Coastal Zone Management Act Federal Consistency Determination

For

Section C
Shoreline Stabilization for Erosion Control
Environmental Assessment

Fort Raleigh National Historic Site
December 2025

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1 Federal Agency Purpose and Action

Fort Raleigh National Historic Site (hereinafter referred to as the "Park," or the "Fort Raleigh National Historic Site") seeks a consistency concurrence from the North Carolina Division of Coastal Management for the purpose of stabilizing approximately 500 feet of unprotected shoreline at Fort Raleigh National Historic Site, Section C. The park would construct a protective rock beam as a barrier to provide shoreline erosion protection.

Fort Raleigh National Historic Site is in Dare County, North Carolina, northwest of the town of Manteo on the northern end of Roanoke Island, an island within the Albemarle Sound (See Figure 1 for a map of the location) Residential developments are located east, west, and south of the park with US Highway 64 running through the southern portion of the site. The project area is a corridor along the northern end of Roanoke Island that is between the Wayside Theatre on the east and the private inholdings of the Elizabethan Gardens on the west and extends out to the mean high-water line on the Albemarle Sound to the north (See Figure 3 for a map of the corridor referenced as Section C).

The purpose of the proposed action is to mitigate park lands from shoreline erosion for the protection of cultural and natural resources and the park's associated property and infrastructure. Shoreline erosion control measures are needed within the boundaries of the park to address shoreline erosion accelerated by segmented stabilization structures, more frequent and intense hurricane activity, winter nor'easters, rising sea levels, currents, and littoral drift. Immediate action is necessary to address this erosion, protect significant archaeological sites, and restore the shoreline to safeguard both cultural heritage and natural ecosystems within the park for the long-term.

Figure 1 Location of Fort Raleigh National Historic Site.

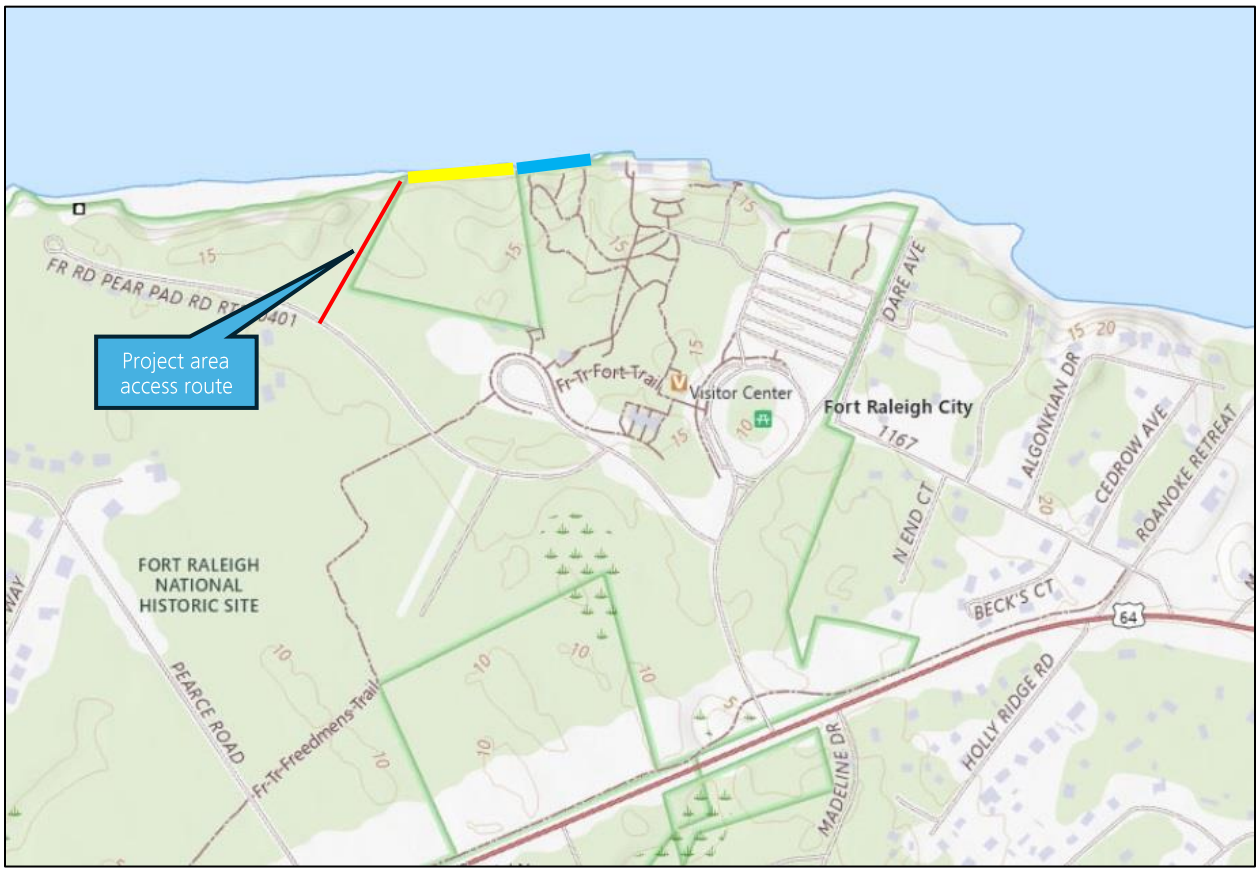

Figure 2 Project area and access route.

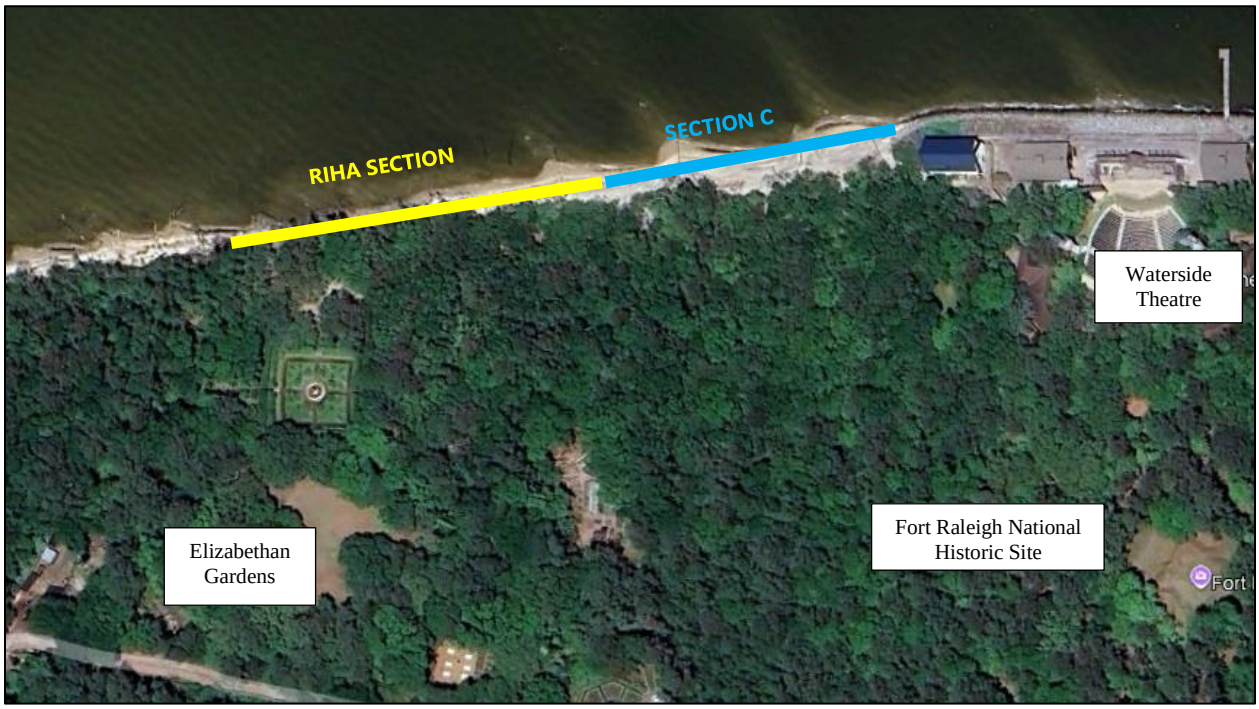

Figure 3 RIHA and Parks proposed rock sections.

The NPS is working with Roanoke Island Historical Association (RIHA) on a project to provide shoreline stabilization to the Elizabethan Gardens shoreline (600 feet) and approximately an additional 500 feet (Section C) of the park's shoreline, see Figures 2 and 3. The project would construct a rock berm starting at the existing rock berm on the western side of the Waterside Theatre and extend roughly 500 feet through park property and then an additional 600 feet through the Elizabethan Gardens property to their western boundary line.

The project will construct a rock berm by placing three-foot-in-diameter quarry stones ranging from 800 to 1300 pounds each along a center line that corresponds roughly to the elevation of the mean high water, MHW, line, refer to Figure 6. The cross-sectional view of the berm will measure 2 feet across at the top of the berm and will have a floating height of approximately 8 feet. The side slope will be 1:1 on both sides resulting in a berm base that varies in width but does not exceed 18 feet, refer to Figure 4.

This alignment will start as a berm where it ties into the western end of the existing rock berm protecting the Waterside Theatre. This will leave a small area of soil behind the berm through the parks 500 feet. Once it gets to the Elizabethan Gardens eastern property line the berm will be place against the existing earth embankment becoming a rock revetment. It will have a cross-sectional view still measuring 2 feet across at the top of the berm and will have a floating height of approximately 8 feet. The side slope will be 1:1 on the sound facing side and on the island side it will result in rock being placed up against the embankment resulting in a berm base that varies in width but does not exceed 10 feet, refer to Figure 5.

The construction will be completed early in 2026 with heavy equipment consisting of a tracked excavator with grappler, Bobcat skid steer, and four dump trucks with dual axels. The project area will be accessed through a narrow dirt trail on the west side of the Elizabethan Gardens, refer to Figure 2. At the northern end of the access route will be an area approximately 60 feet in diameter where the embankment will be cut to allow equipment down to the shoreline and trucks to turn and back up. This cut will be ideally parallel to the embankment. The trucks will turn and back up to the ramp and dump the rock for the skid steer to pick up and take to the excavator for placement. All equipment shall remain above the mean high-water line. The rock berm/revetment construction project will start at the western edge of the Lost Colony's existing rock berm. The project will include a delineation row of 3x5 flags at the mean high-water line to designate the sound sides extent of rock placement. All equipment and rock will be placed above this flagged line.

Once the project is completed an access point (staircase) would be constructed approximately 250 feet west of the existing rock berm at the Waterside Theatre's western most point. This staircase will be constructed out of treated lumber and will cross the rock berm to the sound side shoreline. The staircase will be approximately six feet in width and have a maximum height of nine feet. The staircase will be anchored into the soil once it is constructed.

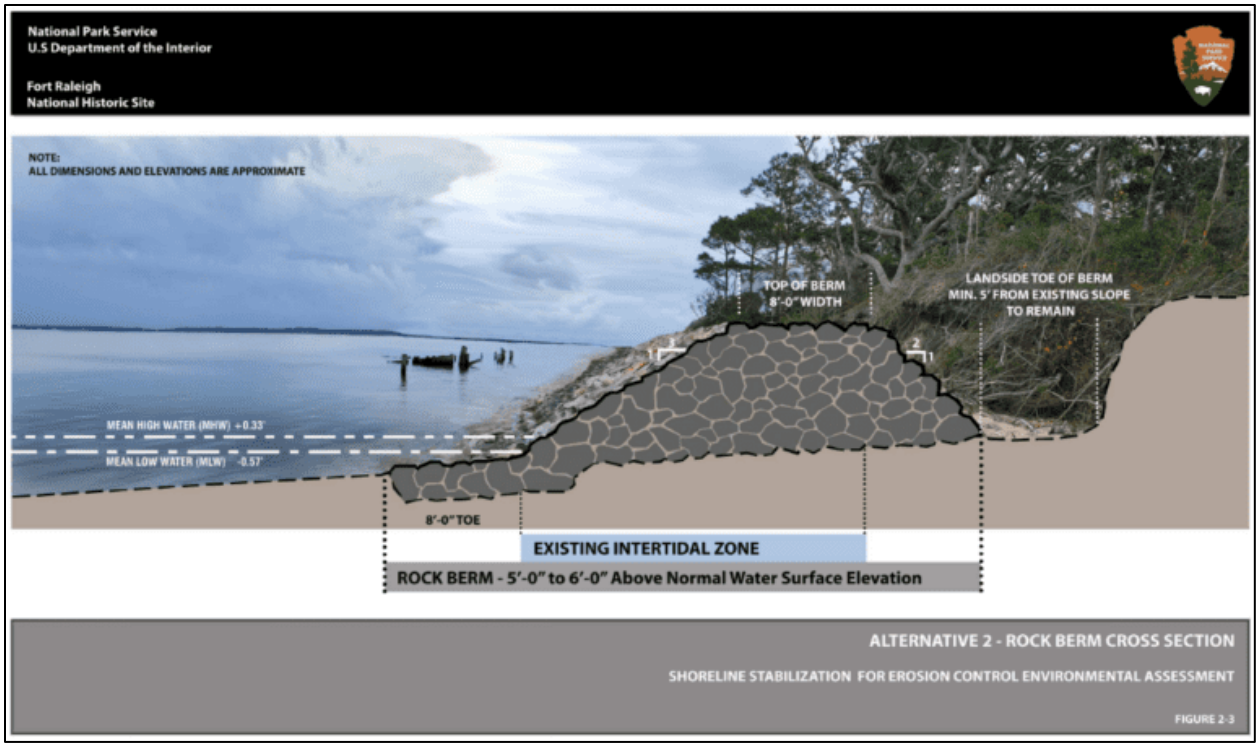

Figure 4 Conceptual design of rock berm.

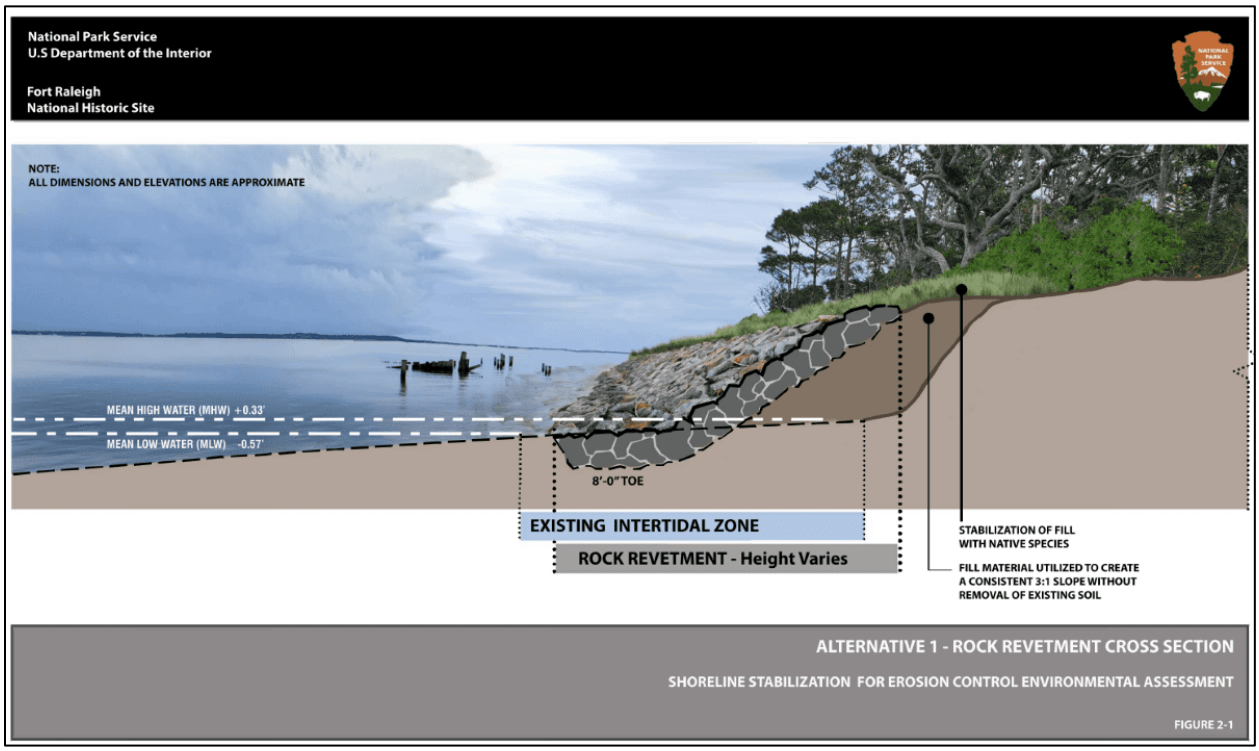

Figure 5 Conceptual design of rock revetment.

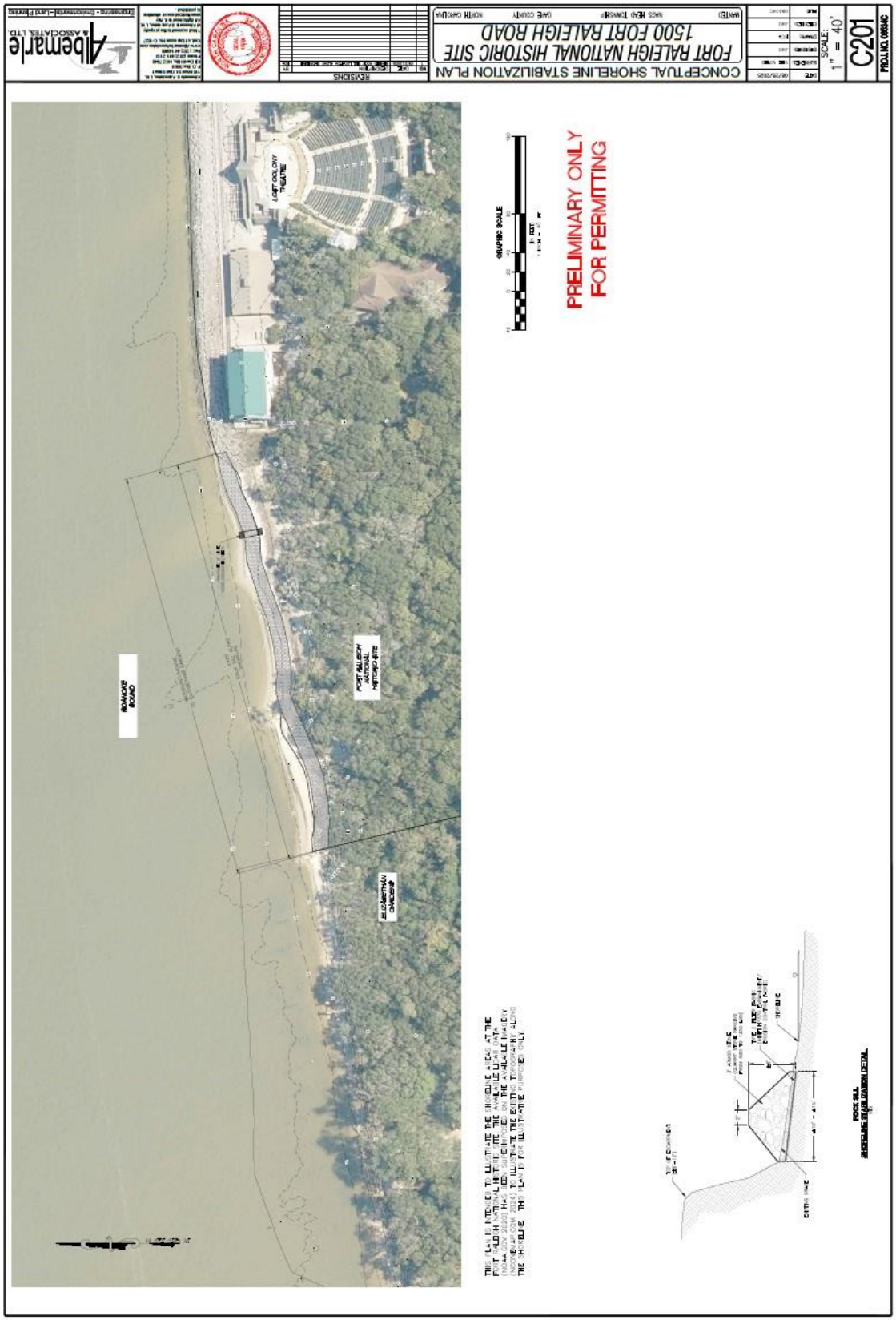

Figure 6 Project designs and map.

2 North Carolina Coastal Area Management Act

In 1972, Congress passed the Coastal Zone Management Act (CZMA), which encouraged states to keep the coasts healthy by establishing programs to manage, protect, and promote the country's fragile coastal resources. Two years later, the North Carolina General Assembly passed the landmark Coastal Area Management Act (CAMA). CAMA required local land use planning in 20 coastal counties and provided for a program for regulating development. The North Carolina Coastal Management Program was federally approved in 1978 by the National Oceanic and Atmospheric Administration (NOAA).

2.1 Areas of Environmental Concern

North Carolina's coastal zone includes the 20 counties that are adjacent to, adjoining, intersected by, or bounded by the Atlantic Ocean or any coastal sound, including Dare County where the Proposed Action would occur. There are two tiers of regulatory review for projects within the coastal zone. The first tier includes Areas of Environmental Concern (AECs) as designated by the state. AECs have more thorough regulatory controls in place than other areas and include coastal wetlands, coastal estuarine waters, public trust areas, coastal estuarine shorelines, ocean beaches, frontal dunes, ocean erosion areas, inlet lands, small surface water supply watersheds, public water supply well fields, and fragile natural resource areas. The second tier includes areas with land uses that have the potential to affect coastal waters, even though they are not defined as AECs. The coastal zone extends seaward to the three-nautical-mile territorial sea.

An AEC is an area of natural importance, and its classification protects the area from uncontrolled development. AECs include almost all coastal waters and about three percent of the land in the 20 coastal counties. The four AECs are as follows:

1. The Estuarine and Ocean System, which includes public trust areas, estuarine coastal waters, coastal shorelines, and coastal wetlands.
2. The Ocean Hazard System, which includes components of barrier island systems.
3. Public Water Supplies, which include certain small surface water supply watersheds and public water supply well fields.
4. Natural and Cultural Resource Areas, which include coastal complex natural areas; areas providing habitat for federal, or state designated rare, threatened, or endangered species; unique coastal geologic formations; or significant coastal archaeological or historic resources.

The following is an analysis of the applicability of policies designed to protect AECs to the proposed plan and the NPS determination of no impact to North Carolina's coastal zone.

2.1.1 15A NCAC 07H .0200 (Estuarine and Ocean System)

15A NCAC 07H .0205 defines and establishes management objectives for coastal wetlands in order "to conserve and manage coastal wetlands so as to safeguard and perpetuate their biological,

social, economic and aesthetic values, and to coordinate and establish a management system capable of conserving and utilizing coastal wetlands as a natural resource necessary to the functioning of the entire estuarine system."

The proposed project would not be located within the unvegetated oceanfront beach system and would not impact coastal wetlands.

15A NCAC 07H .0206 defines and establishes management objectives for estuarine waters in order "to conserve and manage the important features of estuarine waters so as to safeguard and perpetuate their biological, social, aesthetic, and economic values; to coordinate and establish a management system capable of conserving and utilizing estuarine waters so as to maximize their benefits to man and the estuarine and ocean system."

The narrow intertidal zone will naturally recede landward and potentially decrease in width over time as long shore sediment transport processes carry bluff/shoreline sediment down shore and out of the project area. The placement of the rock berm/revetment potentially would have temporary, direct, adverse impacts on estuarine resources because of construction activities. Once the rock is placed above the mean high-water line the results would have no effect on estuarine resources.

The USFWS National Wetland Inventory (NWI) online mapper designates the Albemarle Sound as an "E1UBL" or estuarine, subtidal, unconsolidated bottom, subtidal. NWI did not indicate any other wetland or deepwater habitat resources in the project area. A wetland (estuarine) and watercourse field investigation of the Project area was conducted on February 15 and 16, 2022 by HDR biologists. Wetland compliance for all NPS undertakings is governed by Executive Order (EO) 11990 and Director's Order (DO) #77-1: Wetland Protection for NPS wetlands, and by Section 404 of the Clean Water Act (33 U.S.C. 1344) for Waters of the U.S.

15A NCAC 07H .0207 defines and establishes management objectives for public trust areas in order "to protect public rights for navigation and recreation, and to conserve and manage the public trust areas so as to safeguard and perpetuate their biological, economic, and aesthetic values."

Outside of the recreational amenities and cultural resources that visitors can experience at the park, visitors can engage in recreational activities such as hiking, bird watching, kayaking, swimming, and fishing. Implementation of this project would protect the park's shoreline bluff from continued erosion and would protect some of the resources and amenities within the park that attract visitors, such as the Waterside Theatre, the Elizabethan Gardens, and Fort Raleigh National Historical Site. Preserving the resources and amenities within the park would have a permanent, beneficial impact on visitor use and experience regarding these amenities.

In contrast, the extent of shoreline available for recreational use would be reduced and replaced with a hardened shoreline along the northern shoreline, which presents a hard, uneven surface that is less safe and has less recreational value for waking and hiking. Visitors would continue to be able to access Etheridge Point Beach at the parks western end of Roanoke Island as a beach. As a result, permanent adverse impacts on visitor use would occur by the decrease in recreational space for the north shoreline of the island.

15A NCAC 07H .0209 defines and establishes management objectives for estuarine shorelines and public trust shorelines to ensure that shoreline development is "compatible with the dynamic nature of coastal shorelines as well as the values and the management objectives of the estuarine and ocean system."

The construction of rock berm/revetment structure will also result in both permanent and temporary, direct, and adverse impacts on wetlands and watercourses. Approximately 0.00 acres of wetlands and 0.00 acres of watercourses will be affected within the project footprint due to the rock berm/revetment being placed above the mean high-water line. The rock berm/revetment will change the shoreline in appearance but will not have a significant adverse impact on estuarine and ocean resources. Over the long term, the selected action is expected to provide beneficial outcomes for wetlands, watercourses, and associated native species by reducing shoreline erosion, improving hydrologic stability, and facilitating the development of a living shoreline.

Significant adverse impacts are defined as "include development that would directly or indirectly impair water quality increase shoreline erosion, alter coastal wetlands or Submerged Aquatic Vegetation (SAV), deposit spoils waterward of normal water level or normal high water, or cause degradation of shellfish beds.

2.1.2 15A NCAC 07H .0500 (Natural and Cultural Resource Areas)

15A NCAC 07H .0501 defines fragile coastal natural and cultural resource areas as "areas containing environmental, natural or cultural resources of more than local significance in which uncontrolled or incompatible development could result in major or irreversible damage to natural systems or cultural resources, scientific, educational, or associative values, or aesthetic qualities." The AECs within this category are coastal complex natural areas, coastal areas that sustain remnant species, unique coastal geologic formations, significant coastal archaeological resources, and significant coastal historic or architectural resources.

For the project area during the biological and site condition assessment field surveys, February 15 and 16, 2022, observations were recorded that the beach areas are characterized as degrading or aggrading shifting sands with no existing vegetation. Project area Section C beach areas previously supported sand heather, a state threatened plant. The population has been recorded as being destroyed due to natural bluff/beach erosion succession and was last observed in 1936, as reported in the NHP report. With the placement of a revetment the continual bluff erosion and resulting tree fall would stop along this armored portion of the shoreline, which could be characterized as a long-term, permanent, direct, beneficial impact on the coastal fringe evergreen forest and maritime evergreen forest communities.

Identified by the North Carolina Department of Environment and Natural Resources as a Significant Natural Heritage Area (SNHA) the areas located within Fort Raleigh National Historic Site are defined by the North Carolina Natural Heritage Program (NHP) as areas that "possess natural values justifying recognition by the state as an outstanding part of the natural heritage of North Carolina" (NPS 2016). The Fort Raleigh Maritime Forest Significant Natural Heritage Area is an evergreen maritime forest which is important for conservation of the state's biodiversity. Over time, shoreline erosion has caused large trees and shrubs within this SNHA to become undercut and slough off into the sound all along the shoreline within the project area.

Natural communities and vegetation were assessed within the project area by observing species and comparing vegetation assemblies to the known common and rare communities in the Classification of the Natural Communities of North Carolina. The North Carolina Natural Heritage Program (NHP) Data Explorer Report was also accessed to determine if rare natural communities were present. The park's maritime forest natural area was identified by the NHP Report and is in

the project area. The site contains a mixed maritime evergreen forests and deciduous forest which has been identified by the state of North Carolina NHP as a Significant Natural Heritage Area. Significant Natural Heritage Areas contain one or more natural heritage elements-high quality or rare natural communities, rare species, and special animal habitats.

Tree removal would be needed for construction access for this project. Most of the tree removal would take place along the access route for Section C. The impacts associated with the temporary removal of maritime evergreen forest (0.18 acre) and coastal fringe evergreen forest communities (<0.01 acre) from the access route would result in long-term, direct, adverse impacts.

15A NCAC 07H .0505 defines and establishes management objectives "to protect unique habitat conditions that are necessary to the continued survival of threatened and endangered native plants and animals and to minimize land use impacts that might jeopardize these conditions."

Wildlife observations were recorded during the biological and site condition assessment field surveys of the Project area conducted on February 15 and 16, 2022. No state or federally listed USFWS species were identified within the Project area during field surveys.

The USFWS Information for Planning and Consultation Environmental Conservation Online System (USFWS IPaC ECOS) and the North Carolina Natural Heritage Program Data Explorer (NHDE) were consulted to identify potential federal or state rare, threatened and endangered species within the Project area. A total of 13 federally listed species were identified by the IPaC ECOS report, one species listed as a proposed federally endangered species (tricolored bat), one species listed as a federal candidate species (monarch butterfly), and eight stated listed species were noted within the Project area or within one mile. The West Indian Manatee will be the only T&E species that may be present in the project area. The NPS determined, and the United States Fish & Wildlife Service (USFWS) concurred that the project may affect, but not likely to adversely affect (MANLAA), the West Indian Manatee. The NPS determined that for the proposed project as designed "No effect" for all other species. The USFWS concurred with our determination that the proposed actions will have no effect on the red wolf, piping plover, red knot, green, hawksbill, Kemp's ridley, leatherback and loggerhead sea turtles, black rail, red-cockaded woodpecker, American alligator or monarch butterfly.

National Marine Fisheries Service (NMFS) has jurisdiction of threatened and endangered species within the waters of North Carolina. The Atlantic sturgeon and shortnose sturgeon have been found in the past within one mile of the Project area. NMFS and USACE have jurisdiction over the listed sea turtles and sturgeon species. Based on existing conditions and anecdotal observations by NPS, there is no suitable nesting habitat available for sea turtles that occurs within the project area. The NPS concluded that the proposed project as designed may affect but is not likely to adversely affect the green sea turtle, Kemp's ridley sea turtle, loggerhead sea turtle, Atlantic sturgeon, and shortnose sturgeon. National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) concurred with the NPS determination on the listed species and/or designated critical habitat.

15A NCAC 07H .0508 defines and establishes use standards for development in designated fragile coastal natural or cultural areas. As described under "15A NCAC 07H .0501."

The project area does contain coastal historic and architectural resources (no fragile coastal natural areas). The project would have no adverse effect to the values of the Lost Colony Waterside Theatre cultural resource. Therefore, the proposed project is consistent with these use standards.

The Waterside Theatre is protected by a shoreline hardened with riprap; however, unprotected sections of shoreline adjacent to the theatre have the potential to threaten and compromise the overall stability of the protected area.

15A NCAC 07H .0509 establishes management objectives to conserve significant coastal archeological resources for the purpose of preserving their value as scientific, educational, and aesthetic resources.

Coastal archeological resources that would be affected by the proposed project, Fort Raleigh National Historic Site is within the project area. There is potential that archeological resources have been lost through historical erosion. Today, the park is a significant archeological site with an incomplete survey. The park's currently known archeological resources are considered fundamental resources as they provide information and artifacts that are important to understand the park's significance. The loss of archeological resources has been documented, and salvage operations have occurred to prevent further loss of artifacts. With the placement of a revetment this project will have permanent beneficial impacts on the in situ archeological resources through the reduction of shoreline erosion. Consultation, resulting in concurrence, has taken place with the NC State Historic Preservation Officer (SHPO) and other consulting parties, in accordance with Section 106 of the National Historic Preservation Act (NHPA).

On July 14, 1939, the State of North Carolina deeded Fort Raleigh State Park to the United States government. Fort Raleigh National Historic Site was established by Secretarial Order on April 5, 1941, to preserve land declared to be of national significance as a portion of the colonial settlement or settlements established in America by Sir Walter Raleigh between 1584 and 1590. The site contains 355 acres that are unique in the NPS system because of the preservation and interpretation of the history of the first English attempts at colonization in the New World and the history of Native Americans, European Americans and African Americans on Roanoke Island. The site was listed on the National Register of Historic Places in 1966.

The park's boundaries encompass a broad range of archeological sites that embody nearly the full spectrum of Eastern Carolina American Indian culture, the colonial settlements established in America by Sir Walter Raleigh between 1584 and 1590, the American Civil War, the African American Freedmen's Colony, a Depression-era Works Progress Administration (WPA) camp, and the life and career of radio pioneer Reginald Fessenden.

Numerous archeological excavations have occurred at FORA. They began with the rise of the US historic preservation movement in the late nineteenth century, which resulted in the excavation of several historic sites, including FORA in 1895 by Talcott Williams. Jean C. Harrington, a leading historical archeologist, oversaw excavations at FORA following the Second World War from 1947 to 1950 and from 1963 to 1965. Archeologist Ivor Noel Hume conducted the next phase of archeological work from 1991 to 1993. A further archeological investigation, managed by Nicholas Luccketti, followed Hume's work from 1994 to 1995. Archeological investigations by the National Park Service Southeast Archeological Center began in 2000 and are ongoing. The First Colony Foundation, formed in 2004, has also led numerous archeological investigations at the site over the last two decades.

15A NCAC 07H .0510 defines and establishes management objectives "to conserve coastal historic architectural resources of more than local significance which are valuable educational, scientific, associative or aesthetic resources."

The project including both historic and non-historic architectural resources would have no adverse effect to the values of the Lost Colony Waterside Theatre cultural resource. This architectural resource allows visitors to connect with the history of the original colony. Therefore, the proposed project is consistent with these use standards.

The Lost Colony play was first performed at the Waterside Theatre in 1937. It is the nation's first and longest running outdoor symphonic drama and is produced by the Roanoke Island Historical Association (RIHA) on the very site of the first English colony in the New World. The Waterside Theatre is protected by a shoreline hardened with riprap; however, unprotected sections of shoreline adjacent to the theatre have the potential to threaten and compromise the overall stability of the protected area. The NPS parking lot for visitors and patrons is located 100 feet from the shoreline and is also at risk from shoreline erosion. Another cultural resource the Dough Cemetery, has been protected by the installation of a rock revetment, the shoreline east and west of this existing rock revetment has eroded significantly, and the cemetery is at risk from the land becoming undercut.

2.2 General Policy Guidelines

The North Carolina CAMA sets forth eleven General Policy Guidelines, addressing:

- Shoreline erosion policies
- Shorefront access policies
- Coastal energy policies
- Post-disaster policies
- Floating structure policies
- Mitigation policies
- Coastal water quality policies
- Policies on use of coastal airspace
- Policies on water- and wetland-based target areas for military training areas
- Policies on beneficial use and availability of materials resulting from the excavation or maintenance of navigational channels
- Policies on ocean mining

The purpose of these rules is to establish generally applicable objectives and policies to be followed in the public and private use of land and water areas within the coastal area of North Carolina. The following is an analysis of the applicability of these policies to the proposed action.

2.2.1 15A NCAC 7M .0200 (Shoreline Erosion Policies)

The project is adjacent to an estuarine (Albemarle Sound) and public trust area (Fort Raleigh National Historic Site). However, the project actions would not have a significant effect on the estuarine and ocean system. Therefore, these policies would be consistent with these policies.

2.2.2 15A NCAC 7M .0300 (Shorefront Access Policies)

The proposed project is located on National Park Service land. This project will have minor impacts to shoreline access in the section where the berm and revetment will be placed. Other areas along the shoreline will be accessible to visitors via informal trails to the shoreline and Etheridge Point. Additionally, a staircase will be constructed to provide public access to the sound. Changes to shorefront access will take place with the proposed project; therefore, an access point was designed into the project to provide for public access and be consistent with these policies.

2.2.3 15A NCAC 7M .0400 (Coastal Energy Policies)

The proposed project does not involve the development of any major energy facilities. Therefore, these policies are not applicable.

2.2.4 15ANC AC 7M .0500 (Post-Disaster Policies)

These policies require that all state agencies prepare for disasters and to coordinate their activities in the event of a coastal disaster. The NPS Outer Banks Group, under which the Fort Raleigh NHS is administered, has a long history of working with state and local agencies for disaster preparation and recovery. Current technology offers plenty of advanced warning of major storms (i.e., tropical storms and nor'easters), and the park has developed a Severe Storm Response Plan to minimize risks to human health and safety and to minimize potential property damage during storm events. To help protect life, notice would be given to park visitors of upcoming storm events and area closures. The proposed rock berm/revetment would not undergo significant impacts from flood events resulting from these storms systems. Therefore, the project would be consistent with these policies.

2.2.5 15A NCAC 7M .0600 (Floating Structure Policies)

The rock/revetment project would not propose for the implementation of any floating structures. Therefore, these policies are not applicable.

2.2.6 15A NCAC 7M .0700 (Mitigation Policy)

North Carolina's mitigation policy states that "Coastal ecosystems shall be protected and maintained as complete and functional systems by mitigating the adverse impacts of development as much as feasible, by enhancing, creating, or restoring areas with the goal of improving or maintaining ecosystem function and areal proportion."

The project area has not been developed and is primarily dominated by severely eroded embankments and fallen mature trees. The project area is bordered by estuarine wetlands to the north, and the project actions would have no impacts to these wetlands by remaining above the mean high-water line. Project actions will not trigger the need to do compensatory mitigation for Sec 404 permitting by the Army Corps of Engineers (USACE). The proposed action would be consistent with this policy.

2.2.7 15A NCAC 7M .0800 (Coastal Water Quality Policies)

Project activities would not cause degradation of water quality that would impair traditional uses of coastal waters. The project area currently allows stormwater runoff to reach the sound unchecked. The proposed action would stabilize the existing embankment and have a positive impact to water quality. The proposed action would be consistent with this policy.

2.2.8 15A NCAC 7M .0900 (Policies on use of Coastal Airspace)

No use of coastal airspace would be part of the proposed action; therefore, these policies are not applicable.

2.2.9 15A NCAC 7M .1000 (Policies on Water- and Wetland-Based Target Areas for Military Training Areas)

No use of military training areas would be part of the proposed action; therefore, these policies are not applicable.

2.2.10 15A NCAC 7M .1100 (Policies on Beneficial and Availability of Materials Resulting from the Excavation or Maintenance of Navigational Channels)

No channel excavation or maintenance of navigational channels would occur as part of this project; therefore, these policies are not applicable
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2.2.11 15A NCAC 7M .1200 (Policies on Ocean Mining)

No ocean mining would be part of the proposed action; therefore, these policies are not applicable.

3 North Carolina Dredge and Fill Law

The North Carolina Dredge and Fill Law (§ 113-229. Permits to dredge or fill in or about estuarine waters or State-owned lakes) states that, "…before any excavation or filling project is begun in any estuarine waters, tidelands, marshlands, or State-owned lakes, the party or parties desiring to do such shall first obtain a permit from the Department." The proposed rock berm/revetment project would not involve dredge or fill activity within estuarine waters, ocean system, or State-owned lakes. All the work would occur above the mean high-water line. The NPS is consulting with USACE regarding the need for Section 404 Nationwide Permit. It is anticipated that no permit will be required, however if this changes a permit will be obtained prior to the construction taking place. As such, this action would be considered a permissible activity by the North Carolina Department of Environmental Quality.

4 Dare County Coastal Management Policies

CAMA required local governments in each of the 20 coastal counties in North Carolina to prepare and implement a land use plan and ordinances for its enforcement consistent with established federal and state policies. Specifically, policy statements are required for resource protection, resource production and management, economic and community development, continuing public participation, storm hazard mitigation, post-disaster recovery, and evacuation plans. Upon approval by the North Carolina Coastal Resources Commission, the plan becomes part of the North Carolina Coastal Management Plan.

The Dare County Land Use Plan (LUP) was certified by the North Carolina Coastal Resources Commission in 2011 and addresses land use planning in relation to CAMA. Of these policies, the following are applicable to the rock berm/revetment project.

4.1 Public Access

Policy PA #1

Dare County supports the preservation and protection of the public's right to access and use of the public trust areas and waters.

The rock berm/revetment would limit access to the sound's shoreline in an area currently not maintained as an area open to the public. Designs of the rock berm/revetment will ensure preservation and protection of public trust areas and waters. However, this project will have minor impacts to shoreline access in the section where the berm and revetment will be placed. Therefore, an access point (staircase) was designed into the project to provide for public access to the sound. Other shoreline areas within the park would continue to be accessible, Ethridge Point, to visitors through informal trails.

Policy PA #2

Dare County reserves the right to review, comment, advocate, or oppose any proposed Federal or State regulations or programs that affect the public trust waters or public trust areas.

The NPS provided a 30-day public scoping period for the review and comment on three preliminary action alternatives for consideration. Dare County did not provide any comments on the project during the public scoping period.

Policy PA #3

Dare County supports North Carolina's shoreline access policies and grant programs and recognizes the importance of shoreline access to our local residents and our tourist economy. Thus, the County will continue to seek opportunities to expand access, including opportunities for the disabled, and to secure funding for beach nourishment in order to maintain wide sandy beaches.

The proposed rock berm/revetment is designed to be constructed above the mean high-water line and includes a staircase to access the shoreline. This staircase will ensure accessibility standards are being met for not only the residents of Manteo but also the tourists to the area. This project would not negatively affect shoreline access.

4.2 Land Use Compatibility

Policy LUC #19

The Dare County Board of Commissioners supports the protection of structures, lands, and artifacts that have been identified by the NC Department of Cultural Resources, Division of Archives and History, as archaeologically or historically significant. On a case-by-case basis individual protection/management strategy should be implemented to ensure archaeological and/or historical resources are not destroyed.

The park's boundaries encompass a broad range of archeological sites that embody nearly the full spectrum of eastern Carolina American Indian culture, the colonial settlements established in America by Sir Walter Raleigh between 1584 and 1590, the American Civil War, the African American Freedmen's Colony, a Depression-era Works Progress Administration (WPA) camp, and the life and career of radio pioneer Reginald Fessenden (NPS 1978).

Numerous archeological excavations have occurred at FORA. They began with the rise of the US historic preservation movement in the late nineteenth century, which resulted in the excavation of several historic sites, including FORA in 1895 by Talcott Williams. Jean C. Harrington, a leading historical archeologist, oversaw excavations at FORA following the Second World War from 1947 to 1950 and from 1963 to 1965. Archeologist Ivor Noel Hume conducted the next phase of archeological work from 1991 to 1993. A further archeological investigation, managed by Nicholas Luccketti, followed Hume's work from 1994 to 1995. Archeological investigations by the National Park Service Southeast Archeological Center began in 2000 and are ongoing. The First Colony Foundation, formed in 2004, has also led numerous archeological investigations at the site over the last two decades.

The rock berm/revetment project would have permanent beneficial impacts on archeological resources through the reduction of shoreline erosion.

4.3 Natural Hazards

Policy NH #2

Estuarine shoreline development should continue to be managed to protect and preserve the natural resources of the estuarine waters and the estuarine shoreline. The appropriate tools include the existing CAMA permit program and the Areas of Environmental Concern (AECs) designated under the CAMA program. Dare County reserves the right to review, comment, advocate or oppose any proposed regulations or programs that may affect the regulation of estuarine waters and/or the estuarine shoreline.

The proposed action would be constructed parallel to the estuary above the mean high-water line. The design of the rock berm/revetment takes into consideration the estuarine environment with no significant adverse impacts to natural and recreational resources along the Estuarine shoreline would occur.

Policy NH #3

Dare County supports the installation and maintenance of estuarine bulkheads. Offshore breakwaters, slopes, riprap, and voluntary setbacks are appropriate alternatives for estuarine shoreline management in lieu of estuarine bulkheads where these other techniques may be equally effective in abating a shoreline erosion problem. The use of living shorelines to re-establish estuarine shorelines that have eroded are supported.

Shoreline erosion control measures are needed within the boundary of Fort Raleigh National Historic Site to address shoreline erosion. This action is necessary to address the erosion and protect significant archaeological sites within the park. The rock berm/revetment project will reduce shoreline erosion through the construction of a rock structural barrier beginning at the mean high-water line, resulting in the protection of the shoreline from wave action.

4.4 Water Quality

Policy WQ #2

Development projects shall be designed and constructed to minimize detrimental impacts on surface water quality, groundwater quality, and air quality. Structures would be designed to fit the natural topographic conditions and vegetation versus modifications to natural conditions to accommodate structures.

The proposed action would be designed and constructed to take into consideration water quality impacts to adjacent wetlands and ground water.

Policy WQ#9

Dare County supports the installation and maintenance of estuarine bulkheads. Offshore breakwaters, slopes, riprap, and voluntary setbacks are appropriate alternatives for estuarine shoreline management in lieu of estuarine bulkheads where these other techniques may be equally effective in abating a shoreline erosion problem. The use of living shorelines to re-establish estuarine shorelines that have eroded are supported.

Shoreline erosion control measures are needed within the boundary of Fort Raleigh National Historic Site to address shoreline erosion. This action is necessary to address the erosion and protect significant archaeological sites within the park. The rock berm/revetment project will reduce shoreline erosion through the construction of a rock structural barrier beginning at the mean high-water line, resulting in the protection of the shoreline from wave action.

5 Other Anticipated Permits

An environmental assessment has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4332[2] [C]); the implementing regulations of the Council on Environmental Quality (40 CFR 1500-1508); the Department of the Interior NEPA regulations (43 CFR Part 46); and NPS Director's Order #12: Conservation Planning, Environmental Impact Analysis and Decision-Making and the accompanying NEPA Handbook. A separate assessment of effect has been prepared to comply with Section 106 of the National Historic Preservation Act of 1966, as amended.

The NPS is consulting with USACE regarding the need for Section 404 Nationwide Permit, Section 401 Water Quality Certification. It is anticipated that no permit will be required with all construction taking place above the mean high-water line, however if these changes required permits will be obtained prior to the construction taking place. The project actions also require a NPS to complete a Floodplains Statement of Findings.

6 Conclusion

In conclusion, after careful consideration of the preceding elements, the NPS has determined that implementation of the proposed action would be fully consistent with the relevant enforceable policies of protecting North Carolina's coastal zone. This was based on the review of the proposed project against the relevant National Oceanographic Atmospheric Administration-approved enforceable policies of North Carolina's Coastal Management Program and Dare County's land use plan policies.