneficial as a result of moving the parking area inland from the exposed tip of the peninsula and thereby gradually increasing the size of the natural buffer along the shoreline of the floodplain as the existing parking area is phased out. The proposed location would maintain the ability of existing wetlands and expanded natural buffer area to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization. Alternative 2 would contribute a slight beneficial increment to otherwise beneficial cumulative impacts.

## **IMPACTS OF ALTERNATIVE 3**

### **Impacts**

Direct, indirect, and cumulative impacts to floodplains under alternatives 3 would be similar to those described under alternative 2. The additional acreage of impervious surface area would

result in slightly greater adverse impacts but, given the inland location of the new parking areas proposed, these impacts would still be considered slight.

Similar to alternative 2, stormwater management measures would be implemented pending coordination with the Maryland Department of Environment and identification of appropriate measures. Site specific stormwater design features could include an infiltration trench around the perimeter of the new Bayside Picnic and Parking Areas. 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.

## **Conclusion**

The entirety of Assateague Island is within the 100-year floodplain. The impact to floodplains associated with alternative 3 would be slight and adverse as a result of additional impervious surface areas and beneficial as a result of moving the parking area inland and thereby gradually increasing the size of the natural buffer on floodplain areas as the existing parking area was phased out. The proposed location would maintain the ability of existing wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization. Alternatives 3 would contribute a slight beneficial increment to otherwise beneficial cumulative impacts.

## **IMPACTS OF ALTERNATIVE 4, THE NPS PREFERRED ALTERNATIVE**

### **Impacts**

Direct, indirect, and cumulative impacts to floodplains under the preferred alternative would be similar to those described under alternatives 2 and 3. The additional acreage of impervious surface area would result in slightly greater adverse impacts but, given the inland location of the new parking area proposed, these impacts would still be considered slight.

Similar to alternatives 2 and 3, stormwater management measures would be implemented pending coordination with the Maryland Department of Environment and identification of appropriate measures. Site specific stormwater design features could include an infiltration trench around the perimeter of the new Bayside Picnic and Parking Areas. 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.

### **Conclusion**

The entirety of Assateague Island is within the 100-year floodplain. The impact to floodplains associated with the preferred alternative would be slight and adverse as a result of additional impervious surface areas and beneficial as a result of moving the parking area inland and thereby gradually increasing the size of the natural buffer on floodplain areas as the existing parking area was phased out. The proposed location would maintain the ability of existing wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline sta-

bilization. The preferred alternative would contribute a slight beneficial increment to otherwise beneficial cumulative impacts.

## **IMPACTS OF ALTERNATIVE 5**

### **Impacts**

The types of impacts to floodplains under alternative 5 would be similar to those described under alternative 2, except that the existing parking area would not be phased out, but would instead be demolished, and a portion of Bayside Drive would be demolished just south of the proposed new parking area. Demolition of the existing parking area would allow for a return of sandy, more permeable conditions that would restore floodplain functions sooner than other proposed action alternatives, and establish a larger buffer upon completion of the demolition process. Demolition of a portion of Bayside Drive would also return this portion of the paved road to more natural and permeable conditions, providing beneficial floodplain impacts. Once the disturbed areas were allowed to revert to natural conditions, floodplain functions in this area of the peninsula would be restored. General site cleanup measures and allowing previously disturbed areas to naturally revegetate would also improve floodplain conditions in these areas.

The additional acreage of impervious surface area in the new proposed parking area would result in adverse impacts but, given their inland location these impacts would be slight. Relocating the parking area inland would allow the natural features that reduce flooding severity (wetlands and coastal topography) to provide increased floodplain ecological functions. The proposed parking area location would maintain the ability of nearby existing wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization. The impact to floodplains associated with alternative 5 would be beneficial as a result of immediately moving the parking areas inland and allowing the previously existing parking area and a portion of Bayside Drive to naturally revegetate. Although small in areal extent, these impacts would contribute noticeable benefits to the natural functioning of the floodplain. The ecological functions of the floodplain, including temporary storage of floodwaters, moderation of peak flows, groundwater recharge, and maintenance of water quality would improve under this alternative. Through time, relocation of the parking area and removal of the existing parking area would return the site to natural flows of sediment transport erosion at the site. The natural buffers (sandy beach, wetlands, and vegetation) in the vicinity of the study area would continue to help maintain the natural ecological functions and values of the floodplain and reduce flooding and erosion severity.

### **Cumulative Impacts**

As described for alternative 1, past repairs associated with storm damage response and management plans have resulted in impacts within the floodplain. The beneficial cumulative impacts associated with other management actions at the park, along with the slight adverse and beneficial impacts of alternative 5, would have a beneficial cumulative impact on floodplain functions. Alternative 5 would contribute a slight beneficial increment to the cumulative impacts.

## Conclusion

The entirety of Assateague Island is within the 100-year floodplain. The impact to floodplains associated with alternative 5 would be slight and adverse as a result of additional impervious surface area and beneficial as a result of demolishing the existing parking area and a portion of Bayside Drive, and moving the parking area inland, thereby increasing the size of the natural buffer on floodplain areas. The proposed location would maintain the ability of wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization. Alternative 5 would contribute a slight beneficial increment to otherwise beneficial cumulative impacts.



## WILDLIFE AND WILDLIFE HABITAT, INCLUDING VEGETATION

### AFFECTED ENVIRONMENT

Wildlife, habitat, and vegetation along Assateague Island National Seashore are reflective of the harsh, beach environment, flat terrain, high groundwater table, sandy soils, tidal waters, wind, and salt spray, along with the legacy of human use of the barrier island (see discussion of horse and other introductions of animals on Assateague Island in “Chapter 1: Purpose and Need”). Studies to identify and inventory the flora and fauna on both the Virginia and Maryland sides of Assateague Island have been previously performed (Harvill 1967; Higgins et al. 1971; Hill 1986).

### Bird Species

The island is home to resident and migratory bird species. Assateague Island is situated along prominent strands of the Atlantic Flyway, where migratory birds are seen in great numbers resting in the shrub scrub vegetation of the project study area. The area is rich in wetland habitat that many types of birds use to rest and find food. Birds in the area include songbirds, dabblers, marsh and water birds, shorebirds, marine birds, and raptors. Passerines (songbirds) use their vocals to communicate their identity and location to other birds. They inhabit the marshes, wildflowers, and tall pine forests of the area and include numerous species of warblers, nut hatches, sparrows, red wing blackbirds, cardinals, jays, woodpeckers, and finches. Dabblers are waterfowl, such as ducks, swans, brants, and geese that feed on floating or submerged aquatic vegetation, grass, or insects. Some are year-round residents.

Migratory visitors include several species of shoveler ducks, pintails, mallards, widgeons, teal, ruddy ducks, canvasbacks, redheads, ring necked ducks, bluebills, mergansers, buffleheads, and goldeneyes. Shorebirds are a large and varied group of slender, long-legged birds that occur in aquatic and marine shore habitats (Lippson and Lippson 1984), and include the: American oystercatcher (*Haematopus palliatus*), greater yellowlegs (*Tringa melanoleuca*), least sandpipers (*Calidris minutilla*), lesser yellowlegs (*Tringa flavipes*), spotted sandpiper (*Actitis macularius*), whimbrel (*Numenius phaeopus*), Baird's sandpiper (*Calidris bairdii*), and dunlin (*Calidris alpina*). Waters off Assateague Island contain several species of marine birds, including albatrosses, petrels, shearwaters, storm-petrels, phalaropes, skuas, jaegers, gulls, terns, and alcids that may never come ashore. Raptors (birds of prey) on the island are impressive to see and include the bald eagle (*Haliaeetus leucocephalus*), rough-legged hawk (*Buteo lagopus*), peregrine falcon (*Falco peregrinus*), short-eared owl (*Asio flammeus*), northern harrier (*Circus cyaneus*), merlin (*Falco columbarius*), snowy owl (*Bubo scandiacus*), and American kestrel (*Falco sparverius*). The U.S. Fish and Wildlife Service identified 324 bird species on its checklist for the adjacent Chincoteague National Wildlife Refuge (USFWS 1999) and the list above is not all-inclusive. Bird checklists are available on the Assateague Island National Seashore website (<http://www.nps.gov/asis/learn/nature/birds/htm>). The Chesapeake and Delaware Bays harbor the largest concentrations of migratory shorebirds in the western hemisphere.

The geographic setting of the peninsula, supported by years of observations by amateur and professional birders, as well as avian researchers, suggests that these congregations are unique to the peninsula where the Bayside Picnic and Parking area is located, and other bayside locations along Assateague Island are not as significant. According to the eBird database, an online repository for bird observations administered by the Cornell Bird Lab, 276 species of birds have been recorded on the peninsula (Cornell Bird Lab, 2015:

<http://ebird.org/ebird/hotspot/L455820?yr=all&m=&rank=mrec>).

## Mammals, Reptiles, and Amphibians

In comparison to birds, relatively few species of mammals, reptiles, and amphibians are present at the national seashore. Mammals of Assateague Island are typical of the coastal area and broadly include white-tailed deer (*Odocoileus virginianus*) the non-native sika deer (*Cervus japonica*), red fox (*Vulpes vulpes*), raccoons (*Procyon lotor*), and opossum (*Didelphis marsupialis*). Amphibians and reptiles known to be present include Fowler's toads (*Bufo woodhousii fowleri*), green treefrogs (*Hyla cinerea*), gray treefrogs (*Hyla versicolor*), southern leopard frogs (*Rana sphenoccephala*), New Jersey chorus frogs (*Pseudacris triseriata kalmi*), bullfrogs (*Rana catesbeiana*), green frogs (*Rana clamitans melanota*), black rat snake (*Elaphe obsoleta obsoleta*), hognose snake (*Heterodon platirhinos*), box turtle (*Terrapene carolina*), northern diamondback terrapin (*Malaclemys terrapin terrapin*), five-lined skinks (*Eumeces fasciatus*) and northern fence lizards (*Sceloporus undulatus hyacinthinus*). Many of these species may be present within or adjacent to the habitats of the project study area.

## Wildlife Habitat

Habitats within the Bayside Picnic and Parking Area are characterized by woodland and dense shrublands in upland areas, estuarine intertidal shrub-scrub in the upper intertidal zone, and emergent estuarine vegetation in the lower intertidal zones. Woodland species present include loblolly pine (*Pinus taeda*), black cherry (*Prunus serotina*), American sweetgum (*Liquidambar styraciflua*), eastern red cedar (*Juniperus virginiana*), and American Holly (*Ilex opaca*) (Hulslander 2014, personal communication). The estuarine intertidal shrub-scrub along the northern coastline of the peninsula and the southern portion of the study area (near the Life of the Marsh Trail) present excellent examples of gradation between uplands (the shrublands) and the emergent marsh vegetation. This vegetative community consists of salt bush (*Baccharis halimifolia*), bayberry (*Myrica cerifera*), and wax myrtle (*Morella cerifera*). Observed ground cover was sparse, with occurrences of *Paspalum* spp., wild onion (*Allium canadense*) and very sporadic occurrences of giant cordgrass (*Spartina cynosuroides*). Farther along the mesic gradient toward the shoreline, an herbaceous emergent marsh fringes the shoreline with smooth cordgrass (*Spartina alterniflora*) as the dominant ground cover, and common reed and giant cordgrass occurring sporadically. The emergent marsh portion of the northern coastline of the peninsula was subject to aerial treatment to control *Phragmites australis* infestations on Assateague Island (Chase 2013, personal communication). These efforts of control appear successful, as no *Phragmites* clusters were observed within the study area.

These habitats on the peninsula provide food, shelter, and cover for wildlife. The thick shrub scrub coastal vegetation found in undeveloped or previously developed thickets provide screening and resting habitat for some of Assateague Island's wild horse population. The peninsula is also important as a resting and disembarking location for migratory birds. Habitats on the peninsula support unique concentrations of migratory birds during spring and fall migrations. Because of the geographical configuration of the peninsula, and the prominent position into the bay, migratory birds concentrate in very large numbers in the woodland/shrub-scrub habitat between the end of the camping loops and the existing Bayside Picnic and Parking Area. The tip of the peninsula is one of the closest points to the mainland. These migrants, consisting of birds that have migrated long distances along the coast or over the ocean during the preceding night, likely exhibit physiological stress and are in need of immediate shelter, protection from predators, and food. The prominence of the peninsula in the bay and the proximity to the mainland attracts migrants to congregate. On a typical flight day morning, hundreds or thousands of migrants concentrate in the woody habitats at the tip of the peninsula, feeding and resting, and waiting for ideal conditions to cross the bay.

Predictions regarding climate change include the loss of bay islands, marshes, and beaches in the Chesapeake and Delaware Bays. Potential resource impacts from climate change include inundation from sea level rise, increased coastal flooding, storm surge, and/or changes in hydrology. Vegetation and marsh species may shift as hydrologic and salinity changes. Increases in water temperature would cause die-outs or shifts in the latitudinal range of sea grasses, increased potential for disease among bay species, and increased turbidity from sediment run-off during intense rainfalls that would cause water quality concerns. These effects would impact wildlife and habitats in the region, including the Bayside Picnic and Parking Area. Shifts as a result of increases in air and water temperature and summer heat index, greater swings in seasonal precipitation, and increased coastal flooding and habitat loss from sea level rise driven inundation would impact resident and migrating species to varied degrees (USFWS no date).

## **IMPACTS OF ALTERNATIVE 1: NO ACTION / CONTINUE CURRENT MANAGEMENT**

### **Impacts**

Under alternative 1, there would be no new construction-related actions and no proposed changes to the current footprint or location of the Bayside Picnic and Parking Area. Routine maintenance activities would continue to occur with little, temporary disturbance to wildlife. No observable or measurable impacts would be anticipated on the abundance and/or diversity of wildlife and vegetation species as a result of proposed actions.

Over time, the size and functionality of the existing Bayside Picnic and Parking Area and amenities would likely decrease because of damages from future storm activity, and visitor use could decrease. With a potential decrease in visitors, wildlife in this vicinity that are sensitive to human presence may benefit from a reduced human presence. Such a change would likely be seasonal, and would have only a slight impact on wildlife in the vicinity of the Bayside Picnic and Parking Area. Impacts to wildlife, habitat, and vegetation would be negligible.

### **Cumulative Impacts**

Past, present, and reasonably foreseeable actions that have the potential to impact wildlife, habitat, and vegetation in the study area include continued NPS policies to protect natural resources, and management plans and activities that improve or restore wildlife habitat. Management plans such as the Resource Management Plan (NPS 1999), Maryland Coastal Bays Program, and the Draft Comprehensive Conservation Plan for the Chincoteague and Wallops Island National Wildlife Refuges, include management and/or improvements and restoration efforts for wildlife habitats within the national seashore and adjacent national wildlife refuge. These past, present and future actions would improve wildlife conditions in the local area, with benefits to species dependent on regional resources, including those provided in the study area. Additionally, the National Park Service would continue its “no net loss of wetlands” policy and not cause adverse impacts to wetlands. These efforts would continue to have beneficial impacts on the wildlife, habitat, and vegetation within the national seashore. When the negligible impacts of alternative 1 are combined with the beneficial impacts of past, present and future plans, projects and activities affecting wildlife, habitats, and vegetation at the national seashore, the overall cumulative impacts would be beneficial. Alternative 1 would not contribute substantially to the overall beneficial cumulative impacts.

## Conclusion

Alternative 1 would have very limited impacts on wildlife, wildlife habitat, and vegetation resulting from the continued use of the Bayside Picnic and Parking Area in its current location because no new construction would occur, nor would there be planned changes to the existing conditions. Alternative 1 would not contribute substantially to the overall beneficial cumulative impacts to wildlife, wildlife habitats, and vegetation.

## IMPACTS OF ALTERNATIVE 2

### Impacts

Under alternative 2, wildlife habitat and vegetation would be permanently altered to accommodate the new parking area (1.2 acres), handicap drop off/parking area (0.06 acres), dump station (0.21 acres), comfort station (0.01 acres), trails (0.12 acres), and new campsites (0.07 acres). Over time, as use of the existing parking area is phased out, any remaining lands within the existing parking area would be allowed to gradually revert to natural habitat. Vegetation would be cleared (approximately 1.2 acres for the parking area, and additional acreage as identified above) to make way for the new parking area and other amenities. Impacts to vegetation would be somewhat offset over time as the area where the existing parking area is located would be allowed to revert to natural habitat following its gradual deterioration and phased out use. The proposed 2 new campsites are located in areas previously disturbed during the original campground construction; accordingly, there would be minimal loss of vegetation. Placement of portable picnic tables would require minimal clearing of groundcover vegetation in the picnic area, as the picnic tables would be placed in a manner to minimize impact. Implementation of alternative 2 would have slight adverse impacts on wildlife as only a small percentage of the overall wildlife community would be temporarily impacted during construction activities or loss of vegetation.

Some wildlife habitat fragmentation would occur from the development of new facilities; however, because adequate wildlife habitat would continue to be available in the immediate area, adverse impacts to wildlife from habitat fragmentation would likely be minimal. Sufficient habitat and natural communities in the vicinity of the proposed study area would allow wildlife to relocate and easily adapt to maintain normal biological activities. Impacts to wildlife would likely be of short duration during construction and well within natural fluctuations. Temporary impacts to wildlife could occur during construction activities as a result of increased noise and heavy equipment. However, any wildlife displaced during construction activities would likely return to the area and resume normal behaviors after construction activities were completed. Construction would be timed seasonally to minimize impacts to migratory and shoreline bird populations.

### Cumulative Impacts

As described for alternative 1, NPS policies to protect wetlands and habitat and management plans and activities that improve or restore wildlife habitat would continue to result in beneficial impacts on the wildlife, habitat, and vegetation within the national seashore. When the limited adverse impacts of alternative 2 are combined with the beneficial cumulative impacts associated with other management actions at the park, the overall cumulative impacts would be beneficial.

Alternative 2 would contribute a slight adverse increment to the overall beneficial cumulative impacts.

## **Conclusion**

Alternative 2 would have limited impacts on wildlife, habitat, and vegetation because of the minimal footprint of the proposed new parking area and amenities, availability of suitable adjacent habitat, the minimal disturbance time, and the return of existing parking area to natural habitat. Alternative 2 would contribute an imperceptible adverse increment to the overall beneficial cumulative impacts on wildlife, and wildlife habitat, including vegetation.

## **IMPACTS OF ALTERNATIVE 3**

### **Impacts**

Impacts to wildlife, wildlife habitat, and vegetation resulting from the implementation of alternative 3 would be similar to those described under alternative 2. Under alternative 3, habitat and vegetation would be permanently altered to accommodate the new parking areas (1.9 acres), handicap drop off/parking area (0.06 acres), dump station (0.21 acres), comfort station (0.02 acres), and trails (0.4 acres). The existing parking area would be allowed to revert to natural habitat following its gradual deterioration and phased out use. Implementation of alternative 3 would have slight adverse impacts on wildlife as only a small percentage of the overall wildlife community would be impacted by construction activities. Some wildlife habitat fragmentation could occur from the need for additional vegetation removal for the two proposed parking areas; however, because adequate wildlife habitat would continue to be available in the immediate area, adverse impacts to wildlife would likely be minimal as a result of fragmentation. Sufficient habitat and natural communities in the vicinity of the proposed study area would allow wildlife to relocate and easily adapt to maintain normal biological activities. Impacts to wildlife and wildlife habitat would likely be of short duration during construction and well within natural fluctuations. Temporary impacts to wildlife could occur during construction activities from increased noise and heavy equipment. However, any wildlife displaced during construction activities would return to the area and resume normal behaviors after construction activities were completed. Construction would be timed seasonally to avoid impacts to migratory and shoreline bird populations.

### **Cumulative Impacts**

As described for alternative 1, NPS policies to protect wetlands and habitat and management plans and activities that improve or restore wildlife habitat would continue to result in beneficial impacts on the wildlife, habitat, and vegetation within the national seashore. When the minor adverse impacts of alternative 3 are combined with the beneficial cumulative impacts associated with other management actions at the park, the overall cumulative impacts would be beneficial. Alternative 3 would contribute a slight adverse increment to the overall beneficial cumulative impacts.

## Conclusion

Alternative 3 would have limited impacts on wildlife, habitat, and vegetation because of the minimal footprint of the proposed new parking areas and amenities, availability of suitable adjacent habitat, the minimal disturbance time, and the return of the existing parking area to natural habitat. Alternative 3 would contribute an imperceptible adverse increment to the overall beneficial cumulative impacts on wildlife and wildlife habitat.

## IMPACTS OF ALTERNATIVE 4, THE NPS PREFERRED ALTERNATIVE

### Impacts

The types of impacts to wildlife, wildlife habitat, and vegetation resulting from the implementation of the preferred alternative would be similar to those described under alternative 2. Under alternative 4, habitat and vegetation would be permanently altered to accommodate the new parking area (1.5 acres), handicap drop off/parking area (0.06 acres), dump station (0.21 acres), comfort station (0.01 acres), trails (0.37 acres), and new campsites (1.3 acres). Alternative 4 utilizes an existing disturbed area for the footprint of the new parking area (Bayside Campground Loop C) and therefore would disturb less contiguous habitat for the new parking area. However, placing the Bayside Picnic and Parking Area in this location places visitors closer to areas where migratory species are reported to congregate along the vegetated buffer, and therefore visitors may disturb migratory species resting and feeding in this area. This level of disturbance would be slightly greater than campground use due the density of parked vehicles, and because the traffic in this area would increase noise levels.

The addition of a new campground loop under this alternative would expand the overall footprint of day and nighttime use, the human presence, and level of ground disturbing activity farther to the east. The proposed new campground loop is located in an area previously disturbed for camping purposes years ago; therefore, vegetation in this area is more sparse than in other areas along the peninsula farther to the west.

The existing parking area would eventually be allowed to revert to natural habitat. Implementation of the preferred alternative would have some adverse impacts on wildlife as a small percentage of the overall wildlife community would be impacted by construction activities. Some wildlife habitat fragmentation could occur from placement of the proposed sites; however, because the proposed new parking area location is in an already developed area and adequate wildlife habitat would continue to be available in the immediate area, adverse impacts to wildlife would likely be minimal as a result of fragmentation. Sufficient habitat and natural communities in the vicinity of the proposed study area would allow wildlife to relocate and easily adapt to maintain normal biological activities. Impacts to wildlife and wildlife habitat would likely be of short duration and well within natural fluctuations. Temporary impacts to wildlife could occur during construction activities from increased noise and heavy equipment. However, any wildlife displaced during construction activities would return to the area and resume normal behaviors after construction activities were completed. Construction would be timed seasonally to avoid impacts to migratory and shoreline bird populations.

## **Cumulative Impacts**

Past, present, and reasonably foreseeable actions that have the potential to impact wildlife, habitat, and vegetation in the study area include management activities, including those where several interests are balanced into one plan. Management activities, where several interests are balanced into one plan for example the Resource Management Plan (NPS 1999), Maryland Coastal Bays Program, and the Draft Comprehensive Conservation Plan for the Chincoteague and Wallops Island National Wildlife Refuges will continue to have beneficial impacts on the wildlife, habitat, and vegetation. When the minor adverse impacts of alternative 4 are combined with the beneficial impacts of past, present and future plans, projects and activities affecting wildlife, habitat, and vegetation at the national seashore, the overall cumulative impacts would be beneficial. Alternative 4 would contribute a slight adverse increment to the overall beneficial cumulative impacts. As described for alternative 1, NPS policies to protect wetlands and habitat and management plans and activities that improve or restore wildlife habitat would continue to result in beneficial impacts on the wildlife, habitat, and vegetation within the national seashore. When the minor adverse impacts of the preferred alternative are combined with the beneficial cumulative impacts associated with other management actions at the park, the overall cumulative impacts would be beneficial. Alternative 4 would contribute a slight adverse increment to the overall beneficial cumulative impacts.

## **Conclusion**

The preferred alternative would have limited impacts on wildlife, habitat, and vegetation because of the additional footprint of the proposed new parking and camping areas and other proposed amenities, availability of suitable adjacent habitat, the minimal disturbance time, and the return of the existing parking area to natural habitat. Alternative 4 would contribute a slight adverse increment to the overall beneficial cumulative impacts on wildlife and wildlife habitat.

## **IMPACTS OF ALTERNATIVE 5**

### **Impacts**

The types of impacts to wildlife, wildlife habitat, and vegetation resulting from implementation of alternative 5 would be similar to those described under alternative 2. Under alternative 5, habitat and vegetation would be permanently altered to accommodate the new parking area (1.5 acres), dump station (0.21 acres), comfort station (0.01 acres), and new campsites (0.52 acres). Upon completion of construction of the new parking area, the existing parking area would be demolished and allowed to revert to natural habitat. The location of the proposed new parking area south of Campground Loop B is adjacent to Bayside Drive, with vegetation that is not as dense as the areas along the western edge of the peninsula. By locating the parking area near Bayside Drive and adjacent to camping areas, disturbance to wildlife would be minimized because wildlife in this area may already be accustomed to road noise, and campground use.

Implementation of alternative 5 would have slight adverse impacts on wildlife as only a small percentage of the overall wildlife community would be temporarily impacted by construction activities. Some wildlife habitat fragmentation could occur from placement of the proposed parking, picnic, and camping areas; however, because adequate wildlife habitat would continue to be available in the immediate area, and parking and camping would be proximally located, adverse impacts to wildlife would likely be minimal as a result of fragmentation. Sufficient habi-



tat and natural communities in the vicinity of the proposed study area would allow wildlife to relocate and easily adapt to maintain normal biological activities. Impacts to wildlife and wildlife habitat would likely be of short duration and well within natural fluctuations. Temporary impacts to wildlife could occur during construction activities from increased noise and heavy equipment. However, any wildlife displaced during construction activities would return to the area and resume normal behaviors after construction activities were completed. Construction would be timed seasonally to avoid impacts to migratory and shoreline bird populations.

## **Cumulative Impacts**

Past, present, and reasonably foreseeable actions that have the potential to impact wildlife, habitat, and vegetation in the study area include management activities, including those where several interests are balanced into one plan. Management activities, where several interests are balanced into one plan for example the Resource Management Plan (NPS 1999), Maryland Coastal Bays Program, and the Draft Comprehensive Conservation Plan for the Chincoteague and Wallops Island National Wildlife Refuges will continue to have beneficial impacts on the wildlife, habitat, and vegetation. When the minor adverse impacts of alternative 5 are combined with the beneficial impacts of past, present and future plans, projects and activities affecting wildlife, habitat, vegetation at the national seashore, the overall cumulative impacts would be beneficial. Alternative 5 would contribute a slight adverse increment to the overall beneficial cumulative impacts. As described for alternative 1, NPS policies to protect wetlands and habitat and management plans and activities that improve or restore wildlife habitat would continue to result in beneficial impacts on the wildlife, habitat, and vegetation within the national seashore. When the minor adverse impacts of alternative 5 are combined with the beneficial cumulative impacts associated with other management actions at the park, the overall cumulative impacts would be beneficial. Alternative 5 would contribute an imperceptible adverse increment to the overall beneficial cumulative impacts.

## **Conclusion**

Alternative 5 would have limited impacts on wildlife, habitat, and vegetation because of the minimal footprint of the proposed new areas, availability of suitable adjacent habitat, the minimal disturbance time, and the return of the existing parking area to natural habitat. Alternative 5 would contribute an imperceptible adverse increment to the overall beneficial cumulative impacts on wildlife and wildlife habitat.

## VISITOR USE AND EXPERIENCE AND RECREATION RESOURCES

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 human-made disturbances, seashore viewsheds, night skies, and wildlife viewing. 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 and Parking Area provides access to a variety of these activities. The park's proximity to the Washington D.C., Baltimore, and Philadelphia metropolitan areas draws many visitors.

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 2013b). Although the summer months receive the greatest number of visits, migratory bird watching and hunting attract visitors during what were once considered non-traditional visitation periods in the fall and spring. The Bayside Picnic and Parking Area provides access to visitors year-round. Climate change could alter the timing of visits at the national seashore. Visitor numbers currently tend to dip in the fall and winter months, but higher temperatures associated with climate change could shift visitation toward cooler seasons. An increase in the frequency, duration, and intensity of storms associated with climate change could affect visitor experiences, access to coastal areas, and the condition of visitor services and facilities. It is anticipated that as sea levels rise, coastal hazards such as coastal flooding, would increase and accelerate coastal erosion (Maryland Department of Land and Natural Resources 2008). Sea level rise and increased flooding and erosion could limit visitor access in areas of the national seashore. Specific impacts to the national seashore are as yet unknown; however, it is anticipated the existing Bayside parking area at the tip of the peninsula would continue to be subject to erosion. As erosion continues, availability of parking at Bayside would be jeopardized.

The park's visitation consists primarily 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 annually by school bus for scheduled educational programs. 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 the three different barrier island habitats.

Under the park's existing general management plan and current general management planning efforts, the Bayside Picnic and Parking Area and the entire Bayside Peninsula are included in the developed management zone. The area is managed to offer interpretive, educational, and management programs that provide a range of services to visitors. Visitor amenities at the Bayside Picnic and Parking Area include a permanent restroom, 10-12 picnic tables, and 6 grills. There is a canoe, bike, and kayak concession stand located off the northwest corner of the parking area. There are two drinking water pumps, one in front of the restrooms and one in front of the concession stand, and an informational kiosk is located in the northwest corner of the parking area. The parking area and adjacent visitor amenities are universally accessible.

Bayside Campground is one of two campgrounds within the developed area of the national seashore. The campground, located on the northern side of the Bayside Peninsula, is open to tents, trailers, and recreational vehicles, although there are no hookups available. The campground contains 48 campsites spread out within three campground loops (A, B, and C; see figure 4). Each campsite has a picnic table and a fire ring for use by visitors. A drive-in "Generator-Free Zone" is available for campers in Loop B. Traffic in the campground loops is one-way, with visi-

tors entering at Loop A or between Loops A and B, and driving east to west on both sides of each loop to exit out of Loop C. The campground takes reservations from mid April through mid October, correlating with and extending beyond the peak visitation period. In 2013, there were 8,926 visitors to the campground with the largest number of reservations occurring in Loop A, the largest of the three campground loops (NPS 2014d). During the remainder of the year, the campground is open to campers on a walk-in basis. During the off season, the Bayside Campground offers a desirable location for visitors because it offers increased protection from the wind as a result of the existing trees and vegetation, while also providing stunning views of the bay and wildlife. The campground typically has some occupants year round with an estimated 1,500 campers during the 2013-2014 off season (October-April) (Hulslander 2014). Assateague Island falls within the Atlantic migratory flyway and birding is a popular activity at the Bayside Picnic and Parking 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 and Parking 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 Sinepuxent Bay. Two other nearby trails also provide access for birders 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). Portions of the peninsula have thick undergrowth that provides cover and habitat for birds and other wildlife (see also the Wildlife and Wildlife Habitat section) and are sometimes visited by the national seashore's wild horses. These densely vegetated areas are not accessible or attractive for visitor use because of insects and the type of vegetated cover.

## **IMPACTS OF ALTERNATIVE 1: NO ACTION / CONTINUE CURRENT MANAGEMENT**

### **Impacts**

There would be no change in the fundamental nature of visitor experience or recreational opportunities at the Bayside Picnic and Parking Area or the Bayside Campground under the no action alternative. This would be the case until future storms cause additional erosion and resulting constraints, elimination of access, and/or damage to amenities. The Bayside Picnic and Parking Area would remain susceptible to damage during future storm events. There would be adverse impacts on visitor use and experience resulting from any temporary closures associated with necessary clean up and maintenance projects following future storm events. The Bayside Picnic and Parking Area would likely continue to shrink in size as a result of erosion caused by the shifting shoreline. The potential for extended and eventually permanent parking area closures would increase. Parking area conditions could deteriorate to the point that the quality of the visitor experience would be diminished for visitors that favor this area. Adverse impacts on visitor use and recreation resources under the no action alternative could be considerable, depending on the severity and season of future storm events and erosion/damage incurred.

The parking area and campground would remain open in their current condition and visitors would continue to have access to the areas and resources they serve as long as possible, subject to future storm damage. The parking and picnic area, campground, and adjacent amenities would remain universally accessible. The canoe, bike, and kayak concession stand would remain in its current location for as long as possible providing beach access off the tip of the peninsula. If future storm damage threatened its location, the concession stand could be moved slightly inland depending on the damages and available space. If the concession stand had to be re-

moved because of insufficient space, the lack of access to onsite rental equipment would result in ongoing adverse impacts to visitor experience.

Bayside Campground and Bayside Picnic and Parking Area would remain separated by an area of thick vegetation. This vegetated area would continue to serve as a visual barrier between the user groups at the campground and the Bayside Picnic and Parking Area. The distance between the campground and the parking area and vegetation would continue to provide some privacy to campground users and allow for some distance between the high density day use area and the campground. The separation of these two use areas would result in beneficial impacts to campground visitors looking for a quieter environment with some privacy during the day. However, because the parking lot does not allow for overnight parking and the proximity of individual campsites within the campground, these beneficial impacts would be minimal depending on the time of year and the number of campers present.

## 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.

Actions that have adverse impacts on visitor experience in and around the park include facility maintenance, temporary closures, and the use of machinery and equipment for resource management. These routine management actions have a small adverse impact on visitor use and experience, such as restrictions to visitor access or interference with visitor enjoyment of the park. Some visitors may be required to change their plans if an area of the park they want to visit is temporarily closed. Visitors may not be able to access all areas of the park. However, such management actions are generally of short duration and these inconveniences are not likely to impact visitors to a large degree.

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 would alter conditions, with varied beneficial and adverse temporary effects on visitor experience. Overall, the effects on visitor experience would be beneficial.

The potential for extended and eventually permanent parking area closures at the Bayside Picnic and Parking Area would contribute a considerable adverse impact because of the popularity of this area and because there are limited bayside access points in the park. However, there are several other parking and picnic areas in other areas of the national seashore and on the Bayside Peninsula; therefore, the overall cumulative impact on visitor use and experience within the national seashore as a whole would be felt more by some user groups than others and would alter some visitor use patterns.

Adverse and beneficial cumulative impacts associated with other management actions at the park, along with the adverse impacts of alternative 1, would have a slight adverse cumulative impact on visitor experience and recreation resources. Alternative 1 would contribute a moderate adverse increment to cumulative impacts on visitor experience.

## Conclusion

Under the no action alternative, there would be adverse impacts on visitor use and experience resulting from any temporary and/or eventual permanent closures associated with future storm events, and resulting damage and erosion. Parking area conditions could deteriorate to the point that the quality of the visitor experience would be diminished for visitors that favor use of this area. The overall impact to visitor use and experience and recreation resources could be slight to considerable, individually and cumulatively, depending on the severity and season of future storm events. The continued separation of Bayside Campground use and Bayside Picnic and Parking Area use afforded by the vegetated area in between these sites provides a slight benefit to those visitors seeking a relatively quiet environment and some privacy during the day.

## IMPACTS OF ALTERNATIVE 2

### Impacts

Relocating the Bayside Picnic and Parking Area would improve the visitor experience by providing a more sustainable parking facility because the proposed location would be less susceptible to future storm damage. The relocated picnic area, parking area, and trails to the adjacent amenities and shoreline would be universally accessible and would continue to provide low-impact public access with benefits to visitor use and experience. Long-term maintenance requirements and temporary closures would likely decrease because the new parking and picnic area would be located in areas less prone to damage and erosion during future storm events. Parking lot capacity would be more stable over time because the inland location would be less susceptible to shoreline erosion. A more sustainable parking location would allow for extended visitor access on the Bayside peninsula. The farther inland location would decrease the number of times visitors would be inconvenienced because of temporary parking area closures. In addition, following the phased out use of the existing Bayside Picnic and Parking Area, the new trail and resulting open area could provide additional access for visitors interested in watching migratory birds in the area. Thus, the impacts on visitor use and experience from the relocation of the parking area would be expected to be moderately beneficial.

Relocating the canoe, bike, and kayak concession stand east of the new proposed parking area with beach access on the southern portion of the peninsula could impact visitors depending on the activity in which they are participating. Some user groups, such as wind surfers, prefer to engage in activities off the tip of the peninsula. Other user groups, such as kayakers looking for calm waters, prefer being south of the peninsula. Depending on their recreation activity, relocating the concession stand could either adversely or beneficially impact visitors. Because of the relatively close proximity of the newly proposed location to its previous location and the mobility of water-based recreation activities, impacts to different user groups would be minimal.

Relocation of the dump station and two campsites from Loop C to an area between Loops B and A could cause some temporary adverse impacts to returning visitors by adding confusion and impeding smooth traffic flow until they became adjusted to the new layout. Those campers seeking solitude within the Loop C campground could be adversely impacted from the increased noise and activity resulting from the proximity of the proposed parking lot to the remaining campsites within Loop C. However, because of the limited number of campsites within this loop, and because the parking lot would not allow for overnight parking, these impacts would be temporary and slight.

Traffic control measures would be established during construction and could result in a temporary inconvenience for visitors. Pedestrian access to Sinepuxent Bay would be rerouted to provide safe entrance for visitors during construction. Construction of the new parking area and removal of the existing parking area 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; however, adverse impacts from construction would be slight and temporary.

If a clay base with clam shell aggregate was used in the new proposed parking area, it would require monthly grading by park staff during the peak season and occasional resurfacing with clam shells. Routine maintenance of the parking area could result in temporary closures. However, these tasks would be scheduled during non-peak visitation hours to the extent practicable. Slight adverse impacts to visitor use and experience would result from temporary disruptions caused by maintenance of the parking area.

Access to additional amenities, including picnic tables and grills, restrooms and a potential shower / foot wash station, would improve the visitor experience and result in a beneficial impact to visitor use and experience and recreational resources.

Under alternative 2, the new parking area location would require an increase of approximately 600 feet that visitors would need to travel to the tip of the peninsula. However, any adverse impacts to visitors would be minor when compared to current conditions during the peak season that require visitors to walk longer distances when the parking lot is full and they park along the road. Some of these adverse impacts would be minimized by the addition of a loading / unloading zone at the southern end of the existing Bayside Parking Area and closer proximity from the parking area to the kayak concession.

## **Cumulative Impacts**

As described for alternative 1, recreational opportunities and other maintenance and management actions have resulted in impacts to the visitor experience and recreation resources. Adverse and beneficial cumulative impacts associated with other management actions at the park, along with the overall beneficial impacts of alternative 2, would have a beneficial cumulative impact on visitor experience and recreation resources. Alternative 2 would contribute a moderate beneficial increment to cumulative impacts on visitor experience.

## **Conclusion**

As described above, alternative 2 would result in temporary adverse and overall beneficial impacts on visitor experience and recreation resources. Adverse impacts would be primarily related to temporary noise and traffic control measures associated with construction of the new parking area location and from the noise and intrusion that would result from the closer location of the relocated parking and picnic area activity to campground Loop C compared to alternative 1. Overall beneficial impacts would primarily be associated with the increased sustainability of the new parking area, which would allow for continued access to the Bayside Peninsula and the visitor amenities located there. Alternative 2 would contribute a moderate beneficial increment to cumulative impacts on visitor experience.

## IMPACTS OF ALTERNATIVE 3

### Impacts

Relocating the Bayside Picnic and Parking Area into two smaller parking areas farther inland would result in impacts similar to those described for alternative 2. Benefits to the visitor experience would result from the increased sustainability of a location less susceptible to future storm damage, continued universally accessible amenities, decreased maintenance requirements and temporary closures, increased parking capacity stability, and additional pedestrian access on the tip of the Bayside Peninsula. Under alternative 3, the eastern most parking area would be farther inland from the exposed tip of the peninsula than under any other proposed alternative. The inland location of both parking areas, and especially the most eastern area, would increase the sustainability of the parking areas and provide beneficial impacts by allowing for extended visitor access to the Bayside peninsula.

Similar to alternative 2, relocating the canoe, bike, and kayak concession stand to the south side of the peninsula could impact visitors depending on the activity in which they are participating. Depending on their recreation activity, relocating the concession stand could either adversely or beneficially impact visitors, although the magnitude of the impacts would be minimal based on visitor's relative mobility in the water and proximity to the former location.

Under alternative 3, the parking area just south of Loop C of the Bayside Campground would be adjacent to the new picnic area, kayak concession, and other amenities. This parking area would also be much closer to the trail to the Sinepuxent Bay shoreline. The second parking area would be located farther east between Bayside Campground Loops A and B and would require visitors to walk at least 1,000 feet to reach any visitor amenities, and even farther (over 2,000 feet) to reach the tip of the peninsula. Partitioning the parking and moving roughly half of the available parking spots farther away from visitor amenities would increase the distance approximately 600 feet from the western lot and approximately 2,000 feet from the eastern lot to the tip of the peninsula) visitors need to walk to access these amenities and therefore result in adverse impacts to the visitor experience. Adverse impacts to visitors would range from minor to moderate depending on which lot visitors parked in and what areas of the peninsula they were trying to access. During the peak season, visitors sometimes have to walk longer distances to these locations once the parking area is full and people begin parking along the road such that parking in the western lot would not be very different than existing conditions. The increase the distance visitors would need to walk from the eastern parking area in order to access the tip of the peninsula and different amenities and the new parking area configuration could change visitor use patterns on the peninsula during peak season. Some of the adverse impacts would be minimized by the addition of a loading / unloading zone near the peninsula and closer proximity from one of the parking areas to the kayak concession.

Relocation of the dump station and a change in the traffic pattern within Loop C of the Bayside Campground requiring exiting traffic to go through the western parking lot could cause some temporary adverse impacts to returning visitors by adding confusion and impeding smooth traffic flow until they became adjusted to the new layout and traffic pattern. Campers within all three campground loops could be adversely impacted from the increased noise and activity resulting from the closer proximity of the two proposed parking lot locations to the campground campsites. However, because the parking areas would not allow for overnight parking, these impacts would be limited during the daytime, with resulting slightly adverse impacts.

Adverse impacts on visitor use and experience and recreational resources during construction would be the same as those mentioned under alternative 2 and would consist of potential noise, traffic delays, temporary closures, and alternative access routes; however, temporary adverse

impacts from construction would be minor as a result of timing construction during non-peak timeframes.

If clay base and clam shell aggregate materials were used in the proposed new parking areas, impacts from the use of this material would be the same as those mentioned for alternative 2 and would consist of minimal adverse impacts resulting from temporary closures associated with routine scheduled maintenance.

As described under alternative 2, increased amenities proposed under this alternative would result in beneficial impacts to visitor use and experience and recreational resources.

## **Cumulative Impacts**

As described for alternative 1, recreational opportunities and other maintenance and management actions have resulted in impacts to the visitor experience and recreation resources. Adverse and beneficial cumulative impacts associated with other management actions at the park, along with the overall beneficial impacts of alternative 3, would have a beneficial cumulative impact on visitor experience and recreation resources. Alternative 3 would contribute a minor beneficial increment to cumulative impacts on visitor experience.

## **Conclusion**

As described above, alternative 3 would result in temporary adverse and overall beneficial impacts on visitor experience and recreation resources. Adverse impacts would be primarily related to temporary noise and traffic control measures associated with construction, increased confusion and disruption to traffic associated with the new parking area location, and the noise and intrusion that would result from the closer location of the two parking areas to campsites within the campground. Beneficial impacts would primarily be associated with the increased sustainability of the new parking area, which would allow for continued access to the Bayside Peninsula and the visitor amenities located there. Slight adverse impacts would result from the increased distance visitors would be required to travel from the more eastern parking area to the visitor amenities. Alternative 3 would contribute a minor beneficial increment to cumulative impacts on visitor experience.

## **IMPACTS OF ALTERNATIVE 4, THE NPS PREFERRED ALTERNATIVE**

### **Impacts**

Relocating the Bayside Picnic and Parking Area farther inland in the area now occupied by campground Loop C would result in similar impacts to those described for alternative 2. Benefits to the visitor experience would result from the increased sustainability of a location less susceptible to future storm damage, continued universally accessible amenities, decreased maintenance requirements and temporary closures, increased parking capacity stability, and additional pedestrian access on the tip of the Bayside Peninsula.

Similar to alternative 2, relocating the canoe, bike, and kayak concession stand to either the south or north side of the peninsula could impact visitors depending on the activity in which they are participating. Depending on their activity, relocating the concession stand could either



adversely or beneficially impact visitors, although the magnitude of the impacts would be minimal based on visitors' relative mobility in the water and proximity to the former location.

Under the preferred alternative, the new parking area location would require an increase in the distance visitors would need to travel to the tip of the Bayside Peninsula of approximately 550 feet. However, any adverse impacts on visitors would be minor because during the peak season, visitors sometimes have to walk longer distances to these locations once the parking area is full and people begin parking along the road such that this would not be very different than existing conditions. Some of the adverse impacts would be minimized by the addition of a loading / unloading zone near the peninsula.

At the Bayside Campground, the visitor experience would be improved by a small (3 campsites) increase in the total number of campsites available, the addition of several picnic areas, and the addition of a new campground loop to the east of Loop A. Removal of campground Loop C, a change in the traffic pattern within Loop B and the new parking area, and the relocation of the dump station could cause some temporary adverse impacts to returning visitors by adding confusion and impeding smooth traffic flow until they became adjusted to the new layout and traffic pattern. Campers within Loop B could be adversely impacted from the increased noise and activity resulting from the closer proximity of the proposed parking lot to the campsites in Loop B. However, because the parking lots would not allow for overnight parking, these impacts would be limited to daytime use and would be slight.

Adverse impacts on visitor use and experience and recreational resources during construction would be the same as those mentioned under alternative 2 and would consist of potential noise, traffic delays, temporary closures, and alternative access routes; however, temporary adverse impacts from construction would be minor due construction occurring during the off-season.

If clay base and clam shell aggregate materials were used in the proposed new parking lot, impacts from the use of this material would be the same as those mentioned for alternative 2 and would consist of minimal adverse impacts resulting from temporary closures associated with routine scheduled maintenance.

As under alternative 2, increased amenities proposed under this alternative would result in a beneficial impact to visitor use and experience and recreational resources.

## **Cumulative Impacts**

As described for alternative 1, recreational opportunities and other maintenance and management actions have resulted in impacts to the visitor experience and recreation resources. Adverse and beneficial cumulative impacts associated with other management actions at the park, along with the overall beneficial impacts of alternative 4, would have a beneficial cumulative impact on visitor experience and recreation resources. Alternative 4 would contribute a moderate beneficial increment to cumulative impacts on visitor experience.

## **Conclusion**

As described above, the preferred alternative would result in temporary adverse and overall beneficial impacts on visitor experience and recreation resources. Adverse impacts would be primarily related to temporary noise and traffic control measures associated with construction and increased confusion and disruption to traffic associated with the new parking area location, and the noise and intrusion that would result from the closer location of the two parking areas to campsites within the campground. Beneficial impacts would primarily be associated with the increased sustainability of the new parking area, which would allow for continued access to the

Bayside Peninsula and the visitor amenities located there. Adverse impacts would result from the increased distance visitors would be required to travel from the new parking area to the tip of the peninsula. Alternative 4 would contribute a moderate beneficial increment to cumulative impacts on visitor experience.

## **IMPACTS OF ALTERNATIVE 5**

### **Impacts**

Relocating the Bayside Picnic and Parking Area farther inland by campground Loop B would result in impacts similar to those described for alternative 2. Benefits to the visitor experience would result from the increased sustainability of a location less susceptible to future storm damage, continued universally accessible amenities, decreased maintenance requirements and temporary closures, increased parking capacity stability, and additional pedestrian access on the tip of the Bayside peninsula. Under alternative 5, the parking area would be moved even farther inland from the exposed tip of the peninsula, which would increase the sustainability of the parking area and provide beneficial impacts by allowing for extended visitor access to the Bayside peninsula.

Similar to alternative 2, relocating the canoe, bike, and kayak concession stand to south side of peninsula could impact visitors depending on the activity in which they are participating. Depending on their recreation activity, relocating the concession stand could either adversely or beneficially impact visitors, although the magnitude of the impacts would be minimal based on visitor's relative mobility in the water and proximity to the former location.

A change in the traffic patterns of Loop B and Loop C of the Bayside Campground, the relocation of the dump station, and the relocation of some campsites could cause some temporary adverse impacts to returning visitors by adding confusion and impeding smooth traffic flow until they became adjusted to the new layout and traffic pattern. Campers within Loops B and C could be adversely impacted from the increased noise and activity resulting from the closer location of the proposed parking lot to the campsites within both loops. However, because the parking lot would not allow for overnight parking, these impacts would be limited to daytime use impacts and be slight.

Under alternative 5, the new parking area location would require a significant increase (approximately 1,400 feet) in the distance visitors would need to travel to the tip of the Bayside Peninsula. Adverse impacts to visitors would range from minor to moderate depending on what areas of the peninsula visitors were trying to access. However, adverse impacts on visitors would be less substantial because during the peak season, visitors sometimes have to walk longer distances to these locations once the parking area is full and people begin parking along the road such that this would not be much different than existing conditions. The new parking area configuration and the increased distance visitors would need to walk in order to access the tip of the peninsula and different amenities could change visitor use patterns on the peninsula during peak season. This alternative would not include a loading / unloading zone near the tip of the peninsula and therefore visitors who wanted to access the peninsula but could not easily navigate the trail could be adversely impacted by this restriction. Some of the adverse impacts would be minimized by closer proximity from the parking area to the kayak concession.

Adverse impacts on visitor use and experience and recreational resources during construction would be the same as those mentioned under alternative 2 and would consist of potential noise, traffic delays, temporary closures, and alternative access routes; however, temporary adverse impacts from construction would be minor as a result of timing construction to occur during the off-season.

If clay base and clam shell aggregate materials were used in the proposed new parking lot, the impacts would be the same as those mentioned for alternative 2 and would consist of minimal adverse impacts resulting from temporary closures associated with routine scheduled maintenance.

As under alternative 2, increased amenities proposed under this alternative would result in overall beneficial impacts to visitor use and experience and recreational resources.

## **Cumulative Impacts**

As described for alternative 1, recreational opportunities and other maintenance and management actions have resulted in impacts to the visitor experience and recreation resources. Adverse and beneficial cumulative impacts associated with other management actions at the park, along with the overall beneficial impacts of alternative 5, would have a beneficial cumulative impact on visitor experience and recreation resources. Alternative 5 would contribute a moderate beneficial increment to cumulative impacts on visitor experience.

## **Conclusion**

Alternative 5 would result in temporary adverse and overall beneficial impacts on visitor experience and recreation resources. Adverse impacts would be primarily related to temporary noise and traffic control measures associated with construction, increased confusion and disruption to traffic associated with the new parking area location, and the noise and intrusion that would result from the closer location of the parking area to campsites within the campground. Beneficial impacts would primarily be associated with the increased sustainability of the new parking area, which would allow for continued access to the Bayside Peninsula and the visitor amenities located there. Adverse impacts would result from the increased distance visitors would be required to travel from the new parking area to the tip of the peninsula and the lack of a loading / unloading zone near the tip of the peninsula. Alternative 5 would contribute a moderate beneficial increment to cumulative impacts on visitor experience.

## CHAPTER 4:

### Consultation and Coordination

This chapter describes public involvement and agency consultation conducted during the preparation of this environmental assessment. A combination of activities, including public scoping, internal workshops, and agency briefings, has helped to guide the National Park Service in developing this environmental assessment. This chapter provides a detailed list of the various consultations initiated during the development of the environmental assessment, as well as a list of preparers.

#### BRIEF HISTORY OF PLANNING AND PUBLIC INVOLVEMENT

This document has been prepared in accordance with the National Environmental Policy Act of 1969, as amended; regulations of the Council on Environmental Quality (40 CFR 1500-1508); and NPS Director's Order #12: *Conservation Planning, Environmental Impact Analysis, and Decision-Making* (2011) and accompanying DO-12 Handbook (2001). Pursuant to Director's Order #12, the National Park Service has made a diligent effort to involve the interested and affected public in this National Environmental Policy Act process. This process, known as scoping, is initiated at the beginning of a National Environmental Policy Act project to identify the range of issues, resources, and alternatives to address in the environmental assessment. Typically, both internal and public scoping is conducted to address these elements. State and federal agencies were contacted to uncover any additional planning issues and to fulfill statutory requirements, as described in the following sections. The planning process for the proposed action was initiated during the internal scoping efforts in May 2014. This process introduced the purpose, need, and objectives of the project as well as potential alternatives.

#### INTERNAL SCOPING

To begin the planning process for the proposed action, internal scoping was conducted on May 13, 2014 by staff members from Assateague Island National Seashore and planning professionals from the NPS Denver Service Center. 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.

#### PUBLIC SCOPING

Public meetings were conducted at the park on May 13<sup>th</sup> and 14<sup>th</sup>, and June 7, 2014 and were attended by 29 people collectively.

Scoping for the proposed action began in April 2014. Scoping letters were sent out to interested parties to inform them of the proposed action. These letters were distributed on April 23, 2014. The National Park Service also issued a press release in April, 2014 to announce the environmental assessment and solicit public comments during a 30 day comment period ending on June 15, 2014. Interested public and agencies will have an opportunity to further review and comment on this environmental assessment during a 60-day review period.

## AGENCY CONSULTATION

Agency consultation for the proposed action began in April 2014. Scoping letters were sent out to various regulatory agencies to inform them of the proposed action and/or initiate consultation. These letters were distributed on April 23, 2014. Copies of these letters and responses from the agencies, if applicable, can be found in “Appendix A: Relevant Correspondence.”

### SECTION 7 OF THE ENDANGERED SPECIES ACT

Section 7 of the Endangered Species Act requires federal agencies to consult with the U.S. Fish and Wildlife Service regarding the potential for proposed actions to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The National Park Service reviewed species data for the study area through the U.S. Fish and Wildlife Information, Planning and Conservation System. Subsequently, in a letter sent in April 23, 2014, the National Park Service initiated informal consultation with the U.S. Fish and Wildlife Service about the presence of federally listed threatened or endangered species in the vicinity of the national seashore. Based on information gathered during scoping, a review of the U.S. Fish and Wildlife Service Information, Planning and Conservation website, and a review of park records and field surveys, no special status species and/or habitat concerns were identified within the vicinity of the Bayside Picnic and Parking Area or the proposed relocation sites. Because no special status species and/or habitat were identified within the vicinity of the Bayside Picnic and Parking Area, the proposed actions would have no appreciable effect on special status species.

### SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the impacts of their undertakings on historic properties. At the onset of this environmental assessment process, in accordance with section 800.3(c) of the Advisory Council on Historic Preservation’s regulations (36 CFR 800), the park sent a letter to consult with the Maryland State Historic Preservation Officer to initiate section 106 consultation. Efforts to identify cultural resources in the study 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 for the *Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation Environmental Assessment*, which considered the same general area as those areas being considered in this environmental assessment. No archeological resources or historic structures were identified in the study area. The National Park Service determined that implementation of the proposed action would have no effect on historic properties. In a letter dated June 15, 2015, the State Historic Preservation Office concurred that no historic properties would be affected by the proposed action.

### SECTION 404 OF THE CLEAN WATER ACT AND RIVER AND HARBORS ACT

The identification of wetlands and other waters of the United States within the study area is necessary to ensure their protection in accordance with federal laws (section 404 of the Clean

Water Act [CWA] and the Rivers and Harbors Act of 1899) and state laws. At the state and federal level, wetlands are defined as:

“Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3[b]; 40 CFR 230.3[t]).

Wetlands, as separately classified ecosystems, are designated as a special aquatic site under section 404 of the CWA and are therefore a subset to waters of the United States.

Wetlands in the vicinity of the study area were delineated in 2014 and several small wetlands were identified near the tip of the peninsula. These wetlands were considered and avoided during planning and alternative design. Wetlands would be avoided during any construction activity and a buffer would be established to protect them from construction related impacts during the short term construction timeframe.

## COASTAL ZONE MANAGEMENT ACT

The National Park Service would 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 policies 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. Maryland’s coastal zone extends to the inland boundary of the 16 counties bordering the Atlantic Ocean and includes the study area. The National Park Service would review and coordinate the proposed action with the state. The consistency determination is provided in appendix C. Based on the information, data, and analysis presented in the determination, the National Park Service finds that preferred alternative (alternative 4) under the *Bayside Picnic and Parking Area Relocation Environmental Assessment* is consistent to the maximum extent practicable with the enforceable policies of the Maryland Coastal Zone Management Program.

## NPS PROCEDURAL MANUAL 77-2, FLOODPLAIN MANAGEMENT

Due to the uncertainties of the coastal environment and the potential for shifting floodplains between completion of this document and any subsequent relocation efforts, the park will complete a floodplains statement of findings and post it for public review just prior to implementation of the selected alternative, pursuant to NPS Procedural Manual 77-2: *Floodplain Management* (NPS 2003).

## LIST OF PREPARERS AND CONTRIBUTORS

This document was prepared by Parsons with input from staff at Assateague Island National Seashore, the NPS Denver Service Center, and the NPS Northeast Region Office. The National Park Service independently reviewed all sections of the environmental assessment prior to publication and is responsible for the content.

**Table 3: List of Preparers and Contributors**

| <b>National Park Service, Assateague Island National Seashore</b>               |   |
|---|---|
| Angje Alvino  | Chief of Administration                         |
| Kerry Berg  | Fee Program Manager / Visitor Services          |
| Jonathan Chase  | Vegetation Specialist                           |
| Dana Condron  | Park Ranger, Law Enforcement / Water Operations |
| Deborah Darden  | Superintendent                                  |
| Liz Davis   | Interpretation                                  |
| Ishmael Ennis   | Chief of Maintenance, Retired                   |
| Randy Hartz   | Maintenance Supervisor                          |
| Bill Huslander  | Chief, Resource Management                      |
| Lauren Kramer   | Staff, Assateague Island National Seashore      |
| Jack Kumer  | Natural Resource Specialist                     |
| Debbi Morlock   | Concessions                                     |
| Ted Morlock   | Chief Ranger                                    |
| Karen Rodney  | Volunteer in Parks Coordinator                  |
| Kelly Taylor  | Interpretation (Science Communicator)           |
| Jenna Yaccobucci  | Staff, Assateague Island National Seashore      |
| <b>National Park Service, Denver Service Center and Northeast Region Office</b> |   |
| Connie Chitwood   | DSC - Natural Resource Specialist               |
| Lee Terzis  | DSC - Contracting Officer's Representative      |
| Mike Tomkosky   | DSC - Project Manager                           |
| Jacki Katzmire  | Regional Environmental Coordinator              |
| Sarah Killinger   | Regional Environmental Specialist               |
| <b>Parsons</b>  |   |
| Alyse Getty   | Project Manager                                 |
| Taylor Houston  | Wildlife and Wetland Specialist                 |
| Rachael Mangum  | Cultural Resource Specialist                    |
| Alexa Miles   | Environmental Scientist                         |
| Cheryl Quaine   | Coastal Resources Specialist                    |

## **PUBLIC REVIEW**

The environmental assessment will be on formal public and agency review for 60 days and has been distributed to a variety of interested individuals, agencies, and organizations. It also is available for public review on the NPS Planning, Environment, and Public Comment web site <http://parkplanning.nps.gov/asis>, and hard copies are available at the NPS park headquarters.



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## **APPENDIX A: RELEVANT CORRESPONDENCE**

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

June 10, 2014

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 Relocation Environmental Assessment

Dear Mr. Hulslander:

The U.S. Environmental Protection Agency (EPA) has received and reviewed your April, 23, 2014 letter regarding the Environmental Assessment (EA) being prepared for the Assateague Island National Seashore, MD Bayside Picnic Parking Area Relocation project. The project is being proposed to relocate the Bayside Picnic Area to a location that is more sustainable, less exposed to the elements and less susceptible to damage from future storm events. EPA has reviewed your letter 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.

The document should describe potential impacts to the natural and human environment. Existing resources should be identified and EPA encourages that adverse impacts to natural resources, especially wetlands and other aquatic resources, be avoided and minimized wherever

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possible EPA suggests coordinating with other appropriate federal, state and local resource agencies on possible impacts to wetlands, streams, historic and/or rare, threatened and endangered species. The EA should also evaluate potential impacts to air quality and determine if there will be any impacts to environmental justice communities that may be present in the area.

EPA strongly encourages a thorough cumulative impact analysis for past, present and reasonably foreseeable projects occurring in the project areas. The document should address potential indirect and cumulative effects in the project areas, and analysis may aid in the identification of resources that are likely to be adversely affected by multiple projects, and sensitive resources that could require additional measures. It is suggested that a secondary and cumulative effects analysis begin with defining the geographic and temporal limits of the study; this is generally broader than the study area of the project.

Thank you for coordinating with EPA on this project. Please update EPA as this project progresses and provide a copy of the EA when it is available for review. If you have any questions or would like to discuss our comments, the staff contact for this project is Ms. Barbara Okorn; she can be reached at 215-814-3330.

Sincerely,



Barbara Rudnick  
NEPA Team Leader  
Office of Environmental Programs



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**United States Department of the Interior**  
**NATIONAL PARK SERVICE**  
**Assateague Island National Seashore**  
7206 National Seashore Lane  
Berlin, MD 21811  
(410) 629-1443

RECEIVED  
MAY 29 2015



04.B.1 (D30)

May 26, 2015

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

The Maryland Historical Trust has determined that there are no historic properties affected by this undertaking.

*Jonathan Ryan* Date 6/15/15

Subject: Section 106 Consultation *Bayside Picnic and Parking Area Relocation, Worcester County, Maryland*

*Assateague Island National Seashore*

Dear Mr. Little,

The National Park Service (NPS) wishes to consult with your office on the proposed Bayside Picnic and Parking Area Relocation project for Assateague Island National Seashore, Worcester County, Maryland, in compliance with 36 CFR 800. This area was damaged by Hurricane Sandy in October of 2012. The purpose of the project is to plan for the future relocation of the Bayside Picnic and Parking Area to a site that is less susceptible to damage from future storm events, minimizes the impact to natural and cultural resources, and allows for sustained visitor access and recreational use of this area of the national seashore. The proposed alternatives consist of new parking areas and a redesigned campground.

**Project Background**

The potential relocation of the Bayside Picnic and Parking Area was initially addressed in an Environmental Assessment (EA) in 2013. At that time, a Phase I archeological survey was completed, but no archeological resources were identified within the Area of Potential Effect (APE). In a letter from your office dated July 22, 2013, you concurred that the project would have no adverse effect on historic properties.

Since that time and in response to public comments, the NPS is preparing a new EA to address additional alternative locations for the future relocation of the Bayside Picnic and Parking Area. Therefore, the NPS is also re-initiating consultation with your office in compliance with Section 106 of the National Historic Preservation Act (NHPA) by identifying historic properties within the expanded APE, and assessing the potential effects of the proposed undertaking.

*Priority disturbance*  
*Archaeo: #119 ABC 6/15/15*

*see 201303054*  
*la*  
*JES*  
*6/15/15*

### **Area of Potential Effect and Inventory of Historic Properties**

For this undertaking, the APE includes the expanded project footprint, inclusive of all areas where soil-disturbing activities are being considered. (See attached figure.) No historic properties, including buildings, districts, objects, or structures were identified within the expanded project APE. To address the potential for impacts to archeological resources, the NPS conducted a Phase Ia Archeological Assessment of the entire landform on which the proposed alternatives are located. The landform, a man-made peninsula, includes a portion of the area previously surveyed in 2013.

The Phase Ia Archeological Assessment consisted of a review of previous cultural resources investigations, archival research, and historic map and aerial photograph analysis. The alternatives for the new parking area are located on a peninsula that was created from dredged fill in the early 1950s as part of private development before the NPS acquired property for the ASIS. A portion of the peninsula was initially developed by the NPS in the late 1960s for a 40-site campground, and later redeveloped into the current campground and parking area configuration.

Extensive disturbance from prior construction activities and lack of intact, naturally occurring landscape and soils indicates that no intact archeological resources are likely to occur in the project area. Therefore, based on the results of the prior Phase I shovel testing and the additional archival research, the NPS has determined that no further archeological investigations are warranted, and that the proposed undertaking will have no adverse effects on historic properties in the APE. A copy of the Phase Ia Archeological Assessment is enclosed for your review.

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](mailto:bill_hulslander@nps.gov).

Sincerely,



Deborah Darden  
Superintendent

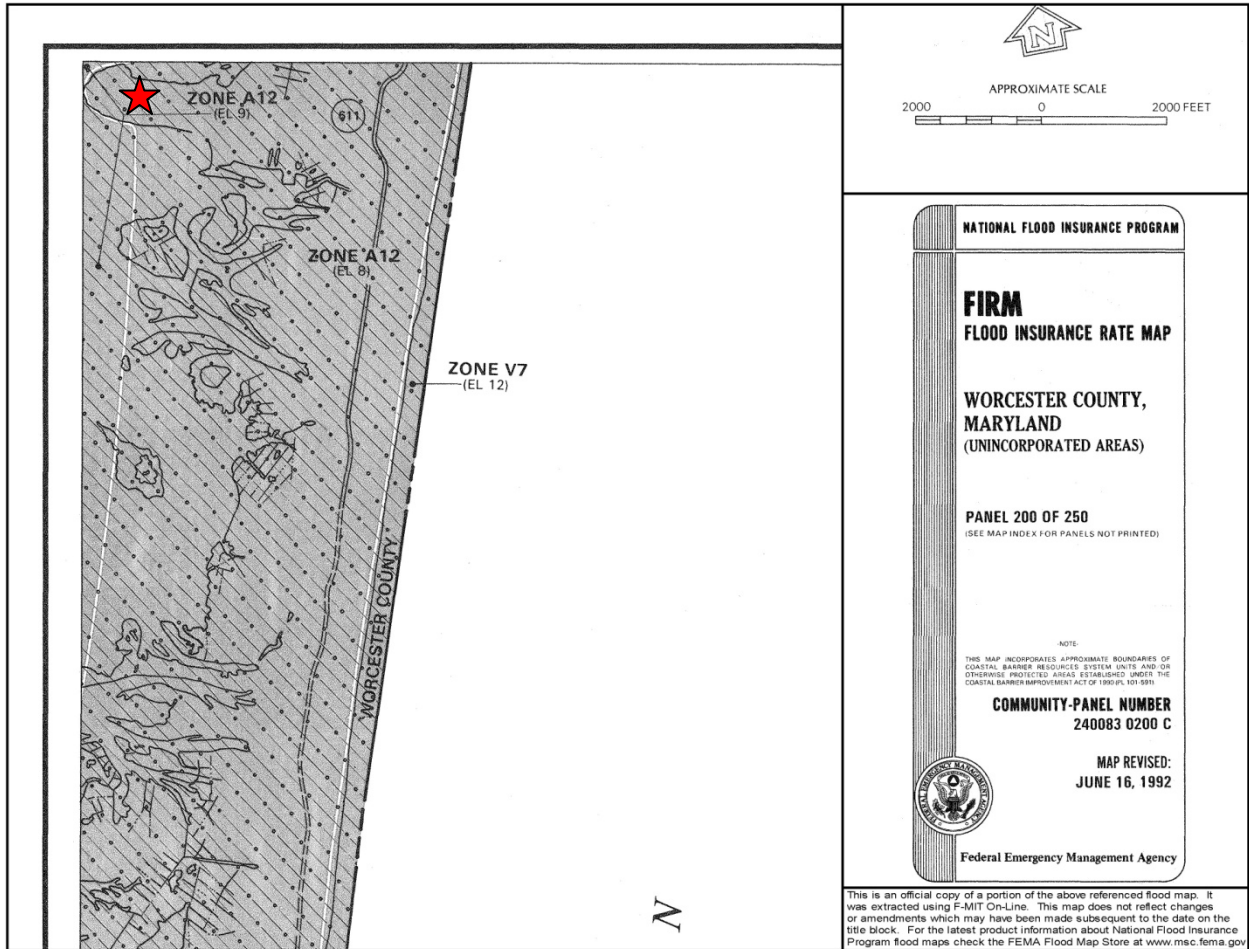
Attachments:

1. Project Area Map, Location of the Project Area
2. Phase Ia Archeological Assessment Report

**APPENDIX B: FEDERAL EMERGENCY MANAGEMENT AGENCY  
FLOOD INSURANCE RATE MAP**

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**APPENDIX C: COASTAL ZONE MANAGEMENT ACT  
CONSISTENCY DETERMINATION FOR THE PREFERRED ALTERNATIVE  
(ALTERNATIVE 4)**



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## Coastal Zone Management Act Consistency Determination for the Preferred Alternative

This document provides the State of Maryland with the 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 Parking Area 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 would be conducted in a manner consistent with the Maryland Coastal Zone Management Program. Additional information on the preferred alternative can be found in "Chapter 2: Alternatives" of the environmental assessment.

### BACKGROUND

In October 2012, Hurricane Sandy affected 24 states from Florida to New England causing hundreds of millions of dollars of damage to property. The Bayside Picnic and Parking Area was among the properties damaged at Assateague Island National Seashore. This parking area is located in the northern half of the national seashore within the state of Maryland. Following Hurricane Sandy, the initial damage survey report identified the need to remove and replace approximately 650 square yards of existing asphalt pavement and to reconstruct a previously existing boardwalk washed away during the storm. As an interim response to repair the 2012 impacts from Hurricane Sandy, the park completed planning and design, and produced an environmental assessment to address damage to the existing Bayside Picnic and Parking Area and damage to the South Ocean Beach Parking Area (NPS 2013a). Reconstruction of the parking area in its current location was part of this previous environmental assessment to address the damages to the asphalt surface inflicted by Hurricane Sandy at this bayside location. A relocation site, to the northeast of the existing site between the existing lot and Loop C of the campground, was suggested for the Bayside Picnic and Parking Area and was carried forward for analysis in the August 2013 *Bayside Picnic and South Ocean Beach Parking Areas Removal and Relocation Environmental Assessment*. However, it was not selected for implementation in the decision document because of concerns raised by the public regarding the removal of vegetation, impacts to migratory birds, and other issues. As a result of this prior planning effort, the park is planning to reconstruct the existing Bayside Parking Area within the existing footprint. Work would include removal of the existing asphalt and reconstruction utilizing a clay base with clam shell aggregate. This would protect the bay from asphalt debris that might result from future storm events.

However, reconstruction of the Bayside Picnic and Parking Area in its current location does not address the vulnerability of the picnic and parking facilities. The purpose of the project is to plan for the relocation of the Bayside Picnic and Parking Area to a site less susceptible to damage from future storm events, minimize the impact to natural resources, and allow for sustained visitor access and recreational use of this area of the national seashore.

### PROJECT DESCRIPTION

The National Park Service prepared an environmental assessment to analyze the effects of relocating the Bayside Picnic and Parking Area. Additional information can also be found in chapters 1 and 2 of the environmental assessment. The Bayside Picnic and Parking Area is located on Sinepuxent 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 is one of only two designated sites within the Maryland portion of the national seashore where visitors have direct access to parking and recreational opportunities along the bayside of the island. These activities include boating, birding, shellfishing, sunbathing, and picnicking along the shorelines of Sinepuxent Bay.

Should future storm events damage the existing Bayside Picnic and Parking Area to a point beyond reasonable repairs, the parking area would be moved farther inland. Until such time, the National Park Service would continue to use the existing parking area. Upon moving the parking areas farther inland, the National Park Service would increase the setback from the shoreline and increase the buffer between the proposed parking area and the high water line in compliance with the Atlantic Coastal Bays Protection Act of 2002 and the Worcester County shoreline protection setback and buffer law.

Under the preferred alternative (alternative 4), the Bayside Campground Loop C would be removed and a new parking area would be constructed in its place (see figures 7-9 in the environmental assessment). The southern end of the existing parking area would be converted into a drop off and roundabout with a short-term loading/unloading zone for recreational use. Use of the remainder of the current Bayside Parking Area would be phased out and disturbed areas would be allowed to revert to natural conditions. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

The proposed new parking area(s) would be constructed either with asphalt and/or a clay base with clam shell aggregate. The National Park Service would use a clay base with clam shell aggregate to surface the proposed parking areas wherever practical. Asphalt surfacing would be used for the camping loops, rerouted portions of the road, and could be used for some of the more inland parking areas.

Construction of the new parking area would require the use of mechanized equipment and could require the need to import or export fill to recontour the new parking area accordingly. 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 existing Bayside Picnic and Parking Area and construction of the new parking area would be located in nearby parking areas in the national seashore. Maintenance of the clay base with clam shell aggregate, where appropriate, would require monthly surface leveling by park staff during the peak season and occasional resurfacing with clam shells.

Stormwater management measures at the Bayside Parking Area would be implemented pending coordination with the Maryland Department of Environment and identification of appropriate measures. Site specific stormwater design features could include an infiltration trench around the perimeter of the parking area. 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.

## **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). First, policies were evaluated for their relevance based 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 environ-

mental assessment, the National Park Service conducted a wetlands delineation and phase IA archeological assessment of the picnic and parking area. The wetlands delineation determined the proposed action would not impact jurisdictional or non-jurisdictional wetlands. Pedestrian reconnaissance and subsurface testing of the project areas were conducted during previous phase I archeological survey work, and a phase IA assessment was completed of the peninsula inclusive of any areas where soil-disturbing activities are planned and 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 archeological 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 table of the policies and their relevant/non-relevant relationship to the proposed action is provided at the end of this section (table 1).

## 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 and installation of asphalt 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 are not expected to be long-term. Because of the short-term and localized nature of these impacts, it would not affect the attainment status of the airshed that encompasses Assateague Island National Seashore, the airshed designation, or 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 and installation of asphalt and from other construction activities that use 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 removal of asphalt, 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 constructing a new parking area with a clay base with clam shell aggregate. The southern end of the existing parking area would be converted into a drop off and roundabout with a short-term loading/unloading zone for recreational use. Following construction, use of the remainder of the existing Bayside Picnic and Parking Area would be phased out and disturbed areas would be allowed to revert to natural conditions. Visitors would continue to be able to access scenic views. Bayside Drive would be rerouted north at the Bayside Campground Loop B entrance. A new picnic area and the relocated kayak concession stand would either be provided within a previously disturbed area of Bayside Drive south of the parking area or immediately north of the parking area. A portion of Bayside Drive between the proposed picnic area and the Loop B entrance would be designated for NPS administrative use only. Two new campground loops would be installed; one between Loops B and A, and one to the east of Loop A. The entrance to Loop A would be modified to accommodate the new loop. The campground loops would be located in areas that were previously disturbed and would continue to allow for visitor access and enjoyment of the scenic values the area provides.

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 natural character and scenic value of the project area and adjacent areas by choosing locations for the new parking area and associated facilities that are in previously disturbed areas, when possible, and by avoiding wetlands. In addition, after the existing parking area was removed, the majority of that area would be allowed to revert to natural conditions. The project would be integrated with existing access points. 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 construction of the new parking area and during the phased removal of the existing parking area 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 topography of the project area is relatively flat. However, habitat and vegetation in upland areas would be permanently altered to accommodate the new parking area (1.5 acres), handicap drop off/parking area (0.06 acres), dump station (0.21 acres), comfort station (0.01 acres), trails (0.37 acres), and new campsites (1.3 acres). With erosion and sediment control 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.**

Stormwater management measures at the Bayside Picnic and Parking Area would be implemented pending coordination with the Maryland Department of Environment and identification of appropriate measures. Site specific stormwater design features could include an infiltration trench around the perimeter of the parking area(s). 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. 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 Bayside Picnic and Parking Area is shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) map number 2400830200C. The entirety of Assateague Island is within the 100-year floodplain (figure 3 in the environmental assessment), labeled A-12 on FEMA maps, which 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 and Parking Area. The major source of flooding in this area is overwash from Sinepuxent Bay. Immediately adjacent to the parking area project, estuarine wetlands, particularly along the northern shoreline of the peninsula provide shoreline stabilization function and somewhat reduce flood potential (by allowing for water storage during surges).

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 floodplains statement of findings would be completed and posted for public review before implementation of the selected alternative. The proposed new parking area would be constructed either with asphalt and/or a clay base with clam shell aggregate. The National Park Service would use a clay base with clam shell aggregate to surface the proposed parking area wherever practical. Asphalt surfacing would be used for the camping loops and rerouted portions of the road. If constructed with asphalt, surface materials would continue to convey sheetflow into surrounding areas during precipitation events. If constructed with a clay base and clam shell aggregate, though not permeable, it would increase surface roughness of the driving 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. The additional acreage of impervious surface area would result in adverse impacts to the floodplain but, given their inland location these impacts would be slight.

Relocation of the existing parking area farther inland from the exposed tip of the peninsula would gradually increase the natural buffer as the existing parking area is phased out and removed, thereby improving the amount of pervious surface area and providing an additional natural buffer from sheetflow during precipitation events. Natural features that reduce flooding severity (wetlands and coastal topography) would continue to provide increased floodplain ecological functions. The chosen location and avoidance of wetlands would maintain the ability of wetlands to support floodplain functions to reduce flood severity, aid in sediment retention, and shoreline stabilization. The impact to the floodplain would be beneficial as a result of moving the parking area inland and increasing the size of the buffer along the shoreline. Although small in areal extent, these impacts would contribute noticeable benefits to the natural functioning of the floodplains in the vicinity of the existing parking area. Portable, new facilities would be removed prior to storm activity so as not to impede water flow across the peninsula during storm events. Once the existing parking area is phased out and disturbed areas were allowed to revert to natural conditions, floodplain functions in this area of the peninsula would also be restored, with beneficial floodplain impacts. General site cleanup measures would also improve floodplain conditions in this area. Overall, the ecological functions of the floodplain, including temporary storage of floodwaters, dissipation of stormwater runoff, moderation of peak flows, groundwater recharge, and maintenance of water quality would improve under this alternative. Through time, relocation of the parking area and removal of the existing parking area would return the area to natural flows of sediment transport at the site. The natural buffers (sandy beach, wetlands, and vegetation) in the vicinity of the study area would continue to help maintain the natural ecological functions and values of the floodplain and reduce flooding and erosion severity.

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 Bayside Picnic and Parking Area would 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 health and safety, or to provide visitor access.

Currently, a portion of the Bayside Picnic and Parking Area is within the 100-foot buffer. Under the preferred alternative, the new parking area location would fall entirely outside of the 100-foot buffer. The proposed new parking area would be constructed either with asphalt and/or a clay base with clam shell aggregate. The National Park Service would use a clay base with clam shell aggregate to surface the proposed parking areas wherever practical. Asphalt surfacing would be used for the camping loops and rerouted portions of the road. If constructed with asphalt, surface materials would continue to convey sheetflow into surrounding areas during precipitation events. If constructed with a clay base and clam shell aggregate, though not permeable, it would increase surface roughness of the parking areas. 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. Use of the remainder of the existing Bayside parking area would be phased out and disturbed areas would be allowed to revert to natural conditions. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

The proposed picnic area would place 10-12 tables clustered in 3 areas outside the buffer. Given that shoreline erosion and the associated loss of vegetation will likely continue, it is anticipated that conditions within the proposed picnic areas will change overtime and that the proposed picnic amenities could be placed within existing openings in the vegetation without the need to remove any trees. If any vegetation clearing was required, it would likely involve clearing vines and other understory species. This vegetation removal would only occur in the area immediately surrounding the 3 table clusters and not throughout the entire picnic area.

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 Bayside Picnic and Parking Area would 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 and Parking Area is in the 100-foot buffer established under the Atlantic Coastal Bays Protection Act. Under the preferred alternative, the new parking area location would fall entirely outside of the 100-foot buffer. The proposed new parking area would be constructed either with asphalt and/or a clay base with clam shell aggregate outside the 100-foot buffer. The National Park Service would use a clay base with clam shell aggregate to surface the proposed parking areas wherever practical. Asphalt surfacing would be used for the camping loops and rerouted portions of the road. If constructed with asphalt, surface materials would continue to convey sheetflow into surrounding areas during precipitation events. If constructed with a clay base and clam shell aggregate, though not permeable, it would increase surface roughness of the parking areas. 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. Use of the remainder of the existing Bayside parking area would be phased out and disturbed areas would be allowed to revert to natural conditions. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

The proposed picnic area would place 10-12 tables clustered in 3 areas outside the buffer. Given that shoreline erosion and the associated loss of vegetation will likely continue, it is anticipated that conditions within the proposed picnic areas will change overtime and that the proposed picnic amenities could be placed within existing openings in the vegetation without the need to remove any trees. If any vegetation clearing was required, it would likely involve clearing vines and other understory species. This vegetation removal would only occur in the area immediately surrounding the 3 table clusters and not throughout the entire picnic area. 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 Bayside Picnic and Parking Area would 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 health and safety, or to provide visitor access.

Currently, a portion of the Bayside Picnic and Parking Area is within the 100-foot buffer. Under the preferred alternative, the new parking area location would fall entirely outside of the 100-foot buffer. The proposed new parking area would be constructed either with asphalt and/or a clay base with clam shell aggregate outside the 100-foot buffer. The National Park Service would use a clay base with clam shell aggregate to surface the proposed parking areas wherever practical. Asphalt surfacing would be used for the camping loops and rerouted portions of the road. If constructed with asphalt, surface materials would continue to convey sheetflow into surrounding areas during precipitation events. If constructed with a clay base and clam shell aggregate, though not permeable, it would increase surface roughness of the parking areas. 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. Use of the remainder of the existing Bayside parking area would be phased out and disturbed areas would be allowed to revert to natural conditions. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

The proposed picnic area would place 10-12 tables clustered in 3 areas outside the buffer. Given that shoreline erosion and the associated loss of vegetation will likely continue, it is anticipated that conditions within the proposed picnic areas will change overtime and that the proposed picnic amenities could be placed within existing openings in the vegetation without the need to remove any trees. If any vegetation clearing was required, it would likely involve clearing vines and other understory species. This vegetation removal would only occur in the area immediately surrounding the 3 table clusters and not throughout the entire picnic area. 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, a portion of the Bayside Picnic and Parking Area is within the 100-foot buffer. The proposed new parking area would be constructed either with asphalt and/or a clay base with clam shell aggregate and would fall entirely outside the 100-foot buffer, as defined under the Atlantic Coastal Bays Protection Act. The National Park Service would use a clay base with clam shell aggregate to surface the proposed parking areas wherever practical. Asphalt surfacing would be used for the camping loops and rerouted portions of the road. If constructed with asphalt, surface materials would continue to convey sheetflow into surrounding areas during precipitation events. If constructed with a clay base and clam shell aggregate, though not permeable, it would increase surface roughness of the parking areas. 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. Use of the remainder of the existing Bayside parking area would be phased out and disturbed areas would be allowed to revert to natural conditions. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

A soil erosion and sediment control plan would be implemented in accordance with regulatory standards. 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 in 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. 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 health and safety, or to provide visitor access. The project would 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 parking area project would be integrated with existing access points and roadways. 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 implementation of these activities. The parking area would be surfaced with a clay base with clam shell aggregate and/or asphalt. Construction of the Bayside Picnic and Parking Area could require the need to import fill (potential sources for fill include the park's existing stock pile of natively sourced fill or locally acquired crushed road base) 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 non-structural shoreline stabilization measures. MDE (C1) Md. Code Ann., Envir. § 16-201.**

No shoreline stabilization measures are proposed as part of this project. The new Bayside Picnic and Parking Area would be less exposed to the elements and less susceptible to damage from future storm events to provide continued visitor access to this area of the national seashore. The removal of the existing Bayside Picnic and Parking Area would provide an opportunity for the sediments to stabilize and migrate naturally. These measures would help encourage the preservation of the natural environment along the peninsula. The Bayside Parking Area and areas within the campground would be surfaced with a clay base with clam shell aggregate and/or asphalt surface to prolong visitor access to this area. 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.

The Bayside Picnic and Parking Area would be relocated to an area less susceptible to tidal shore erosion and storm damage and the majority of the existing picnic and parking area would be allowed to revert to more natural conditions. These actions would encourage the preservation of the natural environment of the tidal shoreline. The NPS actions would be consistent to the maximum extent practicable with Tidal Shore Erosion Policy 6 and would avoid measures that are least consistent with State policy.

## 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 proposed new parking area would be constructed either with asphalt and/or a clay base with clam shell aggregate. The National Park Service would use a clay base with clam shell aggregate to surface the proposed parking area wherever practical. Asphalt surfacing would be used for the camping loops and rerouted portions of the road. If constructed with asphalt, surface materials would continue to convey sheetflow into surrounding areas during precipitation events. If constructed with a clay base and clam shell aggregate, though not permeable, it would increase surface roughness of the parking areas. 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.

Infiltration trenches could be utilized in order to minimize the impact footprint, as the parking area is 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 Bayside Picnic and Parking Area would 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 health and safety, or to provide visitor access. The proposed action would relocate the parking area inland to a less susceptible location. In preparation for the environmental assessment, the National Park Service conducted a wetlands delineation of the picnic and parking area which determined the proposed action would not impact tidal and non-tidal wetlands. Following construction of the new parking area, the existing Bayside Parking Area would be phased out and disturbed areas would be allowed to revert to natural conditions. Some limited filling and grading and site cleanup could be necessary to return the area to more natural contours and conditions.

Best management practices would be in place during the planning and implementation of these activities. Erosion and sediment control would be accomplished through the use of perimeter controls, such as silt fencing, sediment traps, erosion check screen filters, and hydro mulch to prevent the entry of sediment into waterways. The parking area would be surfaced with clay base with clam shell aggregate and/or asphalt. Stormwater could be addressed by use of infiltration trenches at the perimeter of the parking area where appropriate, or via sheetflow. 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 preferred alternative (alternative 4) under the *Bayside Picnic and Parking Area Relocation Environmental Assessment* 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

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 on whether the proposed action is similar to the type of activity mentioned in the policy. Policies were determined to be “relevant” if the proposed action may have an impact on the coastal use or resource identified in the policy. Policies were determined to be “not relevant” if the proposed action would not likely 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 would 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 would 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.   |

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

| Enforceable Policy  | Relevancy  |
|---|--|
| 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.  |
| 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 would 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 would 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.  |



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

| Enforceable Policy   | Relevancy   |
|--|---|
| 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.   |
| 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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>Channelization shall be the least favored flood control technique.<br>Multiple purpose use shall be preferred over single purpose use, the proposed project shall achieve the purposes intended, and, at a min- | 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   |
|--|---|
| imum, project shall provide for a 50 percent reduction of the average annual flood damages.  |   |
| 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 would 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 would 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 would 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 involves changing existing surface material in an existing parking area located within the buffer to improve site conditions by using natural materials and eliminate asphalt, and minimizes adverse impacts. |
| 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.               |
| 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 intense development activities.          |

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

| Enforceable Policy  | Relevancy   |
|---|---|
| <p>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.</p> <p>Nonmaritime heavy industry</p> <p>Transportation facilities and utility transmission facilities, except those necessary to serve permitted uses, or where regional or interstate facilities must cross tidal waters</p> <p>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</p> <p>CAC (C9) COMAR 27.01.02.02.</p>  | <p>Not relevant. The proposed action does not involve these activities or facilities.</p>   |
| <p>Coastal Resources Policy 30. The following policies apply in those areas of the Critical Area that are determined to be areas of intense development.</p> <p>To the extent possible, fish, wildlife, and plant habitats should be conserved.</p> <p>Development and redevelopment shall improve the quality of runoff from developed areas that enters the Chesapeake or Atlantic Coastal Bays or their tributary streams.</p> <p>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.</p> <p>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.</p> <p>If practicable, permeable areas shall be established in vegetation.</p> <p>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.</p> <p>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.</p> <p>To the extent practicable, development shall be clustered to reduce lot coverage and maximize areas of natural vegetation.</p> <p>Development shall minimize the destruction of forest and woodland vegetation.</p> <p>CAC (C9) COMAR 27.01.02.03.</p> | <p>Not relevant. The proposed action would not occur in an area of intense development.</p> |

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

| Enforceable Policy   | Relevancy   |
|--|---|
| <p>Coastal Resources Policy 31. The following policies apply in those portions of the Critical Area that are not areas of intense development.</p> <p>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.</p> <p>All development sites shall incorporate a wildlife corridor system that connects undeveloped vegetated tracts onsite with undeveloped vegetated tracts offsite.</p> <p>All forests that are cleared or developed shall be replaced on not less than an equal area basis.</p> <p>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.</p> <p>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.</p> <p>To the extent practicable, development shall be clustered to reduce lot coverage and maximize areas of natural vegetation.</p> <p>Lot coverage is limited to 15 percent of the site.</p> <p>CAC (C9) COMAR 27.01.02.04.</p>  | Relevant.   |
| <p>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.</p> <p>A proponent of an action described above shall explain the actions impact on:</p> <p>Habitat for finfish, crustaceans, mollusks, and wildlife of significant economic or ecologic value;</p> <p>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;</p> <p>Marine commerce,</p> <p>Recreation, and aesthetic enjoyment;</p> <p>Flooding;</p> <p>Siltation;</p> <p>Natural water flow, water temperature, water quality, and natural tidal circulation;</p> <p>Littoral drift;</p> <p>Local, regional, and State economic conditions;</p> <p>Historic property;</p> <p>Storm water runoff;</p> <p>Disposal of sanitary waste;</p> <p>Sea level rise and other determinable and periodically recurring natural hazards;</p> <p>Navigational safety;</p> <p>Shore erosion;</p> <p>Access to beaches and waters of the State;</p> <p>Scenic and wild qualities of a designated State scenic or wild river; and Historic waterfowl staging areas and colonial bird-nesting sites.</p> <p>MDE (B2) COMAR 26.24.01.01, COMAR 26.24.02.01, .03; COMAR 26.24.05.01.</p> | 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 would not impact a forested or 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 action. |

**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 action. |
| 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 action. |
| 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 would 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 would 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 would 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 would 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 would 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 leaseholder, 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:<br>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;<br>The fill material shall be relatively free of organic material, floating debris, or other objects;<br>Silt and clay fills that change the sandy nature of the existing beach materials are not acceptable;<br>Gravel fill may be acceptable, if particle sizes are equal to or greater than the existing beach materials; and<br>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.<br>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 non-structural 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 non-structural 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 would 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.<br>No action and relocation of structure<br>Nonstructural shoreline stabilization, including beach nourishment, marsh creation, and other measures that encourage the preservation of the natural environment<br>Shoreline revetments, breakwaters, groins, and similar structures designed to ensure the establishment and long-term viability of non-structural shoreline stabilization projects<br>Shoreline revetments<br>Breakwaters<br>Groins<br>Bulkheads<br>MDE (C1) COMAR 26.24.04.01C.     | Relevant.   |
| Tidal Shore Erosion Control Policy 7. Tidal shore erosion control projects shall not occur when:<br>There is no evidence of erosion;<br>Existing tidal wetlands are adequately serving as a buffer against erosion;<br>Adjacent properties may be adversely affected by the proposed method of erosion control;<br>Navigation may be adversely affected by the project and the applicant has not made provisions to offset these impacts;<br>Threatened or endangered species, species in need of conservation, or significant historic or archaeological resources may be adversely affected by the project; or<br>Natural oyster bars or private oyster leases may be adversely affected by the project.<br>MDE (C1) COMAR 26.24.04.01. | Not 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 would 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 would 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 would 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 would 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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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 September 2015