

**DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY**

FINDING OF NO SIGNIFICANT IMPACT FOR SEAWALL REPAIR AND RESTORATION AT NAVAL SUPPORT ACTIVITY ANNAPOLIS, ANNAPOLIS, MARYLAND

Introduction

Pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321 et seq.), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), and Department of the Navy procedures for implementing NEPA (32 CFR Part 775), the United States Department of the Navy (Navy) gives notice that an Environmental Assessment (EA) has been prepared and that an Environmental Impact Statement is not required for the repair and restoration of seawall and shorelines along designated portions of the Lower Yard, the Upper Yard, and North Severn at Naval Support Activity (NSA) Annapolis in Annapolis, Maryland.

Description of the Proposed Action

NSA Annapolis proposes to repair and restore seawall and shoreline along the installation perimeter to include portions of the Lower Yard along the Severn River, College Creek, Spa Creek, and Santee Basin; portions of the Upper Yard along the Severn River and College Creek; and portions of shoreline on North Severn along the Severn River and Yard Patrol Basin. The repairs and restoration would address structural deficiencies on the existing seawall and potential impacts from future extreme weather events, storm surge, sea level rise, and land subsidence. Repairs and restoration would occur along approximately 19,334 linear feet of shoreline that is divided into 15 “reaches.”

Specific restoration and enhancement techniques could include hardened structures, log toe stabilization, and living shoreline, where appropriate. Hardened structures include bulkhead, sheet pile seawall, riprap, or a combination of these techniques. To date, Reach 9 (along the Lower Yard) and a portion of the North Severn seawall have undergone preliminary design. Construction along Reach 9 may be completed in phases, dependent on funding allocations, would likely begin within the next few years, and could last approximately three and a half years. Subsequent reaches would be prioritized for repair—as funding becomes available—based on condition, elevation, and mission criticality. It is assumed that construction would occur over 10 to 20 years for all 15 reaches.

Purpose and Need

The purpose of the Proposed Action is to repair and restore portions of the NSA Annapolis seawalls and shoreline that have been damaged or made vulnerable by degradation over time. The Proposed Action is primarily needed to address existing structural deficiencies along the NSA Annapolis seawalls and shoreline to maintain the safety and function of mission-critical areas behind the shorelines and seawalls. A secondary need for the Proposed Action is to address the potential impacts due to future extreme weather events, storm surge, sea level rise, and land subsidence. Of the 15 reaches included in this project area, three have been assessed as serious and three as poor, meaning all six of these reaches (totaling 9,174 linear feet, or 47 percent of the total shoreline) are exhibiting advanced deterioration and oversteering, with localized or widespread failures possible. The remaining nine reaches are currently assessed as good, satisfactory, or fair.

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NSA Annapolis is adjacent to the Chesapeake Bay. Elevations range from sea level to 80 feet above mean sea level, which makes the installation vulnerable to localized flooding and storm surge. Flooding events have increased over the past 20 years; in 2018, a record number of 41 flood events occurred at NSA Annapolis. Hurricane Isabel in 2003 caused an immense amount of water and storm damage at the U.S. Naval Academy (USNA). Climate change could exacerbate current conditions and increase inundation over time, which could lead to loss of land or damage mission-critical facilities, preventing NSA Annapolis and USNA from accomplishing their missions.

Alternatives

Alternatives were developed for analysis based upon the following screening factors:

- Seawalls must be built to heights that are feasible and structurally sound.
- Repair and restoration of existing functional structures must provide for compatible use.
- Width of waterway, depth of waterway, bottom material, fetch, shoreline orientation, and existing structures must be considered when determining the type of repair and restoration structure. Fetch is defined as an area of the ocean over which the wind blows in an essentially constant direction, thus generating waves.
- Structures cannot be constructed within navigation channels or interfere with existing navigation.
- Seawall height and the type of structure must take into account varying tide levels, storms, and wave conditions.

The Navy considered a No Action Alternative and three action alternatives that meet the purpose of and need for the Proposed Action.

No Action Alternative: No seawall repair or restoration would be undertaken. Sections of the existing seawall and shoreline would continue to deteriorate over time and could eventually fail.

Alternative 1: Hardened structures would be used to accommodate for the 10-year storm and 75-year sea level rise prediction along the Upper Yard (Reaches 1, 2, and 3), and the 50-year storm and 75-year sea level rise prediction along the Lower Yard (Reaches 4 through 12) and North Severn (Reaches 13, 14, and 15). Each of the repairs to and restoration of the seawalls may include extending base support further into the water and allowing for phased elevation increase of the hardened structure over time, up to a maximum height for specific reaches as warranted to address sea level rise over the life expectancy of the structures. Construction would likely occur in phases, with an initial height being increased in the future, as necessary, due to future sea level rise and storm surge. Alternative 1 is the Navy's Preferred Alternative.

Alternative 2: Hardened structures would be used to accommodate for the 10-year storm and 50-year sea level rise prediction along the Upper Yard (Reaches 1 and 2), and the 50-year storm and 50-year sea level rise prediction along the Lower Yard (Reaches 4 through 12) and North Severn (Reaches 13, 14, and 15). Reach 3 would use log toe stabilization built to its existing height with the option to modify the design or height to accommodate for sea level rise, if needed in the future.

Alternative 3: Hardened structures would be used along Reaches 1, 2, and 4 through 15 to existing heights, which does not accommodate for future sea level rise. Reach 3 would use living shoreline techniques that could be modified to accommodate for sea level rise, if needed in the future.

Environmental Effects of the Preferred Alternative

The EA examined the potential effects of the No Action Alternative, Alternative 1, Alternative 2, and Alternative 3 on the following resource categories: air quality, water resources, geological resources, cultural resources, biological resources, visual resources, noise, transportation, and hazardous materials and wastes. The following is a summary of the environmental consequences of Alternative 1, as it is the Navy's Preferred Alternative as well as the action alternative that would result in the greatest potential for impacts across most resources; differences among alternatives are also noted for specific resources.

Air Quality: There would be no significant impacts on air quality. Short-term, minor air emissions would occur during construction from construction equipment, waste removal, and material delivery. Emissions would be below *de minimis* and major source thresholds. No long-term changes in air emissions would occur.

Water Resources: There would be no significant impacts on water resources. Direct and indirect, short-term, minor, adverse impacts would occur during construction. Excavation, clearing, and grading at all of the reaches combined would disturb more than one acre; therefore, a Maryland Department of the Environment General Permit for Stormwater Associated with Construction Activity would be required, and erosion and sediment controls and pollution prevention measures would be implemented.

No impacts on jurisdictional wetlands would occur, but non-jurisdictional estuarine and marine deepwater wetlands have been mapped for Carr Creek, College Creek, Mill Creek, Spa Creek, and the Severn River. A joint federal and state permit for the Alteration of Any Tidal Wetland in Maryland would be required for temporary, construction-related impacts on these non-jurisdictional wetlands. Best management practices (BMPs) for sediment- and erosion-control and work in tidal waters and wetlands would be employed per all permitting requirements.

Much of the project area at the Upper and Lower Yards, as well as a small portion of Reach 13, are within the 100-year or 500-year floodplains. Therefore, impacts on floodplains are unavoidable. Short-term, minor impacts on floodplains from construction activities adjacent to the shoreline would occur. After construction is completed, equipment would be removed from the floodplains, and the disturbed area restored to preconstruction conditions. Long-term, negligible, localized changes in the demarcation of the floodplain behind the seawall along affected reaches could occur with the proposed increases in seawall heights. Considering the overall volume of the Chesapeake Bay, Severn River, Spa Creek, and College Creek, the estimated potential water displacement from the higher NSA Annapolis seawalls would have no to negligible impact on surrounding properties.

Long-term, beneficial effects from reduced shoreline erosion and sedimentation would be expected under all alternatives. Alternative 1 would offer the best long-term protection from shoreline erosion and sedimentation with the highest seawall heights that accommodate a 10- and 50-year design storm and 75-year sea level rise. Alternative 1 would provide the best long-term protection, followed by Alternative 2, and lastly Alternative 3.

Geological Resources: There would be no significant impacts on geological resources. Short-term, minor, adverse impacts would directly affect soils during construction. Erosion- and sediment-control measures would be implemented to reduce sedimentation in the water. In the long term, the proposed elevated seawalls would limit bank and soil erosion that can result from flooding due to structural deficiencies, storm surge, and sea level rise. Alternative 1 would provide the best long-term protection, followed by Alternative 2, and lastly Alternative 3.

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Cultural Resources: There would be no significant impacts on cultural resources, with implementation of a Programmatic Agreement. Some of the seawalls are contributing resources to the historic landscape of the USNA. Therefore, long-term, adverse effects on the seawalls from construction and demolition would occur. Increasing the height of the perimeter bulkhead would also be an adverse effect on the views significant to the USNA historic district under Alternative 1, and also under Alternatives 2 but to a lesser degree because proposed heights are lower. Conversely, long-term, beneficial effects from repaired shoreline protection and increased bulkhead height would also occur by protecting historic resources from water damage. Alternative 1 would provide the best long-term protection, followed by Alternative 2, and lastly Alternative 3.

A Programmatic Agreement that reflects all alternatives has been executed between the Navy, Maryland State Historic Preservation Officer, with the City of Annapolis as a Consulting Party. The Programmatic Agreement includes further consultation for each reach as well as construction routes, and sets forth mitigation measures.

Biological Resources: There would be no significant impacts on biological resources. Construction activities would result in temporary noise and sedimentation impacts during the underwater installation and repair of seawalls, which would have minor impacts on wildlife on and near the reaches under construction. Noise from construction activity, particularly if pile driving is needed to replace pilings due to deterioration or to increase seawall height, would adversely affect Essential Fish Habitat. To minimize adverse effects on Essential Fish Habitat, the Navy would implement the following BMPs, as recommended by National Oceanic and Atmospheric Administration (NOAA) Fisheries during consultation:

- avoid in-water work such as construction and demolition during anadromous fish migration and spawning, from February 15 through June 15
- design Reach 3 in College Creek to minimize impact on any potential submerged aquatic vegetation found in site surveys or mapped in the previous five years
- minimize fill of open water beyond existing hardened structures to the extent practicable
- avoid the use of creosote-treated timber, do not locate creosote or pressure-treated timber in areas containing shellfish or in sensitive habitats, and cut removed creosote-treated timber into short lengths to prevent reuse and dispose of all debris from creosote-treated timber including attached, contaminated sediments, in an approved upland facility

BMPs may be incorporated in accordance with project permits and regulations to avoid and minimize adverse impacts on benthic communities, shellfish, fish, and submerged aquatic vegetation during in-water construction. BMPs may include, but are not limited to, turbidity curtains, which would limit sediment disturbance during construction activity, minimizing the effects of turbidity within the immediate area of construction. The seawall repair and restoration would not result in any permanent loss of vegetation or habitat.

Alternative 1 would have long term-beneficial effects from prevention of land subsidence and erosion along the project reaches. Alternative 2 would use log toe stabilization along Reach 3, which would have greater benefits for biological resources than Alternative 1. Alternative 3 would use living shoreline along Reach 3, which would have greater benefits for biological resources than Alternatives 1 or 2.

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The Navy coordinated with U.S. Fish and Wildlife Service, NOAA Fisheries, and Maryland Department of Natural Resources Wildlife and Heritage Service. The alternatives would have no effect on threatened or endangered species.

Visual Resources: There would be no significant impacts on visual resources. Short-term, minor, adverse impacts on visual resources would occur along reaches undergoing repair and restoration, temporarily altering the visual character of the shoreline. In the long term, increased seawall heights would impede views towards the Severn River and the Chesapeake Bay along the project reaches (which would be greatest under Alternative 1, and somewhat less under Alternative 2). The increased height on the perimeter bulkhead would also protect against storm surge and provide long-term, beneficial effects on the historic district and its contributing buildings and landscape features of USNA. Alternative 1 would provide the best long-term protection against storm surge and flooding, followed by Alternative 2, and lastly Alternative 3.

Noise: There would be no significant impacts on the noise environment. Short-term, minor, adverse impacts from airborne and underwater noise would occur during construction activities. No long-term changes in noise would occur.

Transportation: There would be no significant impacts on transportation systems. Short-term, minor, adverse impacts are expected. Repair and restoration of the seawalls would require a combination of landside and waterside construction. Construction activities would generate localized traffic associated with daily passenger vehicles for construction workers arriving at and departing from the project areas. In addition, construction vehicles and equipment would operate throughout the construction phase for repair or restoration of each reach. The movement of materials and equipment and the removal of construction and demolition debris would create further vehicle trips on and near NSA Annapolis. No long-term changes in transportation systems would occur.

Hazardous Materials and Wastes: There would be no significant impacts on hazardous materials and wastes. Short-term, minor impacts would occur from small quantities of hazardous materials/wastes during construction. Treated wood, electrical equipment, lighting ballasts, and other debris from removed shoreline structures would need characterization to determine appropriate disposal. Increased seawall height could offer improved long-term protection and management of facilities that store hazardous materials and wastes. Alternative 1 would provide the best long-term protection against storm surge and flooding, followed by Alternative 2, and lastly Alternative 3.

Cumulative Impacts

Potential cumulative impacts of any of the alternatives in combination with other past, present, or reasonably foreseeable future actions were analyzed and found to be not significant.

Public and Agency Involvement

The Navy prepared and circulated a Draft EA to inform the public of the Proposed Action and to allow the opportunity for public review and comment. The review period began with a Notice of Availability published in the *Capital-Gazette* on August 1, 2019. The Draft EA was available on a Navy website.

The Navy coordinated or consulted with agencies including the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, NOAA Fisheries, Maryland Department of the Environment, Maryland Department of Natural Resources, and Maryland Department of Planning (Maryland State Clearinghouse) regarding the Proposed Action. Specific design plans will be coordinated with NOAA Fisheries Habitat Conservation

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Division as these are completed to ensure appropriate site-specific consideration and protection of Essential Fish Habitat.

Finding

Based on the analysis presented in the EA, which is herewith incorporated by reference into this Finding of No Significant Impact, the Navy finds that implementation of any of the alternatives, including Alternative 1 as the Navy's Preferred Alternative, would not significantly affect the quality of the human or natural environment or generate significant controversy. Therefore, preparation of an Environmental Impact Statement is not required.

The EA prepared by the Navy addressing this action is on file. Interested parties may obtain a copy from:

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Date



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