

# **FINDING OF NO SIGNIFICANT IMPACT**

## **South Ocean Beach Parking Area and Over-Sand Vehicle Entrance Road Reconfiguration**

**US Department of the Interior  
Assateague Island National Seashore  
Berlin, MD**

**October 2023**

### **Background**

The South Ocean Beach recreation area of the Assateague Island National Seashore (Assateague Island NS) is currently facing shoreline regression and encroachment from westward dune migration. The National Park Service (NPS) determined from annual shoreline regression data on Assateague Island collected between 1996 and 2018 that the South Ocean Beach shoreline had migrated westward between 4.5 and 5 feet per year on average during that period. These data suggest that the dunes will continue to migrate westward, causing significant sand deposition on the existing traffic circle and over-sand vehicle (OSV) zone entrance road by 2040, making the facilities that serve South Ocean Beach unsustainable at their current locations. Additionally, the South Ocean Beach recreation area does not have capacity to accommodate current visitation, which causes congestion, user conflicts, and park resource degradation. The configuration of the existing facilities creates unsafe conditions for pedestrians, drivers, bicyclists, and wildlife, particularly during peak visitation.

The NPS proposes to reconfigure the facilities that serve South Ocean Beach to be less susceptible to damage caused by natural coastal processes and future storm events by moving them to a more sustainable location. The proposed action will also improve safety and protect and enhance the visitor experience and park resources by managing current visitor use more effectively and upgrading infrastructure and amenities that are in poor condition and/or inadequate for current visitation.

The public had an opportunity to comment from June 6, 2022 through July 5, 2022 during the preliminary design phase of the project; and during the release of the *South Ocean Beach Parking Area and Over-Sand Vehicle Entrance Road Reconfiguration Environmental Assessment* (EA) from July 3, 2023 through August 1, 2023. Responses to substantive public comments received on the EA are provided in Appendix A.

### **Selected Action and Rationale for Decision**

The EA analyzed the no action alternative and three action alternatives for the proposed South Ocean Beach parking area and OSV entrance road reconfiguration. Based on the analysis documented in the EA, the NPS has selected Alternative 2 for implementation. Alternative 2 has been selected because it meets the purpose of and need for action by improving resiliency and visitor use, experience, and safety, while also resulting in the least amount of additional impervious surface area and the lowest initial and life-cycle cost of the three action alternatives.

The selected action will redevelop the traffic circulation features at the recreation area to include:

- relocating the traffic circle approximately 650 feet northwest of its existing location;
- reconstructing the parking area to include an asphalt surface material with pavement markings that will increase capacity to 150 standard parking spaces that are 9 feet wide, six accessible parking spaces, and two-way drive aisles;
- relocating the OSV zone entrance road to a more sustainable location, looping to the west around the new parking area, and providing increased vehicle queue capacity;
- relocating the air compressor station along the new OSV zone entrance road to provide eight air pumps, a vault toilet, and downward facing lighting;
- improving beach access and amenities by establishing two beach boardwalk paths from the parking area, including new comfort stations at each path that include one prefabricated concrete vault toilet building (each with two toilets), pedestal showers, water fountains, changing cabanas, and benches adjacent to each path that can be relocated in response to storms or changes in the landscape;
- reconstructing the asphalt multi-use path around the parking area and OSV zone entrance road to create a loop that connects back to the existing path on Oceanside Drive;
- incorporating small-scale, nonstructural stormwater management techniques to mitigate effects on water quality and floodplain functions;
- installing signage and striping; and
- placing fencing and other barriers.

Details of the selected action and the other alternatives considered are described in the *Alternatives* chapter of the EA.

## **Mitigation Measures**

The Organic Act and its associated Management Policies 2006 task NPS with preventing impairment of park resources. This mandate gives the NPS authority to adopt mitigation measures. The NPS will implement the following mitigation measures under the selected action for resource protection and to minimize disruption to park visitors (more detailed descriptions for the wetland and floodplain mitigation measures can be found in Appendix C – Wetland and Floodplain Statement of Findings):

### **Wetlands**

- Continue to evaluate opportunities to further reduce wetland impacts as the design progresses.
- Obtain required authorizations and certifications for unavoidable wetland impacts in accordance with Sections 404 and 401 of the Clean Water Act and Maryland's Nontidal Wetlands (Code of Maryland Regulations 26.23.01) regulations.
- Develop an Erosion and Sediment Control (ESC) Plan that includes best management practices (BMPs) to contain sediment in the construction area.
- Design and construct an on-site compensatory wetland mitigation project to replace the loss of wetlands and associated functions in accordance with NPS Director's Order 77-1: *Wetland Protection*, Clean Water Act requirements, and Maryland's Nontidal Wetlands regulations.
- Allow temporarily disturbed wetland areas to naturally revegetate after construction is complete.

## **Floodplains**

- Implement the proposed action to allow natural coastal processes to continue while maintaining visitor use and minimizing resource damage within the floodplain.
- Relocate the South Ocean Beach facilities to locations less susceptible to damage from shoreline regression, dune migration, and coastal storm events, and by using moveable facilities as much as possible to minimize flood risk.
- Design and construct the proposed facilities to be consistent with the 44 Code of Federal Regulations (CFR) Part 60 under the National Flood Insurance Program.
- Obtain authorization for proposed floodplain disturbance in accordance with Maryland's Construction on Nontidal Waters and Floodplains regulations.
- Develop an ESC Plan that includes BMPs to minimize floodplain disturbance.
- Incorporate stormwater management BMPs to compensate for the increase in impervious surface area and loss of floodplain functions.
- Remove existing pavement and restore wetland and upland habitats in these areas to mitigate for flood storage, groundwater infiltration, and habitat loss.
- Prepare a Critical Area Buffer Management Plan that demonstrates compensation for vegetation removal in accordance with Maryland's Critical Area regulations.
- Allow other temporarily disturbed areas to naturally revegetate after construction is complete.
- Clean construction vehicles and equipment offsite to prevent the transport of invasive plant seeds, propagules, and other weed seeds, onto Assateague Island NS.

## **Visitor Use, Experience, and Safety**

- Construct the project primarily during off-peak visitation between October and April.
- Use fencing or other similar temporary barriers to establish a perimeter around active construction areas for the safety of park visitors and wildlife.
- Construct the project during the daytime to avoid night sky impacts and nighttime noise disruption.
- Phase construction to maintain traffic circulation between Oceanside Drive and Bayberry Drive and to maintain access to the OSV zone.
- Establish temporary alternative access routes to the Life of the Dunes Trail and duck blinds nearest to South Ocean Beach.

## **Significance Criteria Review**

### **Potentially Affected Environment**

South Ocean Beach is located approximately 1.25 miles south of the entrance station to Assateague Island NS in Worcester County, Maryland. South Ocean Beach provides visitors with access to beach activities, the OSV zone, the Life of the Dunes Trail, and duck and deer hunting areas. The area also provides opportunities for nature study, birding, picnicking, and other leisure, educational, and recreational activities. There is also a multi-use path that enters the recreation area from Oceanside Drive and ends at the Life of the Dunes Trail.

South Ocean Beach, and the majority of Assateague Island NS, are located within the regulated 100-year floodplain according to the Federal Emergency Management Agency. Outside of park infrastructure, the project area consists of inland wetlands, forest and shrubland, and dunes and grasslands habitats. Most of the wetlands within the project area are within interdunal swales or depressions and are a unique

coastal feature that are susceptible to westward dune migration, future storm surges, coastal flooding, and other climate change effects.

No archeological resources, historic structures and districts, or cultural landscapes were identified within the project's area of potential effect.

### **Degree of Effects of the Action**

The NPS considered the following actual or potential project effects in evaluating the degree of the effects (40 CFR § 1501.3(b)(2)) for the selected action. As documented in the EA, the selected action has the potential for adverse and beneficial impacts on wetlands and visitor use, experience, and safety, as well as adverse impacts to floodplains. NPS did not identify any significant adverse effects from implementing the selected action. Impacts are summarized below.

#### ***a. Beneficial and adverse, and short- and long-term effects of the selected action.***

The duration of short-term impacts is defined as construction and up to 3 years following construction for wetland and floodplain impacts and during construction for visitor use, experience, and safety. Long-term impacts are through the operational lifetime of the reconfigured South Ocean Beach parking area and OSV entrance road.

**Wetlands.** The selected action will result in both short-term adverse impacts to wetlands as well as long-term benefits. During construction, the selected action will result in approximately 5,107 square feet (0.12 acre) of temporary impacts to nontidal wetlands from the installation of ESCs and minor grading activities at pavement removal and wetland creation areas to establish desired contours. Temporarily disturbed wetlands will be allowed to naturally revegetate post construction. While the selected action will also permanently impact 6,588 square feet (0.15 acre) of nontidal wetlands, long-term benefits are expected because the NPS will create 11,695 square feet (0.27 acre) of wetlands that will more than compensate for the loss of wetland area and function from construction. Past actions avoided estuarine and inland palustrine wetland impacts and reasonably foreseeable future actions are expected to do the same. Therefore, the selected action will not have cumulative impacts to wetlands.

**Floodplains.** The selected action will result in adverse short- and long-term impacts to the floodplain. The selected action will result in 344,990 square feet (7.92 acres) of ground disturbance and will add 42,357 square feet (0.97 acre) of impervious surface within the 100-year floodplain. In addition, the selected action requires clearing approximately 103,149 square feet (2.37 acres) of vegetation. The loss of habitat and vegetation will be mitigated by removing 80,503 square feet (1.85 acres) of existing pavement to restore wetland and upland habitats in these areas. Off-site plantings will occur as determined by an approved Critical Area Buffer Management Plan. The NPS will also use stormwater management BMPs to mitigate for the reduced infiltration capacity at the site caused by the increase in impervious surface area. Past and reasonably foreseeable future actions have floodplain disturbance. However, the selected action will not have significant cumulative impacts to floodplains because it will result in localized floodplain disturbances within the developed area.

**Visitor Use, Experience, and Safety.** The selected alternative will result in temporary disruptions to visitors as some facilities will need to be closed during construction. The NPS will maintain circulation between Oceanside Drive and Bayberry Drive and maintain access to the OSV zone, hunting areas, duck blinds, and the Life of the Dunes Trail. However, the selected action will result in long-term benefits to

visitors by prolonging the useable lifespan of the South Ocean Beach facilities and allowing the NPS to operate and maintain the facilities more easily. Relocation of the OSV zone entrance road will benefit visitors by eliminating user conflicts and increasing the vehicle queue capacity. Expanding the parking area will more adequately support current visitation to South Ocean Beach and, along with guardrail or fencing as deterrents, will prevent visitors from parking along Bayberry Drive or in other unauthorized areas, thus improving safety and minimizing resource degradation. In addition, upgraded amenities will better support current visitation to improve the visitor experience at South Ocean Beach. Past actions have benefited visitors by moving facilities to more sustainable locations and reasonably foreseeable future actions are expected to have the same benefit by managing resources and implementing planning to protect park infrastructure from sea level rise and coastal storms. Therefore, the selected action will have long-term beneficial impacts to visitor use, experience, and safety.

***b. Degree to which the selected action affects public health and safety.***

The NPS considered how implementing the selected action will affect public health and safety. Most construction will occur between October and April when visitation to South Ocean Beach is low compared to peak season periods. Also, some South Ocean Beach facilities will be closed and off-limits to visitors, such as the parking area, multi-use trail, and beach access and amenities, while construction is taking place. Fencing or other similar temporary barriers will establish a perimeter around active construction areas for the safety of park visitors and wildlife. Safe vehicle access will be maintained between Oceanside Drive and Bayberry Drive and to the OSV zone. Safe access will also be maintained to hunting areas, duck blinds, and the Life of the Dunes Trail during construction. As such, implementation of the selected action will not result in significant safety-related issues during construction.

Once construction is complete, relocating the OSV zone entrance road and traffic circle to more sustainable locations will benefit visitors by prolonging the useable lifespan of the facilities and placing them in areas less susceptible to storm damage. The selected action will also reduce user conflicts; provide capacity to manage current visitation more effectively; and upgrade amenities, such as showers and toilets. As such, the selected action will have long-term beneficial impacts to public health and safety.

***c. Effects that would violate federal, state, tribal, or local law protecting the environment.***

The selected action does not threaten or violate applicable federal, state, or local environmental laws or requirements imposed for the protection of the environment.

The NPS consulted with the Maryland Historical Trust (MHT) and federally recognized tribes, including the Delaware Nation, Delaware Tribe of Indians, and the Pamunkey Indian Tribe, in accordance with Section 106 of the National Historic Preservation Act. The NPS determined and MHT concurred that the project will have no effect on archeological resources, historic structures and districts, and cultural landscapes. The Delaware Nation responded that they have no concerns with the project assuming there will be no deep excavations. The NPS did not receive responses from the Delaware Tribe or the Pamunkey Tribe.

The NPS obtained an official species list from the US Fish and Wildlife Service's (USFWS's) Information for Planning and Consultation website. The list identified the federally listed threatened eastern black rail, piping plover, seabeach amaranth, and the monarch butterfly, a candidate species, as species potentially

affected by the selected action. The NPS sent a letter to USFWS requesting concurrence that the project may affect, but is not likely to adversely affect, federally listed species. The USFWS concurred with the determination.

The NPS consulted with the Maryland Department of Natural Resources (MDDNR) Wildlife and Heritage Services regarding the potential occurrence of state-listed species in the vicinity of South Ocean Beach. The MDDNR identified three recorded plant species of concern, including seabeach knotweed, meadow lovegrass, and seabeach amaranth. The NPS will conduct presence/absence surveys prior to construction to determine if any of these species of concern occur in the project study area and continue to coordinate with MDDNR, if needed, to identify appropriate measures to minimize any impacts.

The NPS consulted with the Maryland Coastal Zone Management Program as required by Section 307 of the Coastal Zone Management Act and enforced by MDDNR. The NPS determined that the selected action will be consistent, to the maximum extent practicable, with the coastal policies of the Maryland Coastal Zone Management Program. MDDNR concurred with the determination, with the caveat that NPS will: schedule a meeting with the Maryland Department of the Environment and the U.S. Army Corps of Engineers prior to submittal of a joint permit application for Clean Water Act Section 404/401 authorization; develop a Critical Area Buffer Management Plan; and resubmit the project for a new determination should the design or level of disturbance change.

### **Finding of No Significant Impact**

Based on the information contained in the EA, I have determined that the selected action does not constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement will not be prepared.

This finding considers the Council on Environmental Quality criteria for significance (40 CFR § 1501.3 (b) (2022)), regarding the *potentially affected environment* and *degrees of effects* of the impacts described in the EA (which is hereby incorporated by reference) and as summarized above.

**Recommended:**

\_\_\_\_\_  
Hugh Hawthorne, Superintendent  
Assateague Island National Seashore

\_\_\_\_\_  
Date

**Approved:**

\_\_\_\_\_  
Gay E. Vietzke, Regional Director

\_\_\_\_\_  
Date

NPS Interior Region 1 documents appended to the FONSI include:

- Appendix A: Public Comment Responses
- Appendix B: Non-Impairment Documentation
- Appendix C: Wetland and Floodplain Statement of Findings

## APPENDIX A. PUBLIC COMMENT RESPONSE

Interested public and agencies were provided an opportunity to review and comment on the Environmental Assessment (EA) during a 30-day review period from July 3, 2023 through August 1, 2023. In addition, a public open house was held at the Assateague Island National Seashore (Assateague Island NS) Headquarters / Environmental Education Center on July 11, 2023. The National Park Service (NPS) used its Planning, Environment and Public Comment (PEPC) website and the Assateague Island NS Facebook page to announce the availability of the EA and the public open house. The NPS also issued a press release from the Superintendent to media outlets and posted it on the News Releases section of the Assateague Island NS website. The NPS also sent by email a notification of the EA public review period to the project mailing list, which included numerous potentially interested stakeholders, agencies, and unaffiliated individuals.

A total of eight correspondences were received during the EA public review period, including one submission from official representatives of organizations and seven correspondences from individual members of the public. Responses to concerns from substantive comments are addressed below.

### **Concern 1A: Alternatives – New Alternatives or Alternative Elements (beach access)**

A commenter was concerned that an alternative should be considered to limit OSV beach access.

**Response:** OSV use is a unique and popular attraction at Assateague Island NS. Relocating the OSV zone entrance road will support NPS objectives by managing visitation more effectively and reducing user conflicts. Assateague Island NS plans to maintain access to the OSV zone as long as it is safe to do so, assuming OSVs do not result in impairment of park resources.

### **Concern 1B: Alternatives – New Alternatives or Alternative Elements (beach replenishment)**

One commenter would like to know why beach replenishment was not considered in the alternatives.

**Response:** Beach replenishment would not address the significant sand deposition that is occurring and that is projected to intensify as the dunes continue to migrate westward. The proposed reconfiguration will move the traffic circle and OSV zone entrance road away from the migrating dunes while allowing NPS to manage visitation more effectively and reduce user conflicts.

### **Concern 1C: Alternatives – New Alternatives or Alternative Elements (counter)**

A commenter was concerned that OSV reconfiguration should include a visible counter at the entrance.

**Response:** The NPS agrees, and we are currently working to identify a solution that will allow us to establish a counter that is visible from the roundabout.

### **Concern 1D: Alternatives – New Alternatives or Alternative Elements (reduce congestion)**

One commenter suggested that the NPS consider additional methods to reduce congestion and idling and specifically named timed entry as an option.

**Response:** While not within the scope for this project, the reconfiguration would not preclude the NPS from investigating such measures in the future.

**Concern 2A: Visitor Use and Experience (beach access)**

One commenter asked that proposed paths to the beach be more accessible.

**Response:** The paths will be designed to be accessible for the disabled community and they will be very similar in length to the existing path.

**Concern 2B: Visitor Use and Experience (exit pathway)**

A commenter suggested designs should include an exit area so that visitors could easily leave the OSV waiting line.

**Response:** The proposed OSV zone entrance road will provide 5-foot-wide shoulders and clear space on both sides to allow vehicles to turn around and leave the queue if desired.

**Concern 3: Environmental Issues (wetland and floodplain mitigations)**

A commenter who is an organization representative asked that the NPS mitigate wetland and floodplain impacts in accordance with regulations and associated permits.

**Response:** The NPS would ensure adherence to all environmental commitments identified during plan approval and permitting. In accordance with the Wetland and Floodplain Statement of Findings (Appendix C) for the proposed action, the NPS would implement the following measures to minimize wetland disturbance and compensate loss:

- Continue to evaluate opportunities to further reduce wetland impacts as design progresses.
- Obtain required authorizations and certifications for unavoidable wetland impacts in accordance with Sections 404 and 401 of the Clean Water Act and Maryland's *Nontidal Wetlands* (Code of Maryland Regulations 26.23.01) regulations.
- Develop an Erosion and Sediment Control Plan.
- Design and construct an on-site mitigation project that would involve wetland creation to compensate for the loss of wetland area and functions.
- Allow temporarily disturbed wetland areas to naturally revegetate after construction.

In accordance with the Wetland and Floodplain Statement of Findings (Appendix C) for the proposed action, the NPS would implement the following measures to minimize floodplain disturbance:

- Design facilities to be consistent with 44 Code of Federal Regulations Part 60 standards under the National Flood Insurance Program.
- Obtain authorization for proposed floodplain disturbance in accordance with Maryland's *Construction on Nontidal Waters and Floodplains* regulations.
- Allow natural coastal processes to continue while maintaining visitor use and minimizing resource damage within the floodplain.
- Outline in the park's Hurricane and Coastal Storm Plan procedures for managing storms, handling emergencies, and recovering assets.
- Develop an Erosion and Sediment Control Plan.
- Include appropriate stormwater best management practices in the project design to compensate for impervious surface increase and loss of floodplain functions.



- Mitigate habitat loss by removing existing pavement and restoring wetlands and upland habitats in these areas.
- Allow temporarily disturbed floodplain areas to naturally revegetate after construction.
- Require the construction contractor to clean vehicles and equipment offsite to prevent transport of invasive plant seeds, propagules, and other weed seeds.

## **APPENDIX B. NON-IMPAIRMENT DETERMINATION**

### **Impairment Prohibition**

The Organic Act of 1916 directs the U.S. Department of the Interior and the National Park Service (NPS) to manage units “to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (54 United States Code [USC] § 100101). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that the NPS must conduct its actions in a manner that will ensure no “derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress” (54 USC § 100101).

### **Impairment Definition**

According to NPS Management Policies 2006 Section 1.4.5, an action is considered an impairment when its impacts “harm the integrity of Park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values”. Section 1.4.5 goes on to state that, “an impact to any park resource or value may, but does not necessarily, constitute an impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

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

### **Impairment Determination**

This impairment determination has been prepared for the selected action described in the Finding of No Significant Impact and the *Alternatives* chapter of the Environmental Assessment (EA). The determination is made for wetlands and floodplains; it does not include impacts to visitor use, experience, and safety because this does not constitute impacts to park resources and values subject to the non-impairment standard.

The selected action will not have significant impacts to wetlands. There will be approximately 5,107 square feet (0.12 acre) of temporary impacts to nontidal wetlands, as well as 6,588 square feet (0.15 acre) of permanent wetland impacts. However, following construction, temporarily impacted wetlands will revegetate naturally and the NPS will create 11,695 square feet (0.27 acre) of wetlands that will more than compensate for the loss of wetland area and function that will occur during construction. The selected action will therefore not result in impairment to wetlands.

The selected action will result in adverse impacts to floodplains from ground disturbance, an increase in total impervious surfaces, and vegetative clearing. However, these impacts will be a very small portion of the overall floodplain and localized to a developed area. The NPS will mitigate impacts to floodplain

functions by restoring approximately 80,503 square feet (1.85 acres) of wetland and upland habitats, conducting off-site plantings, as necessary, and using stormwater best management practices to mitigate for the reduced infiltration. The selected action will therefore not result in impairment to the floodplain.

## **Conclusion**

The NPS has determined that implementing the selected action is not anticipated to constitute an impairment of the resources or values of the park. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts described in the EA, the comments provided by the public and others, and the professional judgment of the decision-maker guided by the direction of the NPS Management Policies 2006.

## **APPENDIX C. WETLAND AND FLOODPLAIN STATEMENT OF FINDINGS**




Assateague Island National Seashore  
Maryland

---


## WETLAND AND FLOODPLAIN STATEMENT OF FINDINGS

South Ocean Beach Parking Area and  
Over-Sand Vehicle Entrance Road Reconfiguration

Assateague Island National Seashore  
Maryland

Recommended:   
\_\_\_\_\_  
Superintendent  
Assateague Island National Seashore

08/08/23  
\_\_\_\_\_  
Date

Certification of  
Technical Adequacy and  
Servicewide Consistency:   
\_\_\_\_\_  
Water Resources Division

08/09/2023  
\_\_\_\_\_  
Date

Approved: \_\_\_\_\_  
\_\_\_\_\_  
Regional Director

\_\_\_\_\_  
Date

## INTRODUCTION

Pursuant to the National Environmental Policy Act of 1969 (NEPA), the National Park Service (NPS) is preparing an Environmental Assessment (EA) for the proposed reconfiguration of the South Ocean Beach parking area and over-sand vehicle (OSV) entrance road at Assateague Island National Seashore (Assateague Island NS) in Worcester County, Maryland.

Executive Order 11990 *Protection of Wetlands*, Executive Order 11988 *Floodplain Management*, and Executive Order 13690 *Establishing a Federal Flood Risk Management Standard*, which amended 11988 on January 30, 2015, require the NPS and other federal agencies to evaluate the likely impacts of actions in wetlands and floodplains. Director's Order 77-1: *Wetland Protection* (effective October 2002) and Procedural Manual 77-1: *Wetland Protection* (reissued June 2016) provide NPS procedures for complying with Executive Order 11990, while Director's Order 77-2: *Floodplain Management* and Procedural Manual 77-2 provide NPS procedures for complying with Executive Order 11988. Guidance for the Federal Flood Risk Management Standard is described in Executive Order 13690 and the associated implementation guidelines.

This Statement of Findings was prepared per Director's Order 77-1: *Wetland Protection* and Director's Order 77-2: *Floodplain Management* for the proposed South Ocean Beach parking area and OSV entrance road reconfiguration and documents compliance with the NPS wetland protection and floodplain management procedures. The NPS has completed a Statement of Findings because the proposed project would occur within the 100-year floodplain and would result in a loss of wetlands on Assateague Island NS.

## PROPOSED ACTION

Under Alternative 2 (the Preferred Alternative), the NPS proposes the following improvements to make the facilities that serve South Ocean Beach less susceptible to damage caused by natural coastal processes and to manage visitors more effectively. The proposed action would reduce the storm-related risks to facilities that serve South Ocean Beach by relocating them to a more sustainable location. The proposed action would also reconfigure the facilities to manage current visitor use more effectively and upgrade infrastructure and amenities that are in poor condition and /or inadequate for current visitation.

### Circulation

The Preferred Alternative would relocate the traffic circle approximately 650 feet northwest of its existing location centered on the existing Bayberry Drive. The traffic circle would be similar in size to the existing circle, allowing for safe circulation by providing adequate sight distance and separation between entrance and exit points. Bayberry Drive would intersect with the traffic circle on the north side while Oceanside Drive would intersect with the traffic circle from the northeast. The OSV entrance road intersects with the traffic circle on the west side and the parking area access road intersects with the traffic circle on the south side. Roads would have 11-foot-wide lanes and the traffic circle lane width would be 15 feet. The traffic circle would accommodate the WB (wheelbase)-50 design vehicle type (defined as a large semi-trailer truck with an overall length of 55 feet) and recreational vehicles (RV) without traversing over the center circle.

### Parking Area

The Preferred Alternative would expand the parking area by about 20,670 square feet to approximately 58,870 square feet in area. The parking area would include an asphalt surface material with pavement markings to accommodate 150 standard 9-foot-wide parking spaces, six accessible parking spaces, and two-way drive aisles that would be 24 feet combined width. Also, the entrance and exit lanes to the parking area would run adjacent to each other to connect to the traffic circle.

### OSV Zone Entrance Road

The Preferred Alternative would relocate the OSV zone entrance road to a more sustainable location, looping to the west around the new parking area. The NPS would make the temporary location of the existing

electronic OSV zone entrance gate permanent, allowing for queuing capacity for up to approximately 90 vehicles. The NPS would use asphalt pavement for the road to approximately 15 feet east of the multi-use path crossing on the OSV zone entrance road where the road surface would then change to a clay and clamshell surface. The OSV zone entrance road would have 5-foot-wide shoulders and clear space on both sides of the roadway to allow vehicles to turn around and leave the queue if desired.

#### OSV Zone Air Compressor Station

Additionally, the NPS would construct an air compressor station near the southwest corner of the parking area, adjacent to the exit lane on the OSV zone entrance road, approximately 60 feet from the clay and clamshell OSV zone entrance road surface, and approximately 1,000 feet south of the entrance to the traffic circle. The air compressor station would provide eight air pumps, a vault toilet, and downward facing lighting adjacent to the OSV zone exit lane of similar shape and size to the existing station. A new, prefabricated structure would house the air compressor and any electrical panels. A utility contractor would extend an electrical conduit from its current location to the air compressor building to operate the compressor and lights at the air pumps. The NPS would install a standard timber gate or automated gate system on the OSV zone entrance road just off the traffic circle to restrict access to the OSV zone if needed. The Preferred Alternative would also include pavement widening to accommodate short-term parking for one to two vehicles to access the vault toilet.

#### Beach Access and Amenities

The Preferred Alternative would establish two pedestrian paths to provide access to the beach from the parking area. The NPS would design the paths to align with pedestrian routes in the parking area and would distance the paths from each other as much as feasible to spread visitors out on the beach. The paths would be on existing pavement or constructed as at-grade wooden boardwalks until they reach the beach where they would transition to accessible matting placed on the sand.

The Preferred Alternative would also establish two comfort stations including one prefabricated concrete vault toilet building (each with two toilets), pedestal showers, water fountains, changing cabanas, and benches adjacent to each boardwalk path near the parking area. The NPS would widen the paths in front of these facilities to provide sufficient space for pedestrian circulation within and through the comfort stations. The comfort stations would be moveable so the NPS could relocate the facilities in response to storms and / or changes to the landscape. Service vehicles would be able to access the vault toilets for maintenance and cleaning from the parking area across from the multi-use path. The NPS would install a standard timber gate to prevent unauthorized parking at the vault toilet access locations. A utility contractor would extend a water line from its current location on Oceanside Drive to the pedestal showers and drinking fountains.

#### Multi-Use Path

The NPS would construct a 10-foot-wide asphalt multi-use path around the parking area and OSV zone entrance road under the Preferred Alternative, creating a loop trail that connects back to the existing path on Oceanside Drive. The path's alignment would direct visitors to the Life of the Dunes Trail at the south end of South Ocean Beach. A new trailhead established at the entrance to the Life of the Dunes Trail would include a bicycle rack, bench, and trailhead signage. The NPS would sign and mark the path that crosses the OSV zone entrance road for pedestrian safety.

#### Stormwater Management

The Preferred Alternative would incorporate small-scale, nonstructural stormwater management techniques to mitigate the project's effects on water quality and floodplain functions in accordance with Maryland's *Stormwater Management* regulations, the 2000 *Maryland Stormwater Design Manual*, and the 2015 publication *Maryland Stormwater Management and Erosion and Sediment Control Guidelines for State and Federal Projects*. According to the *Maryland Stormwater Design Manual*, the proposed project would qualify

as a new development since the existing percent impervious within the project limits is less than 40 percent. The manual therefore requires water quality treatment of 100 percent of the new impervious area and 100 percent of the full depth reconstructed impervious area within the project limits stormwater management facilities. The action alternatives incorporate grass swales for stormwater quality treatment along all new roadways and along the longitudinal edges of the parking area to incorporate stormwater management into the proposed project. The manual would not require stormwater quantity management because existing drainage within the project study area outfalls directly to tidally influenced waters.

#### Signing and Striping

The NPS would install signing to direct visitors to the parking area, OSV zone entrance road, beach area, and Life of the Dunes Trail; mark unauthorized parking areas; and establish traffic laws and other restrictions. Striping would delineate parking spaces, pedestrian crossings, paths, and roadways. All signing and striping would match NPS standards.

#### Fencing and Barriers

The Preferred Alternative includes placing split rail fencing, primarily to deter visitors from parking beyond designated spaces and on road shoulders, taking care to maintain safe routes for horses through South Ocean Beach. The NPS would install steel backed timber guardrail to match the existing infrastructure within Assateague Island NS between the multi-use path and the roads as a safety measure and fencing between the multi-use path and parking area to delineate the roadway pavement and path pavement.

#### Construction Phasing and Staging

Construction phasing would provide continuous access to the OSV gate for those permitted to drive on the beach. The NPS may need to temporarily relocate the OSV gate and / or entrance road to maintain access. The current clamshell parking area and beach access would not be accessible to visitors during construction, as the parking area would serve as the primary materials and equipment staging area.

### **OTHER ALTERNATIVES CONSIDERED**

The NPS evaluated two additional alternatives (Alternatives 1 and 3) in the EA that the NPS did not select as the Preferred Alternative. Both alternatives are similar to the Preferred Alternative except for differences to the parking area and OSV zone air compressor station.

#### **Alternative 1**

Under Alternative 1, the NPS would expand the existing parking area by about 40,530 square feet to approximately 78,730 square feet in area. The parking area would include an asphalt surface material with pavement markings to accommodate 152 standard 9-foot-wide parking spaces and six accessible parking spaces. However, unlike the Preferred Alternative, Alternative 1 includes 45-degree angled parking spaces, and a one-way, 14 feet wide drive aisle to facilitate efficient entering and exiting parking spaces and provide safer pedestrian crossings within the parking area. The entrance and exit road to the parking area would split to match the one-way traffic flow in the parking area and to minimize wetland impacts, which is also different from the Preferred Alternative.

Additionally, the NPS would construct the air compressor station under Alternative 1 at a different location along the OSV zone entrance road compared to the Preferred Alternative. Under Alternative 1, the air compressor station would be located approximately 100 feet south of the entrance to the traffic circle. All the facilities provided at the air compressor station under Alternative 1 would be similar to the Preferred Alternative.

#### **Alternative 3**

Under Alternative 3, the NPS would expand the parking area by about 31,510 square feet to approximately 69,710 square feet in area. The parking area would accommodate 150, 90-degree angled parking spaces, six



accessible parking spaces, and two-way drive aisles that would be 24 feet wide. However, unlike the Preferred Alternative, Alternative 3 involves constructing the parking area using a clay and clamshell surface material like the existing parking area. Pavement markings delineating each parking space are not feasible on this surface material; however, the NPS would install split rail fencing around the parking area, and within its interior, to delineate parking aisles and vehicle circulation. Alternative 3 assumes 10.5-foot-wide parking spaces (Alternative 1 and the Preferred Alternative assume parking spaces are each nine feet wide) to compensate for the inefficiencies that are inherent to this type of alternative parking surface. The six accessible parking spaces would require an accessible surface, such as asphalt, to facilitate pedestrian access between the parking spaces and the paths and boardwalks. The entrance and exit lanes to the parking area would be on the same alignment as the Preferred Alternative, running adjacent to each other to connect to the traffic circle.

The OSV zone air compressor station location under Alternative 3 would be like Alternative 1. All the facilities provided at the air compressor station under Alternative 3 would be similar to the Preferred Alternative.

## SITE DESCRIPTION

### Wetlands

The NPS conducted a wetland investigation during project planning to determine the presence, extent, and classification of waters of the United States, including wetlands and waters of the State, within the project study area. The NPS delineated one estuarine, intertidal, scrub-shrub (E2SS) wetland and several palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetland systems. Detailed descriptions of the wetlands that would be permanently and/or temporarily impacted during construction of the Preferred Alternative are below. **Figure 1** attached to this Statement of Findings displays the locations of these impacted wetlands.

**Wetland 5A (WET5A)** is within an interdunal depression between the OSV access road and the Life of the Dunes Trail near the southeast corner of the South Ocean Beach parking area. During the investigation, primary indicators of hydrology included a high water table and saturated soils within the wetland. Hydrophytic vegetation dominated WET5A, including wax myrtle (*Morella cerifera*), switchgrass (*Panicum virgatum*), and needlepod rush (*Juncus scirpoides*). Soils met the criteria of stripped matrix, a hydric soil indicator of the Atlantic Coastal Plan. WET5A encompasses 2,133 square feet (0.05 acres) within the study area and was classified as a PEM wetland with persistent vegetation and a seasonally flooded/saturated and/or intermittently flooded water regime.

**Wetland 7 (WET7)** is within the existing traffic circle. During the investigation, primary indicators of hydrology included a high water table and saturated soils within the wetland. Hydrophytic vegetation dominated the wetland, including wax myrtle, loblolly pine (*Pinus taeda*), woolly panic grass (*Dichanthelium acuminatum*), small carpetgrass (*Arthraxon hispidus*), common reed (*Phragmites australis*), and roundleaf greenbrier (*Smilax rotundifolia*). Soils met the criteria of stripped matrix, a hydric soil indicator of the Atlantic Coastal Plain. WET7 encompasses 9,265 square feet (0.21 acres) within the study area and was classified as a PSS wetland with broad-leaved evergreen and needle-leaved evergreen vegetation and a seasonally flooded/saturated water regime.

**Wetland 10 (WET10)** is adjacent to Bayberry Drive northwest of the traffic circle. During the investigation, primary indicators of hydrology included a high water table and saturated soils. Hydrophytic vegetation dominated WET10, including wax myrtle, loblolly pine, common reed, and roundleaf greenbrier. Soils within the wetland met the criteria of stripped matrix, a hydric soil indicator of the Atlantic Coastal Plain. WET10 encompasses 4,033 square feet (0.09 acres) within the study area and was classified as a PSS wetland with broad- and needle-leaved evergreen vegetation and a seasonally flooded/saturated water regime.

**Wetland 11 (WET11)** is primarily located directly north of the traffic circle between Bayberry Drive and Oceanside Drive. The wetland was dominated by hydrophytic vegetation that included narrowleaf cattail

(*Typha angustifolia*). Primary indicators of hydrology included a high water table, saturated soils, water marks, and inundation visible on aerial imagery within the wetland. Soils within the wetland met the criteria of stripped matrix, a hydric soil indicator of the Atlantic Coastal Plain. A portion of WET11 consists of a roadside ditch along Bayberry Drive and around the east side of the traffic circle. This portion of WET11 encompasses 4,791 square feet (0.11 acres) within the study area and was classified as a PEM wetland with non-persistent vegetation and a seasonally flooded/saturated and/or intermittently flooded water regime. The remaining portion of WET11 encompasses 74,921 square feet (1.72 acres) within the study area and was classified as a PSS wetland with broad- and needle-leaved evergreen vegetation and a seasonally flooded/saturated water regime. The ditch and adjacent PSS wetlands have a direct surface connection to traditional navigable waters via a culvert that conveys flow within the ditch to a tidal marsh associated with Chincoteague Bay outside of the project study area to the north.

### **Functions and Values Assessment**

The NPS evaluated the functions and values of each wetland using the USACE New England District's "Descriptive Approach" (USACE 1999). The inland wetlands identified during the investigation are generally in interdunal depressions or swales, or in ditches or depressions adjacent to park infrastructure, and serve relatively similar functions, although larger wetlands would have a higher potential to effectively provide these functions compared to smaller wetlands. The following describes the primary wetland functions and values observed for the wetlands:

**Groundwater recharge/discharge** is a primary function of all the delineated wetlands due to the sandy composition of the soils and because a fragipan or bedrock do not occur that would restrict groundwater/surface water interaction.

**Floodflow alteration** is a primary function of WET5A and WET11 because they are generally located in depressional features with the capability to store and infiltrate floodwaters.

**Sediment/toxicant retention** is a function of WET5A and WET11 because they are generally located in depressional features with the potential to retain sediments as water recedes following coastal storm events. Also, sediment and debris from park roadways can be retained in adjacent ditches and wetlands.

**Nutrient removal** is a function of WET5A and WET11 because they are generally located in depressional features with the potential to sequester nutrients and prevent their transport to other waterbodies.

**Production export** is a function of all the delineated wetlands because they are likely to provide food sources for wildlife on the Island to varying degrees.

**Wildlife habitat** is a primary function of all the delineated wetlands. Wetlands in smaller depressional areas can provide habitat for amphibians (seasonally) and for birds and other small mammals. Larger wetlands bordered by expansive forested uplands and edge habitat are more likely to also provide suitable habitat for white-tailed deer, sika deer, and Assateague's wild horses.

Wetlands at the South Ocean Beach parking area also provide **educational/scientific** value to the park due to their locations with a dynamic coastal landscape, as well as **recreational, visual quality/aesthetic**, and **heritage** value because of the opportunities for visitors to be able to view and appreciate the wetlands for bird watching, or while walking to the beach, hiking the Life of the Dunes Trail, or walking, biking, or driving on park roadways and trails.

Interdunal wetlands are unique coastal features that vary greatly in plant species composition due to fluctuations in water levels and salinity. These wetland habitats are also now known to support populations of Bethany Beach firefly (*Photuris bethaniensis*) on Assateague Island NS, which is a species currently under review by the USFWS for listing under the Endangered Species Act.

### **Functional Quality Rating**

WET5A supports all the functions described in the previous section. Its location within an interdunal depression is unique to the coastal maritime dune and grassland system, and its position on the dynamic landscape makes WET5A sensitive to coastal events and natural processes. Even though WET5A is small it was given a “high” quality rating because of its uniqueness, landscape position, lack of invasives, and the variety of functions it supports, including providing potential habitat for Bethany Beach firefly. An estimated 392 square feet (0.01 acres) of temporary impacts are anticipated to WET5A from minor grading activities to establish desired contours to connect WET5A with a potential wetland creation area aimed at mitigating project wetland impacts.

WET7 supports some of the functions described previously within this section, primarily providing suitable habitat for birds and other wildlife. However, because WET7 is located within the traffic circle, it is believed that the wetland has established due to alterations to the pre-development natural hydrologic conditions of the site. Due to this, WET7’s limited functional value, and because the invasive common reed has established within the wetland, WET7 has been given a “low” quality rating. An estimated 685 square feet (0.02 acres) of temporary impacts are anticipated to WET7 from minor grading activities to establish desired contours to connect WET7 with a potential wetland creation area aimed at mitigating project wetland impacts.

WET10 supports some of the functions described previously within this section, primarily providing suitable habitat for birds and other wildlife. WET10 has been given a “low” quality rating because of its limited functional value, location adjacent to Bayberry Drive, and because common reed has established within the wetland. An estimated 1,628 square feet (0.04 acres) of permanent impacts are anticipated to WET10 from grading and establishing desired contours for the entrance road to the parking area. Additionally, an estimated 479 square feet (0.01 acres) of temporary impacts are anticipated from installing ESCs.

The PSS portion of WET11 supports all the functions described previously in this section. Due to its size, WET11 has the highest functional value of the impacted wetlands, although there remains the possibility that the wetland was established due to alterations to the pre-development natural hydrologic conditions of the site when Oceanside Drive and Bayberry Drive were constructed. As such, the PSS portion of WET11 was given a “moderate” quality rating. An estimated 2,813 square feet (0.06 acres) of permanent impacts are anticipated to the PSS portion of WET11 from grading and establishing desired contours for the multi-use trail. Additionally, an estimated 2,780 square feet (0.06 acres) of temporary impacts are anticipated to the PSS portion of WET11 from installing ESCs and from minor grading activities to establish desired contours.

The PEM portion of WET11 is within a ditch at the existing traffic circle and along Bayberry Drive. The ditch provides a direct surface water connection to tidal waters and has been observed to have standing water and is sparsely vegetated with cattails and other wetland plants. The PEM portion of WET11 provides all the functions described previously in this section but was given a “low” quality rating since the wetland is in a manmade ditch adjacent to park infrastructure. An estimated 2,147 square feet (0.05 acres) of permanent impacts are anticipated to the PEM portion of WET11 from relocating the ditch to accommodate the new parking area entrance road and multi-use path. A new ditch would be established adjacent to these features to replace the hydrologic functions of the existing ditch. Additionally, an estimated 771 square feet (0.02 acres) of temporary impacts are anticipated to the PEM portion of WET11 from installing ESCs and from minor grading activities to establish desired contours.

## **Floodplains**

As shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map 24047C0285H, effective July 16, 2015, South Ocean Beach is entirely within Zone AE, an area that presents a 1% annual chance of flooding, also known as the 100-year floodplain (FEMA 2015a). The 100-year floodplain represents areas of high flood risk according to FEMA. On Assateague Island, Zone AE occurs behind the dunes and is not subject to wave action. Base flood elevations are five to six feet in the project study area. **Figure 2** attached to this Statement of Findings displays the location of the Preferred Alternative within the 100-year floodplain. The proposed action is considered a Class I Action per NPS Procedural Manual 77-2: *Floodplain Management*.

Floods on Assateague Island can typically range from minor overwash events during high tides to major flooding from hurricanes and other coastal storms. Excessive precipitation can also cause flooding in 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. High waves and water have periodically swept entirely over Assateague Island and flowed into Chincoteague Bay and Sinepuxent Bay adjacent to the project study area. As demonstrated by Tropical Storm Isabel in 2003 and Hurricane Sandy in 2012, NPS facilities on Assateague Island are extremely vulnerable to coastal flood events. However, because large coastal storm events are typically predictable, with warning times ranging from many hours to several days, evacuation can be fairly easy to coordinate. Assateague Island NS prepares an annual Hurricane and Coastal Storm Plan for the protection of park staff, visitors, and resources that outlines the operating procedures for storm preparations, including evacuation, and the responsibilities of park staff before, during, and after a storm.

Floodplains provide a wide range of benefits to natural environments and human society. According to FEMA, floodplains can provide a variety of water resource, biological, and societal functions (FEMA 2015b). Water resource functions of floodplains include natural flood storage, erosion control, groundwater recharge, and surface water quality treatment. Biological functions of floodplains include production export and provision of fish and wildlife habitats. Societal resources are the floodplain functions that benefit human society with harvestable products, recreational opportunities, and educational values.

Natural resource conditions at South Ocean Beach provide beneficial functions that help to mitigate impacts of flooding. Estuarine wetlands west of South Ocean Beach provide flood storage, erosion control, and sediment retention functions. Dunes along the seashore impede storm surge. Interdunal wetlands and other inland depressions also function to store flood waters. The floodplain on Assateague Island also supports infiltration and groundwater recharge due to the unconsolidated nature of the soil and fluctuating groundwater table. Floodplain vegetation can provide water quality treatment, support a wide variety of wildlife, and provide recreational opportunities.

Sea level rise and coastal flooding can be used as an indicator of climate change. At Lewes, Delaware, just over 33 miles north of Assateague Island, sea level increased nearly nine inches between 1960 and 2021 according to collected data. Data from Lewes also provides evidence that the average number of coastal flood events per year has increased. Between 1950 and 1989, the average number of coastal flood events was less than 2 per year. The average number increased to just over four from 1990 to 2009, and to an average of almost eight between 2010 and 2020 (EPA 2022). Additionally, along the Atlantic coast, sea level rise is converting land to open water. The EPA estimates that approximately four square miles of land was lost along the Atlantic coast between 1996 and 2011 (EPA 2022). As a barrier island, Assateague Island is especially vulnerable to coastal flooding, rising sea level, land loss, and other climate change effects.

## **JUSTIFICATION FOR USE OF WETLANDS AND THE FLOODPLAIN**

### **Wetlands Justification**

Data collected by NPS suggests that shoreline regression and westward dune migration will cause significant sand deposition on the existing traffic circle and OSV zone entrance road by 2040, making the facilities that serve South Ocean Beach unsustainable at their current locations. To meet the project's purpose and need to make the facilities less susceptible to damage from these natural coastal processes, the NPS proposes to relocate these facilities to the west away from projected 2040 dune areas where wetland impacts are unavoidable. Additionally, to meet the project's purpose and need to manage visitor use more effectively, the NPS must expand the facilities into wetlands to meet current visitation demand. Therefore, the loss of wetlands is unavoidable under each of the action alternatives, including the Preferred Alternative.

Assateague Island NS staff conducted a choosing by advantages (CBA) workshop in November 2022 to determine which of the three action alternatives presented in this EA provides the most value (i.e., benefits

measured against the cost to construct, maintain, and replace the alternative based on a 25-year useful lifespan). The NPS chose Alternative 2 as the Preferred Alternative through this process, which has more wetland impacts than Alternative 1, but less impacts than Alternative 3. Although the Preferred Alternative has 23 percent more wetland impacts than Alternative 1 (6,683 square feet compared to 5,301 square feet, respectively), the Preferred Alternative accommodates the targeted number of parking spaces within 16,327 square feet less impervious surface area and 33,602 square feet less overall floodplain disturbance compared to Alternative 1, while also having the lowest initial cost and life-cycle cost of the three action alternatives.

### Floodplain Justification

According to FEMA floodplain mapping, the majority of Assateague Island NS, including South Ocean Beach, is within the 100- or 500-year floodplain of Chincoteague Bay, Sinepuxent Bay, and/or the Atlantic Ocean. A portion of the North Ocean Beach parking area and secondary dune directly to the east is the only part of the developed area of Assateague Island NS not within the floodplain. As such, floodplain disturbance necessary to reconfigure the South Ocean Beach parking area and OSV zone entrance road is unavoidable. Implementation of the Preferred Alternative would result in 344,990 square feet (7.92 acres) of disturbance and an increase of 42,357 square feet (0.97 acres) of impervious surface area within the 100-year floodplain.

## MITIGATION

### Wetland Mitigation

The NPS would implement the following measures to minimize wetland disturbance and compensate for the loss of wetlands associated with the Preferred Alternative:

- 1) The NPS would continue to evaluate opportunities to further reduce wetland impacts as the design progresses.
- 2) The NPS would obtain required authorizations and certifications for unavoidable wetland impacts in accordance with Sections 404 and 401 of the Clean Water Act and Maryland's *Nontidal Wetlands* (Code of Maryland Regulations [COMAR] 26.23.01) regulations.
- 3) The NPS would develop an Erosion and Sediment Control (ESC) Plan to contain sediment in the construction area. The ESC Plan would include a variety of BMPs, such as stabilized construction entrances, silt fence, and other common practices, to prevent sediment transport offsite and potentially into wetlands.
- 4) Implementation of the Preferred Alternative would result in an unavoidable loss of wetlands from construction activities, including grading and other site preparations, for the proposed infrastructure improvements at South Ocean Beach. The NPS anticipates a total of 6,588 square feet (0.15 acres) of permanent nontidal wetland impacts based on schematic-level designs developed for the Preferred Alternative, including 2,147 square feet (0.05 acres) to PEM wetlands, and 4,441 square feet (0.1 acres) to PSS wetlands. Alternative 2 would also result in a total of approximately 5,107 square feet (0.12 acres) of temporary nontidal wetland impacts, including 1,163 square feet (0.03 acres) to PEM wetlands, and 3,944 square feet (0.09 acres) to PSS wetlands from installing ESCs and grading activities. **Figure 1** attached to this Statement of Findings presents the site-specific wetland impacts that the NPS anticipates would occur. **Table 1** provides a summary of the anticipated wetland impacts and the quality rating that has been used to determine mitigation to satisfy NPS requirements.

Table 1. Summary of Construction-Related Wetland Impacts for the Preferred Alternative

Wetland	Wetland Type	Permanent Impact	Temporary Impact	Quality Rating
WET5A	PSS	none	392 square feet (0.01 acres)	High
WET7	PSS	none	685 square feet (0.02 acres)	Moderate

WET10	PSS	1,628 square feet (0.04 acres)	479 square feet (0.01 acres)	Moderate
WET11	PSS	2,813 square feet (0.06 acres)	2,780 square feet (0.06 acres)	High
WET11	PEM	2,147 square feet (0.05 acres)	771 square feet (0.02 acres)	Moderate
Total Impact		6,588 square feet (0.15 acres)	5,107 square feet (0.12 acres)	

The Preferred Alternative would permanently or temporarily impact 11,695 square feet (0.27 acres) of wetland. To mitigate for the loss of wetlands and associated functions, as well as for temporary wetland disturbances, the NPS would design and construct an on-site compensatory wetland mitigation project under the Preferred Alternative. The project would involve wetland creation to compensate for the loss of wetland area and functions based on the anticipated impacts and functional quality rating given for each impacted wetland. Given the quality of the wetlands being impacted, and the quality of the compensatory wetlands, the NPS compliance requirement is at least a minimum of 11,695 square feet (0.27 acres) of wetland creation (a 1:1 mitigation ratio of area of impact equal to the area of compensation) under the Preferred Alternative.

As part of the proposed project, the NPS would remove approximately 80,503 square feet (1.85 acres) of existing pavement at South Ocean Beach and would restore both wetland and upland habitats in these areas. The NPS has identified more than 64,000 square feet (1.47 acres) of potential wetland creation opportunities within these pavement removal areas to satisfy all compensatory mitigation requirements. **Figure 1** includes the locations of potential wetland creation areas at South Ocean Beach.

The NPS would therefore create 64,000 square feet (1.47 acres) of wetlands by establishing groundwater connectivity as the primary source of hydrology, allowing wetland conditions to develop over time, similar to the interdunal wetlands that currently exist at South Ocean Beach. The NPS would establish vegetation within the created wetlands to replace the PEM and PSS wetland types that the project would permanently remove. These created wetlands would compensate for the loss of wetland area and functions by providing flood storage, groundwater infiltration, sediment/toxicant retention, nutrient removal, and potential habitat once vegetation establishes. The NPS anticipates created wetlands would receive moderate to high quality ratings once wetland conditions become established.

The NPS would coordinate with the Maryland Department of the Environment (MDE) and the US Army Corps of Engineers (USACE), as needed, to ensure that the NPS develops an adequate compensatory mitigation plan that also satisfies Clean Water Act requirements and Maryland's *Nontidal Wetlands* regulations. This coordination would include developing a mitigation monitoring strategy aimed at ensuring wetland conditions are establishing and to address any concerns that might hinder the successful creation of wetlands per the approved mitigation plan. This monitoring typically occurs annually over a five to 10-year period post-construction.

- 5) The NPS would allow temporarily disturbed wetland areas to naturally revegetate after construction is complete.

### Floodplain Mitigation

The NPS would implement measures to minimize floodplain disturbance including, but not limited to, the following:

- 1) The proposed facilities would be consistent with the 44 CFR Part 60 standards under the National Flood Insurance Program.

- 2) The NPS would obtain authorization for proposed floodplain disturbance in accordance with Maryland's *Construction on Nontidal Waters and Floodplains* regulations.
- 3) The NPS would implement the proposed action in part as a mitigation measure to allow natural coastal processes to continue while maintaining visitor use and minimizing resource damage within the floodplain. Relocating the South Ocean Beach facilities west of areas projected to be covered by dunes by 2040 would increase the useable lifespan of the facilities and minimize flood risk by placing the new facilities at locations less susceptible to damage from shoreline regression, dune migration, and coastal storm events. The NPS would also use moveable facilities as much as possible to further minimize flood risk.
- 4) Assateague Island NS's Hurricane and Coastal Storm Plan would reduce flood risk by outlining procedures for managing storms, handling emergencies, and recovering assets.
- 5) The NPS would obtain authorization from MDE for the proposed floodplain disturbance in accordance with Maryland's *Construction on Nontidal Waters and Floodplains* regulations, prior to commencing the proposed project. The NPS would also develop an ESC Plan for the project for MDE approval that would include BMPs to minimize temporary floodplain disturbances outside the limits of construction primarily from erosion and sedimentation. The NPS would also coordinate internally to ensure that the project and proposed mitigation for floodplain impacts are in compliance with Director's Order 77-2: *Floodplain Management*.
- 6) The NPS would include appropriate stormwater management BMPs in the design of the proposed project to compensate for the increase in impervious surface area and loss of floodplain functions provided at South Ocean Beach. Due to the sandy substrate at the site, stormwater management BMPs are likely to consist primarily of ditches and swales adjacent to impervious areas to capture and infiltrate stormwater runoff and to provide for groundwater recharge. These swales would also serve to temporarily store floodwaters until infiltration is possible following more intense storms.
- 7) Additionally, the NPS estimates that Alternative 2 would require 103,149 square feet (2.37 acres) of vegetation clearing and associated habitat loss within the floodplain. To mitigate habitat loss, the NPS would remove approximately 80,503 square feet (1.85 acres) of existing pavement and restore wetland and upland habitats in these areas. The NPS would prepare a Critical Area Buffer Management Plan that would include on-site vegetation restoration and off-site plantings, as necessary, to compensate for vegetation removal in accordance with Maryland's *Critical Area* regulations. The on-site restoration areas would also serve flood storage and groundwater infiltration functions in addition to reducing habitat loss.
- 8) The NPS would allow other temporarily disturbed floodplain areas to naturally revegetate after construction is complete.
- 9) The NPS would also require the construction contractor clean vehicles and equipment offsite to prevent the transport of invasive plant seeds, propagules, and other weed seeds, onto Assateague Island NS.

## CONCLUSION

The Preferred Alternative would permanently or temporarily impact 11,695 square feet (0.27 acres) of wetland. This includes 6,588 square feet (0.15 acres) of permanent nontidal wetland impacts and 5,107 square feet (0.12 acres) of temporary nontidal wetland impacts based on schematic-level designs developed for the Preferred Alternative.

Implementation of the Preferred Alternative would require compensatory mitigation to comply with NPS Director's Order 77-1: *Wetland Protection*. Mitigation would involve creating 64,000 square feet (1.47 acres) of PEM and PSS wetlands to compensate for the loss of wetland area and functions. The NPS anticipates that

the proposed project would have beneficial impacts because the wetland creation would more than compensate for the anticipated loss of wetland area, types, and functions.

Additionally, although the Preferred Alternative would result in unavoidable floodplain disturbance, the impact would not be noticeable due to the relatively small-scale of the proposed project when compared to the overall floodplain area. The proposed project would increase the useable lifespan of the South Ocean Beach facilities, minimize flood risk, and mitigate impacts to floodplain functions and values under the Preferred Alternative.

The NPS finds that this proposed action is consistent with the policies and procedures of Director's Order 77-1: *Wetland Protection* and Director's Order 77-2: *Floodplain Management*, and Executive Order 13690.



## REFERENCES

### **Federal Emergency Management Agency**

- 2015a *Flood Insurance Rate Map 24047C0285H*, effective July 16, 2015, Worcester County, Maryland. FEMA Map Service Center. Online at <https://msc.fema.gov/portal/home>. Accessed February 6, 2023.
- 2015b *Chapter 8: Floodplain Natural Resources and Functions*. Emergency Management Institute. Online at <http://www.training.fema.gov/hiedu/docs/fmc/chapter%208%20-%20floodplain%20natural%20resources%20and%20functions.pdf>. Accessed February 6, 2023.

### **National Park Service**

- 2016 *Procedural Manual 77-1: Wetland Protection*. Online at [https://www.nps.gov/policy/DOrders/Procedural\\_Manual\\_77-1\\_6-21-2016.pdf](https://www.nps.gov/policy/DOrders/Procedural_Manual_77-1_6-21-2016.pdf). Accessed February 6, 2023.

### **US Army Corps of Engineers**

- 1999 *Wetland Functions and Values, A Descriptive Approach*. The Highway Methodology Workbook Supplement. Online at <https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Forms/HighwaySupplement6Apr2015.pdf>. Accessed February 6, 2023.

### **US Environmental Protection Agency**

- 2022 Climate Change Indicators: Oceans. Online at <https://www.epa.gov/climate-indicators/oceans>. Accessed April 4, 2023.

## ATTACHMENTS

Figure 1. Preferred Alternative Wetland Impact Map

Figure 2. Preferred Alternative FEMA Flood Zone Map



