

Appendix A

Public Involvement and Agency Correspondence Materials

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General Agency Review and Public Involvement for the Draft EA

Agency Letter for Draft EA (July 30, 2019)

The following letter was distributed to all the agencies as listed beginning on page A-7.



DEPARTMENT OF THE NAVY

NAVAL SUPPORT ACTIVITY ANNAPOLIS
58 BENNION ROAD
ANNAPOLIS, MARYLAND 21402

IN REPLY REFER TO:
5090
Ser 071
July 30, 2019

Joe Abe
Maryland Department of Natural Resources
Chesapeake and Coastal Service
580 Taylor Avenue
Tawes State Office Building, E-2
Annapolis, MD 21401

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR SEAWALL REPAIR AND RESTORATION AT NAVAL SUPPORT ACTIVITY ANNAPOLIS, MARYLAND

Dear Mr. Abe:

The Department of the Navy is preparing an Environmental Assessment (EA) in compliance with the National Environmental Policy Act of 1969 (NEPA) to evaluate the potential effects associated with the repair and restoration of approximately 19,334 linear feet of seawalls and shoreline at Naval Support Activity (NSA) Annapolis, Maryland. The seawall repair and restoration would occur on the shoreline 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 the North Severn area along the Severn River and Yard Patrol Basin (Figure 1). 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.

The existing shoreline in these areas is mostly hardened, consisting of a mixture of bulkhead and riprap sections. Several of these sections are failing, with wave action occasionally overtopping the hardened structures and undercutting occurring in several areas. The deficiencies in these shoreline structures have resulted in persistent flooding issues and failure of the road and parking areas in several locations behind the seawall, particularly during extreme high tide. Consequently, the Proposed Action is 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 seawalls. A secondary need for the Proposed Action is to address the potential impacts from future extreme weather events, storm surge, sea level rise and land subsidence.

5090
Ser 071
July 30, 2019

This EA evaluates a range of techniques to repair and restore designated reaches, including hardened structures and log toe stabilization. It evaluates the potential environmental impacts associated with three action alternatives and the No Action Alternative (see Figure 1 and Table 1). Under all action alternatives, a 13.8-kilovolt marine cable that has migrated towards the shoreline over time may need to be relocated on the riverbed approximately 10 feet from the seawall. Total soil disturbance during relocation is anticipated to be less than 10 cubic yards for each reach of seawall.

Under 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).

Under 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.

Under 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.

Under the 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.

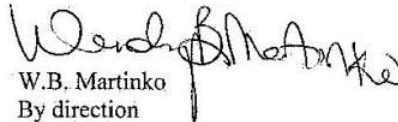
The Navy would like to invite your organization and other consulting parties to review the Draft EA, which can be found online at: https://www.cniv.navy.mil/regions/ndw/installations/nsa_annapolis/om/environmental-environmental-assessment.html. The Draft EA is available for a 30-day public comment period beginning August 1, 2019. Comments on the Draft EA may be submitted via email to navfacwashnepa@navy.mil, or via U.S. mail, no later than 30 days from receipt of this letter, to Naval Facilities Engineering Command Washington, ATTN: Ms. Jennifer Steele, 1314 Harwood Street SE, Building 212, Washington Navy Yard, DC 20374.

In addition, the Navy invites your organization to a public meeting on August 8, 2019, from 6:00–8:00 p.m. at the Hilton Garden Inn, 174 West Street, Annapolis, Maryland. The purpose of the meeting is to discuss the EA with the public and interested parties and to solicit comments.

5090
Ser 071
July 30, 2019

If you have any questions or comments, or need additional information, please contact Ms. Jennifer Steele at navfacwashnepa@navy.mil.

Sincerely,


W.B. Martinko
By direction

Enclosures: 1. Figure 1 NSA Annapolis Location and Proposed Seawall Reaches
2. Table 1 Repair and Restoration Method by Reach for Each Alternative

Copy to: Ms. Jennifer Steele, NAVFAC Washington NEPA Project Manager

Agency Distribution List for Draft EA**FEDERAL AGENCIES**

Kathy Anderson
Chief, Maryland Section Southern
U.S. Army Corps of Engineers
2 Hopkins Plaza
Baltimore, MD 21201

Kristy Beard, Marine Habitat Resource
Specialist
NOAA Fisheries, Annapolis Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

Genevieve LaRouche
U.S. Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

Dennis Montagna
National Park Service Northeast Region
Monument Research & Preservation Program
200 Chestnut Street, 3rd Floor
Philadelphia, PA 19106

Michael Pentony
Administrator of Greater Atlantic Region
Fisheries Office
NOAA Fisheries
55 Great Republic Drive
Gloucester, MA 01930-2276

STATE AGENCIES

State Clearinghouse
Maryland Department of Planning
301 W. Preston Street, Suite 1101
Baltimore, MD 21201

Joe Abe
Maryland Department of Natural Resources
Chesapeake and Coastal Service
580 Taylor Avenue
Tawes State Office Building, E-2
Annapolis, MD 21401

Amanda Apple
State Historic Preservation Office
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032, 2023

Lisa Hoerger
Maryland Department of Natural Resources
Critical Area Commission for the Chesapeake
& Atlantic Coastal Bays
1804 West Street, Suite 100
Annapolis, MD 21401

Denise Keehner
Federal Consistency Coordinator
Deputy Program Administrator
Maryland Department of the Environment
Wetlands and Waterways Program
1800 Washington Boulevard, Suite 430
Baltimore, MD 21230-1708

Paul A. Peditto
Maryland Department of Natural Resources
Wildlife and Heritage Service
580 Taylor Avenue
Tawes State Office Building E-1
Annapolis, MD 21401

CITY AGENCIES

Mayor Gavin Buckley, Chair
City of Annapolis Creeks Cabinet
160 Duke of Gloucester Street
Annapolis, MD 21401

Roberta Laynor
City of Annapolis
Historic Preservation Division
Department of Planning and Zoning
145 Gorman Street, 3rd Floor
Annapolis, MD 21401

Sally Nash, Acting Director
City of Annapolis Department of Planning &
Zoning
145 Gorman Street, 3rd Floor
Annapolis, MD 21401

Patricia Zeno
Historic Preservation Commission
160 Duke of Gloucester Street
Annapolis, MD 21401

OTHERS

Dave Barker, President
Severn River Association
P.O. Box 146
Annapolis, MD 21404

Karen Theimer Brown
Historic Annapolis
42 East Street
Annapolis, MD 21401

Ally Gontang
St. Johns College
60 College Avenue
Annapolis, MD 21401

Chair
The Severn River Commission
Heritage Complex
P.O. Box 6675
Annapolis, MD 21401

Affidavit of Publication for *Capitol-Gazette* (August 1–3, 2019)

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**Naval Support Activity Annapolis
 Notice of Availability and Public Meeting for a Draft Environmental Assessment for Seawall Repair and Restoration at NSA Annapolis, Maryland**

Pursuant to Section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's regulations implementing the procedural provisions of NEPA (40 CFR Parts 1500–1508), the Department of the Navy gives notice that a Draft Environmental Assessment (EA) has been prepared to evaluate the potential impacts on the human and natural environment of repairing and restoring seawalls along portions of the Naval Support Activity (NSA) Annapolis shoreline. Under the Proposed Action, an estimated 19,334 linear feet of seawalls would be repaired and restored to address structural deficiencies on the existing seawall and potential impacts from future extreme weather events, storm surge, sea level rise, and land subsidence.

The Draft EA is available for review at the following website:
https://www.cnrc.navy.mil/regions/ndw/installations/nsa_annapolis/om/environmental-/environmental-assessment.html.
 Comments on the EA may be made no later than August 31, 2019, to Ms. Jennifer Steele, Naval Facilities Engineering Command Washington, 1314 Harwood Street SE, Building 212, Washington Navy Yard, DC 20374; or by email to navfacwashnepa@navy.mil. A public meeting will be held on August 8, 2019, from 6:00–8:00 p.m. at the Hilton Garden Inn, 174 West Street, Annapolis, Maryland, to discuss the EA and its analysis and to solicit comments on the Draft EA.
 6387340 8/1, 8/2, 8/3/2019

Response Letter from State Clearinghouse (September 3, 2019)

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor



Robert S. McCord, Secretary
Sandy Schrader, Deputy Secretary

Maryland
DEPARTMENT OF PLANNING

September 3, 2019

Ms. Jennifer Steele, NEPA Program Manager
Department of the Navy
NAVFAC Washington, EV2
1314 Harwood Street SE, Building 212
Washington Navy Yard, DC 20374

STATE CLEARINGHOUSE RECOMMENDATION

State Application Identifier: MD20190731-0644

Applicant: Department of the Navy

Project Description: Environmental Assessment: Proposed Action Includes Seawall Repair and Restoration of Approximately 19,334 Feet of Seawalls and Shoreline at Naval Support Activity, Annapolis to Address Structural Deficiencies and Potential Weather Impacts With Three Action Alternatives and the No Action Alternative

Project Address: Naval Support Activity, Shoreline at Lower Yard, Upper Yard, North Severn, Annapolis, MD 21402

Project Location: Anne Arundel County

Recommendation: Consistent with Qualifying Comments and Contingent Upon Certain Actions

Dear Ms. Steele:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 34.02.02.04-.07, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter constitutes the State process review and recommendation. This recommendation is valid for a period of three years from the date of this letter.

Review comments were requested from the Maryland Departments of General Services, Natural Resources, Transportation, and the Environment; Anne Arundel County; the City of Annapolis; and the Maryland Department of Planning, including the Maryland Historical Trust. The Maryland Department of Transportation and Anne Arundel County did not provide comments.

The Maryland Department of General Services found this project to be consistent with their plans, programs, and objectives.

The Maryland Department of Planning found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments, as follows: "Seawall and flooding risk management is addressed in Anne Arundel General Development Plan 2009 (p.102-103). The area in question with the shoreline draft EA is categorized as Category 2 (6-8ft). This area will experience 6 to 8 feet of flood waters during a storm event. This should be taken into consideration in this plan proposal. Sea level rise and flooding from storm events should be planned for using BMP's [best management practices]."

301 West Preston Street - Suite 1101 - Baltimore - Maryland - 21201
Tel: 410.767.4500 - Toll Free: 1.877.767.6272 - TTY users: Maryland Relay - Planning.Maryland.gov

Ms. Jennifer Steele
September 3, 2019
Page 2
State Application Identifier: MD20190731-0644

The Maryland Historical Trust (MHT) stated that their finding of consistency is contingent upon the applicant's completion of the review process required under Section 106 of the National Historic Preservation Act, "The Navy will need to consult with MHT (MD SHPO) to complete the Section 106 review of the proposed project, as appropriate."

The Maryland Department of Natural Resources stated that their findings of consistency are contingent upon the applicant taking the following action: "This project will require a [Coastal Zone Management Act] CZMA federal consistency determination."

The City of Annapolis' findings of consistency are contingent upon the applicant taking the actions summarized in the enclosed letter.

The Maryland Department of the Environment found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments summarized below.

1. "Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid waste activities and contact the Resource Management Program at (410) 537-3314 for additional information regarding recycling activities.
2. The Waste Diversion and Utilization Program should be contacted directly at (410) 537-3314 by those facilities which generate or propose to generate or handle hazardous wastes to ensure these activities are being conducted in compliance with applicable State and federal laws and regulations. The Program should also be contacted prior to construction activities to ensure that the treatment, storage or disposal of hazardous wastes and low-level radioactive wastes at the facility will be conducted in compliance with applicable State and federal laws and regulations.
3. The proposed project may involve rehabilitation, redevelopment, revitalization, or property acquisition of commercial, industrial property. Accordingly, MDE's Brownfields Site Assessment and Voluntary Cleanup Programs (VCP) may provide valuable assistance to you in this project. These programs involve environmental site assessment in accordance with accepted industry and financial institution standards for property transfer. For specific information about these programs and eligibility, please contact the Land Restoration Program at (410) 537-3437.
4. Borrow areas used to provide clean earth back fill material may require a surface mine permit. Disposal of excess cut material at a surface mine may require site approval. Contact the Mining Program at (410) 537-3557 for further details.
5. Construction, renovation and/or demolition of buildings and roadways must be performed in conformance with State regulations pertaining to 'Particulate Matter from Materials Handling and Construction' (COMAR 26.11.06.03D), requiring that during any construction and/or demolition work, reasonable precaution must be taken to prevent particulate matter, such as fugitive dust, from becoming airborne."

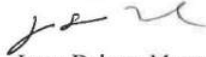
The State Application Identifier Number must be placed on any correspondence pertaining to this project.

Ms. Jennifer Steele
September 3, 2019
Page 3
State Application Identifier: MD20190731-0644

Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at sylvia.mosser@maryland.gov.

Thank you for your cooperation with the MIRC process.

Sincerely,



Jason Dubow, Manager, Resource Conservation and Management

JD:SM
Enclosure—Annapolis Comment Letter
cc:

Tony Redman - DNR
Amanda Redmiles - MDE

Tina Quinichette - MDOT
Wendy Scott-Napier - DGS

Samantha Harris - ANAR
Mayor - ANNAPO

Joseph Griffiths - MDPL
Beth Cole - MHT

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Response Letter from Annapolis Historic Preservation Division (August 28, 2019)



CITY OF ANNAPOLIS HISTORIC PRESERVATION DIVISION

Planning and Zoning Department

145 Gorman Street, 3rd Floor, Annapolis, Maryland 21401

410-260-2200 • MD Relay (711) • FAX 410-263-1129

August 28, 2019

Naval Facilities Engineering Command Washington
ATTN: Ms. Jennifer Steele
1314 Harwood Street SE, Building 212
Washington Navy Yard, DC 20374

Dear Ms. Steele:

The Historic Preservation Division, Department of Planning & Zoning, for the City of Annapolis has reviewed the August 2019 Draft Environmental Assessment (EA) For Seawall Repair And Restoration At Naval Support Activity Annapolis, Maryland. The assessment, summarized with a Proposed Action, was prepared collaboratively between the U.S. Department of the Navy and six contractors. The Proposed Action addresses existing structural deficiencies along approximately 19,334 feet of seawalls and shoreline and also addresses potential impacts from future extreme weather events, storm surge, sea level rise, and subsidence. The project area is divided into 15 areas called “reaches.” The EA offers three action Alternatives and one no action Alternative. We offer the following comments regarding the impact of the Alternatives on cultural resources in the Annapolis Historic District.

The architectural and historic significance of Annapolis has been recognized both locally and nationally. Based upon its “exceptional value or quality in illustrating or interpreting the heritage of the United States,” the Colonial Annapolis Historic District was designated one of forty-three National Historic Landmark Districts in 1965 by the U.S. Department of the Interior’s National Park Service. The Annapolis Historic District was designated as a National Register Historic District in 1966; properties within its boundaries are regulated by the Historic Preservation Commission. In recognition of the superior preservation of its significant eighteenth, nineteenth and early twentieth century structures, an enlarged historic district was placed on the National Register of Historic Places in 1984.

Annapolis is a remarkable urban environment. Laid out 300 years ago on a neck of land where the Severn River joins the Chesapeake Bay, the city evokes a sense of history and a sense of place, expressed in the character of its streets, the fit of its land to the water, and its pleasing human scale. Governor Francis Nicholson’s 1695 town plan for Annapolis is the oldest surviving Baroque plan in the United States. Annapolis presents a unique record of the pre-industrial colonial city in our country, and its collection of 18th-, 19th- and 20th-century architecture is important to the entire nation. Annapolis was home to Maryland’s four signers of the Declaration of Independence; the Continental Congress met here during 1783 and 1784; and in 1845 the U.S. Congress chose Annapolis as the location for the U.S. Naval Academy. All projects which are visible from the water shall respect and reinforce the historic character of the district and shall respect traditional views and visual focal points. The earliest settlements in the city were along Spa Creek and the Severn River. Visitors to Annapolis often came by water, making the system of rivers and creeks

an important gateway to the district. View sheds of the water as well as historic streetscapes as seen from the water have a shape and proportion that have evolved in response to the growth patterns of Annapolis. The scale, placement and configuration of new structures, and plantings within these view sheds need to be carefully planned so that new elements do not alter or obscure the character of these historic patterns. (Building in the Fourth Century: Annapolis Historic District Design Manual, 2011)

Four reaches are listed below as having the greatest impact on the Historic District view shed. Those include, along with their ratings:

- Farragut Field Bulkhead (reach 9) at a corner of the Lower Yard along the Severn River, in Poor Condition,
- Farragut Field Riprap (reach 10) along the southern shoreline of the Lower Yard near the confluence of the Severn River with the Chesapeake Bay, in Good Condition,
- Halsey Fieldhouse Quaywall (reach 11) along the southern shoreline of the Lower Yard on Spa Creek at the confluence of the Severn River, in Fair Condition, and
- Halsey Fieldhouse Quaywall 2 (reach 12) along the southern shoreline of the Lower Yard on Spa Creek, in Fair Condition.

Recommended alternatives for reaches 9-12 include the following:

- Alternative 1 uses hardened structures to raise the above-noted reaches from 3-5 feet currently to a maximum design height of 9.7 feet, accommodating a 50-year storm and a 75-year sea level rise projection.
- Alternative 2 uses hardened structures to raise the above-noted reaches to a maximum design height of 8.02 feet, accommodating a 50-year storm and a 50-year sea level rise projection.
- Alternative 3 uses repair or replacement measures to match the existing conditions and height of the above-noted reaches, not accounting for storm or sea level rise projections.
- The final Alternative is No Proposed Action - no repair, replacement, or restoration.

Impact on a potential increase in flooding to the Historic District from proposed new or higher seawalls, including those not mentioned above (such as reaches 13-15, Yard Basin) must be thoroughly analyzed as well as impact to the viewshed from vantage points with significant views such as the State House dome.

We agree with the PA findings (3-35) that all of the Alternatives have the potential for long-term adverse effects on cultural resources. Raising design heights in Alternatives 1 and 2 will adversely affect significant views from the Annapolis Historic District and potentially push additional water onto the Annapolis Historic District. Depending on the specific area, Alternative 3 or the No Action Alternative will have adverse effects due to damage from current and anticipated flooding documented in numerous studies such as the 2017 *4th National Climate Assessment*, the 2017 *NOAA Sea Level Projections for Annapolis*, and the 2018 *Sea Level Rise Projections for Maryland*. We believe that no particular Alternative should be considered as a global remedy for all reaches, nor perhaps for any one reach without considering sections of a reach, location of specific nearby resources, and adaptability of a design for an impending event, or future retrofit based on updated studies.

Thank you for the opportunity for the City of Annapolis Historic Preservation Division to comment on this Environmental Assessment. We look forward to participating in upcoming phases with comments as the Seawall Repair and Restoration project evolves.

Roberta Laynor
Chief of Historic Preservation

Response Letter from Maryland Department of Natural Resources Wildlife Heritage Service
(August 21, 2019)



Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary

August 21, 2019

Ms. Jennifer Steele
Naval Facilities Engineering Command Washington
1314 Harwood Street, SE
Building 212
Washington Navy Yard, DC 20374

RE: Environmental Review for Draft EA for Seawall Repair and Restoration at Naval Support Activity Annapolis, Anne Arundel County, Maryland.

Dear Ms. Steele:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. However, we would like to point out that the open waters that are adjacent to or part of the site are known historic waterfowl concentration areas. If there is to be any construction of water-dependent facilities please contact Josh Homyack of the Wildlife and Heritage Service at (410) 827-8612 x100 or josh.homyack@maryland.gov for further technical assistance regarding waterfowl.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2019.1315.aa
Cc: J. Honyack, DNR
C. Shearin, CAC

Tawes State Office Building – 580 Taylor Avenue – Annapolis, Maryland 21401
410-260-8DNR or toll free in Maryland 877-620-8DNR – dnr.maryland.gov – TTY Users Call via the Maryland Relay

**Email Correspondence with Maryland Department of Natural Resources Wildlife and Heritage Service
(August 30 and September 5, 2019)**

On Fri, Aug 30, 2019 at 8:26 AM Steele, Jennifer L CIV USN COMNAVFACENGCOM DC (USA) <jennifer.l.steele1@navy.mil> wrote:

Good morning Mr. Homyack,

The Navy is preparing an Environmental Assessment (EA) to look at the potential impacts of repairing and restoring the seawalls at NSA Annapolis in Annapolis, MD. As part of our agency coordination, we provided MDE with an invitation to view the Draft EA and to provide comment. The attached comments were received from Ms. Lori Byrne at the Wildlife and Heritage Service at MD DNR. In her letter, Ms. Byrne requests that we contact you for assistance regarding waterfowl if there is to be any construction of water-dependent facilities.

At this time, there are no plans to construct any additional facilities outside of repairs and upgrades to the existing seawalls and rip-rap sections. The purpose of the proposed action is to address existing structural deficiencies. As part of the proposed action, the Navy is considering seawall repair designs that would allow for a phased height increase over time to address potential impacts from future extreme weather events, storm surge, sea level rise and land subsidence issues. This could require extending the base support of the seawalls to be able to accommodate the potential future increases in height. A copy of the EA can be found at https://www.cnic.navy.mil/regions/ndw/installations/nsa_annapolis/om/environmental-/environmental-assessment.html.

I am writing at Ms. Byrne's suggestion to see if you had any additional comments or concerns regarding the proposed action at this time. Once designs for each reach of seawall are initiated, the Navy intends to apply for all applicable permits and adhere to any mitigations or BMPs contained therein.

Please let me know if you have any questions.

Thank you,

Jenn Steele

Jennifer Steele

NEPA Program Manager

NAVFAC Washington, EV2

1314 Harwood Street SE, Bldg 212

Washington Navy Yard, DC 20374

From: Josh Homyack -DNR- <josh.homyack@maryland.gov>
Sent: Thursday, September 05, 2019 8:26 AM
To: Steele, Jennifer L CIV USN COMNAVFACENGCOM DC (USA) <jennifer.l.steele1@navy.mil>; Lori Byrne -DNR- <lori.byrne@maryland.gov>
Subject: Re: FW: [Non-DoD Source] 5090 Ser 086 July 30, 2019 Naval Support Activity Annapolis, Seawall

Good morning Ms. Steele,

Projects of this size (approx 19334 linear feet of seawall) that are adjacent to Historic Waterfowl Concentration Areas are subject to a time-of-year restriction that prohibit work between the dates of November 15 - March 1.

Please feel free to contact me with any questions.

j

Agency Coordination under Section 106 of the National Historic Preservation Act

Letter to Maryland Historical Trust (July 31, 2019)



DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY ANNAPOLIS
58 BENNION ROAD
ANNAPOLIS MD 21402

IN REPLY REFER TO

5090
Ser ENV-093
July 31, 2019

Ms. Elizabeth Hughes
State Historic Preservation Officer
Director, Maryland Historical Trust
100 Community Place
Crownsville, Maryland 21032-2023

Attn: Ms. Amanda Apple

Dear Ms. Hughes:

SUBJECT: REQUEST FOR SECTION 106 CONSULTATION - REPAIR AND RESTORATION OF THE SEAWALL AND SHORELINE, NAVAL SUPPORT ACTIVITY ANNAPOLIS

The purpose of this letter is to consult with the State Historic Preservation Office (SHPO) per Section 106 of the National Historic Preservation Act of 1966 as amended, on the repair and restoration of the seawall and shoreline along the installation perimeter of the Naval Support Activity Annapolis (NSAA), Anne Arundel County, Maryland.

Background: The Proposed Action is to repair and restore existing seawalls along approximately 19,334 linear feet (divided into 15 "reaches") of shoreline for NSAA including portions of the Upper Yard and Lower Yard along the Severn River, College Creek, Spa Creek, and Santee Basin; and portions of North Severn along the Severn River and Yard Patrol Basin. 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.

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 primary need for the Proposed Action is 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 from future extreme weather events, storm surge, sea level rise and land subsidence.

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 the U.S. Naval Academy from accomplishing their missions.

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Forty-seven percent of the total shoreline included in this Proposed Action is exhibiting advanced deterioration and overstressing, with localized or widespread failures possible. The remaining reaches have been assessed as good, satisfactory, or fair.

Area of Potential Effect: The Area of Potential Effect (APE) for the undertaking in this consultation is defined as the entire USNA, both the Upper and Lower Yards; the portions of the North Severn Complex that would undergo ground disturbance; the entire Annapolis Historic District; and all areas from which the proposed construction would be visible. See APE boundaries in Enclosure 1.

The nearest historic property outside of the installation, the Colonial Annapolis Historic District, was listed as a National Historic Landmark (NHL) in 1965. This property adjoins USNA at the northeastern edge of the City of Annapolis. Visibility to the USNA's shoreline at the southernmost tip of the USNA district is limited to a small public park and dock on the Annapolis Harbor at the end of Dock Street. There are no significant view sheds between the installation's shoreline and the adjacent Colonial Annapolis Historic District.

Identification of Historic Properties in Area of Potential Effect:

Architectural: The APE is the same for all alternatives described below. The APE extends across the entire USNA boundaries, including both the Upper and Lower Yards. The USNA is both an NRHP and NHL Historic District sharing the same boundary. The district includes 139 buildings, structures, and sites that define the USNA character and significance. A variety of landscape features contribute to the district's historical significance, including the historic seawalls.

The APE includes a portion of the North Severn Complex around the Yard Patrol Basin and Severn River and extends 250 feet from the project to include potential views. At one time, portions of the North Severn Complex were determined NRHP-eligible as a historic district; however, due to demolitions, it has lost its historic integrity and is no longer eligible, concurred upon by MHT in 2003. The Yard Patrol Basin has been evaluated as well as the buildings associated with the historic Naval Station Annapolis adjacent to the basin. The Yard Patrol Basin was determined not eligible. Buildings 002NS, 003NS, and 004NS, within the APE adjacent to the north end of the basin are NRHP-eligible. Within the APE is Chance Boatyard in Eastport, which is listed on the NRHP. See Enclosure 2 for locations of all historic properties within or adjacent to the APE: Building 002NS, Building 003NS, Building 004NS, Chance Boatyard, and the Annapolis Historic District.

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Archaeological: There are no known or suspected underwater archaeological sites within the project APE due to the disturbance from the existing seawalls.

Determination of Effect:

Alternative 1: Under Alternative 1, hardened structures would either be repaired, restored, or replaced based on the predicted 10- or 50-year design storm and the 75-year sea level rise scenarios presented by the National Oceanic and Atmospheric Administration (NOAA). The hardened structures would include concrete bulkheads, sheet pile seawalls, riprap, or a combination of these techniques. The walls are proposed to be a maximum height of 6.10 feet for the Upper Yard and 9.10 feet for the Lower Yard and North Severn Complex. See Enclosures 3 and 4 for the location of each Reach along the installation shoreline and Enclosure 5 for a table that describes the proposed wall under each alternative for each Reach.

The Navy considers the work under Alternative 1 to be an adverse effect to the historic seawalls and the USNA Historic District. Demolition, as well as construction or repairs not done according to the Secretary of the Interior's Standards for Rehabilitation would be an adverse effect to the contributing walls. According to the Standards, the historic character must be retained and preserved. The Standards also state that if replacement of a feature is necessary based on the severity of deterioration, the new feature shall match the old, where possible. Increasing the height or the materials of the walls would be considered an adverse effect.

The significant views within USNA, as identified in the *Historic Landscape Survey, Naval Support Activity Annapolis, Maryland* (Kuhn & Groesbeck, 2013) would be adversely affected due to the increased height of the perimeter bulkhead. The setting, siting, and environment is unique to USNA and is significant in the history of the Naval Academy. The landscape study identified seven significant views on the campus that include views of Severn River or College Creek that are contributing to the historic district. Increasing the height of each bulkhead around the perimeter of USNA would impede these historically significant views. Renderings of these alternatives are provided in Enclosures 6-12.

The increased height on the perimeter bulkhead would also have a long-term, beneficial effect on the historic district and its contributing buildings and landscape features of USNA. Floods can cause major damage to structures both internally and externally. Many times, flood damage is irreparable, and materials must be replaced, which would be an adverse effect. Increasing the functionality of the current

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seawalls by repairing and/or replacing them would better protect the USNA historic district and preserve its individual resources and historic materials.

Under Alternative 1, there would be no adverse effects on Buildings 002NS, 003NS, and 004NS on North Severn, Chance Boatyard in Eastport, and Annapolis Historic District from implementing Alternative 1 as there are no direct or indirect effects from this Alternative.

Alternative 2: The study area under Alternative 2 is the same as Alternative 1. Under Alternative 2, the proposed seawalls would be higher than the existing height but lower than under Alternative 1. The proposed wall height is a maximum of 5.54 feet for Reach 1, 4.2 feet for Reach 2, existing height for Reach 3, and 8.02 feet for Reaches 4 through 15. These walls are proposed to be lower than Alternative 1 walls by 0.56 to 1.90 feet.

The seawalls would be designed to accommodate for the 10- or 50-year design storm and the 50-year sea level rise scenarios. Under Alternative 2, hardened structures would be repaired or replaced along Reaches 1 through 15. Each would consist of a hardened structure, except for Reach 3, which would consist of log toe stabilization.

Effects would be similar to Alternative 1; however, since the seawalls would be lower as compared to Alternative 1, the benefits of limiting impacts on cultural resources would be less than those described under Alternative 1. There would be no adverse effects on Buildings 003NS and 004NS on North Severn from implementing Alternative 2.

Alternative 3: Under Alternative 3 the existing hardened structures would be repaired or replaced to the existing height, without accommodating for future sea level rise. All reaches would be repaired or replaced with hardened structures (except for Reach 3). Reach 3 would be replaced with a living shoreline. Repairs and restoration would be done according to the Secretary of the Interior's Standards for Rehabilitation and, therefore, would not cause adverse effects.

The secondary need to address storm surge and sea level rise would not be met under Alternative 3. There would be potential adverse effects on the Historic District and its contributing resources and landscape features from damage caused by flooding and storm surge events from the lack of proper protection. Since the seawalls would remain at the existing height, benefits of limiting impacts on cultural resources would be less than Alternative 1 and 2. There would be no adverse effects on Buildings 003NS and 004NS on North Severn from implementing Alternative 3.

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We consider that repair and restoration of the seawall and shoreline of Naval Support Activity (NSA) Annapolis will have no adverse effect to historic properties at NSA Annapolis. Consulting parties will be notified of this project as outlined in Chapter 14, Section 2 of the Integrated Cultural Resource Management Plan NSA Annapolis (Feb 2018). If you have any questions or would like to visit the project area, please contact Kimberly Hickey either by email at kimberly.hickey@navy.mil, or by telephone at (410) 293-1116. We look forward to your response.

Sincerely,


W.B. Martinko
By direction

- Enclosures:
1. Area of Potential Effect and Location of Undertaking
 2. Location of Historic Properties Within or Adjacent to the APE
 3. Location of Reaches along Upper Yard and Lower Yard Project Area
 4. Location of Reaches for North Severn Project Area
 5. Table of Repair and Restoration Method by Reach for Each Alternative
 6. View of Reach 1 with Current View and Alternatives 1 and 2
 7. View of Reach 2 with Current View and Alternatives 1 and 2
 8. View of Reach 5 with Current View and Alternatives 1 and 2
 9. View of Reach 5 and 6 with Current View and Alternatives 1 and 2
 10. View of Reach 7 with Current View and Alternatives 1 and 2
 11. View of Reach 9 with Current View and Alternatives 1 and 2
 12. View of Reach 10 with Current View and Alternatives 1 and 2

Copy to: Preservation Assistance and Heritage Areas, National Park Service Northeast (Attn: D. Montagna)

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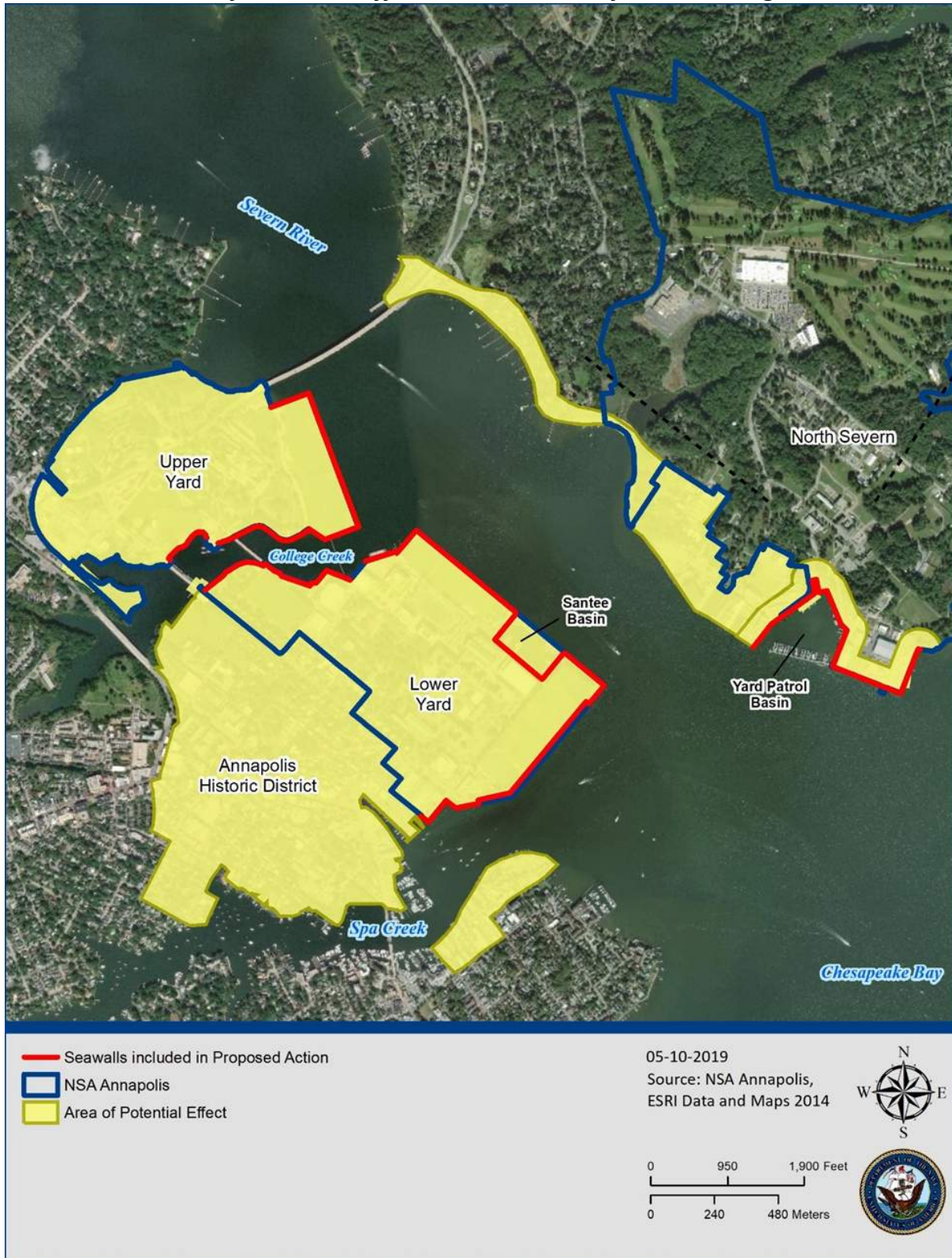
The Maryland Historical Trust has determined that repair and restoration of the seawall and shoreline for Naval Support Activity Annapolis will have no adverse effect to historic properties.

Maryland Historical Trust Preservation Office

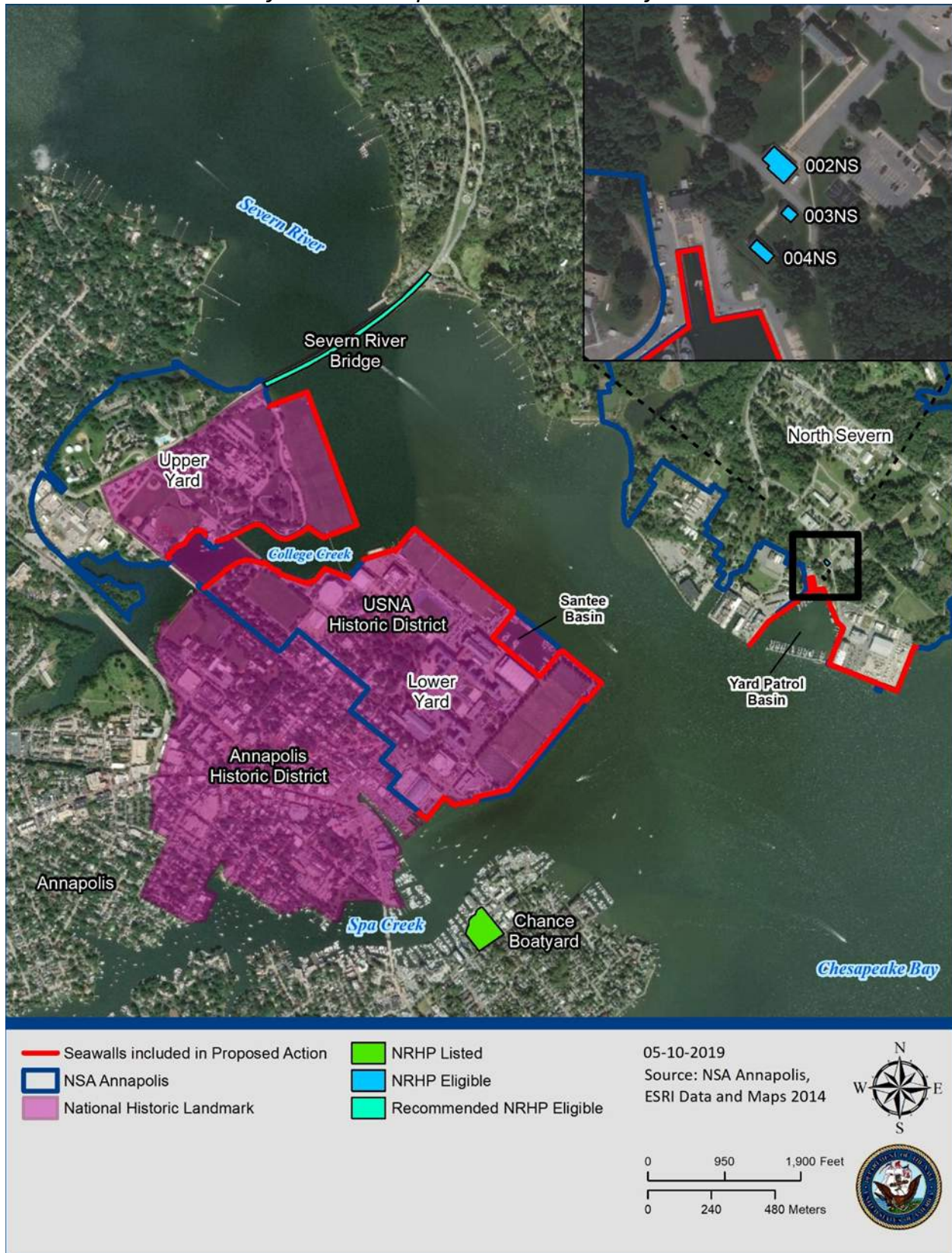
Date _____

Enclosures not all duplicated in the EA:

Enclosure 1. Area of Potential Effect and Location of Undertaking



Enclosure 2. Location of Historic Properties Within or Adjacent to the APE



Response Letter from Maryland Historical Trust (September 5, 2019)

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor

Robert S. McCord, Secretary
Sandy Schrader, Deputy Secretary

September 5, 2019

W. B. Martinko
Naval Support Activity Annapolis
Department of the Navy
58 Bennion Rd.
Annapolis, MD 21402

Re: Seawall Repair and Restoration at Naval Support Activity Annapolis
Anne Arundel County, Maryland
Section 106 Review - Navy

Dear Ms. Martinko:

Thank you for your recent letters initiating consultation with the Maryland Historical Trust (Trust), Maryland's State Historic Preservation Office, pursuant to Section 106 of the National Historic Preservation Act of 1966, concerning the above-referenced undertaking. We appreciate the opportunity for early consultation on this important project. The Trust reviewed the preliminary information provided and looks forward to ongoing coordination to complete the Section 106 review of the project.

According to the information provided by the Navy, the undertaking will entail the repair and restoration of approximately 19,334 linear feet of seawall and shoreline within the Upper Yard and Lower Yard along the Severn River, College Creek, Spa Creek, and Santee Basin as well as portions of the North Severn along the Severn River and Yard Patrol Basin. The project is needed to address existing structural deficiencies of the seawalls and shoreline for maintaining safety and function of mission-critical areas behind the seawalls and shoreline. In addition, the project will help address potential impacts from future extreme weather events, storm surge, sea level rise, and land subsidence.

The Trust agrees with the Navy's delineation of the Area of Potential Effects (APE) identified in your letter dated July 31, 2019. The APE for the project includes the United States Naval Academy (AA-359) and the Colonial Annapolis Historic District (AA-137), both designated as National Historic Landmarks (NHLs), and portions of the North Severn Complex. The seawall and shoreline areas are particularly visible from within the United States Naval Academy, from publicly accessible portions of King George St. and its bridge over College Creek, from portions of City Dock and the Annapolis Harbor, and are prominently visible from water access within the Severn River, Spa Creek, and College Creek.

We understand the Navy is currently exploring three alternatives for the project. Possible restoration and enhancement measures may include combinations of the following treatments: log toe stabilization, living shorelines, and hardened structures involving bulkhead, sheet pile seawall, and riprap. Seawall hardening options may entail elevating the walls by 6 to 9+ feet, which could substantively alter the views both to and from the United States Naval Academy. Elements of the project have the potential to affect the two NHL historic districts within the APE given changes to the landscapes and historically significant viewsheds.

Maryland Historical Trust • 100 Community Place • Crownsville • Maryland • 21032

Tel: 410.697.9591 • toll free 877.767.6272 • TTY users: Maryland Relay • MHT.Maryland.gov

W. B. Martinko
Seawall Repair and Restoration at Naval Support Activity Annapolis
September 5, 2019
Page 2 of 2

As project planning progresses, the Navy will need to develop more detailed plans and renderings of the proposed alternatives and solicit input from consulting parties and the public. Based on this information, the Navy will be able to make an informed assessment of the undertaking's effects on historic properties. A site visit among the involved parties would help provide a better understanding of conditions, constraints, and related issues in the project area and facilitate consultation moving forward. We await further consultation with the Navy and other consulting parties as project planning proceeds to more fully assess the undertaking's effects on historic properties once project details become available. We strongly encourage the Navy to thoroughly explore and consider alternatives that will avoid and minimize any adverse effects to the affected National Historic Landmarks, including the United States Naval Academy and the Colonial Annapolis Historic District.

We look forward to working with the Navy and involved consulting parties to successfully complete the Section 106 consultation for this undertaking. If you have questions or need further assistance, please contact Amanda Apple at amanda.apple@maryland.gov or me at beth.cole@maryland.gov. Thank you for your ongoing coordination.

Sincerely,



Beth Cole
Administrator, Project Review and Compliance
Maryland Historical Trust

BC/201903835

cc: Kimberly Hickey (USNA)
Julie Darsie (NAVFAC)
Jennifer Steele (NAVFAC)
Dennis Montagna (NPS)
Roberta Lawlor (Annapolis Historic Preservation)

**Electronic Section 106 Documentation Submittal to Advisory Council on Historic Preservation
(November 26, 2019)**



Preserving America's Heritage

**Advisory Council on Historic Preservation
Electronic Section 106 Documentation Submittal System (e106) Form
MS Word format**

Send to: e106@achp.gov

I. Basic information

- 1. Name of federal agency** (If multiple agencies, state them all and indicate whether one is the lead agency):

United States Navy, Naval Facilities Engineering Command (NAVFAC) Washington

- 2. Name of undertaking/project** (Include project/permit/application number if applicable):

Naval Support Activity Annapolis Seawall Repair and Restoration

- 3. Location of undertaking** (Indicate city(s), county(s), state(s), land ownership, and whether it would occur on or affect historic properties located on tribal lands):

Annapolis, Anne Arundel County, Maryland

Federal property

Not on tribal lands

- 4. Name and title of federal agency official and contact person for this undertaking, including email address and phone number:**

Julie Darsie
Cultural Resources Program Manager
NAVFAC Washington
julie.darsie@navy.mil
202.685.1754

- 5. Purpose of notification.** Indicate whether this documentation is to:

- ✓ notify the ACHP of a finding that an undertaking may adversely affect historic properties, and/or
- invite the ACHP to participate in a Section 106 consultation, and/or
- ✓ propose to develop a project Programmatic Agreement (project PA) for complex or multiple undertakings in accordance with 36 C.F.R. 800.14(b)(3).

ADVISORY COUNCIL ON HISTORIC PRESERVATION

401 F Street NW, Suite 308 □ Washington, DC 20001-2637
Phone: 202-517-0200 □ Fax: 202-517-6381 □ achp@achp.gov □ www.achp.gov

II. Information on the Undertaking*

6. Describe the undertaking and nature of federal involvement (if multiple federal agencies are involved, specify involvement of each):

See attached documentation

7. Describe the Area of Potential Effects:

See attached documentation

8. Describe steps taken to identify historic properties:

See attached documentation

9. Describe the historic property (or properties) and any National Historic Landmarks within the APE (or attach documentation or provide specific link to this information):

See attached documentation

10. Describe the undertaking's effects on historic properties:

See attached documentation

11. Explain how this undertaking would adversely affect historic properties (include information on any conditions or future actions known to date to avoid, minimize, or mitigate adverse effects):

See attached documentation

12. Provide copies or summaries of the views provided to date by any consulting parties, Indian tribes or Native Hawai'ian organizations, or the public, including any correspondence from the SHPO and/or THPO.

See attached documentation

III. Optional Information

13. Please indicate the status of any consultation that has occurred to date. Are there any consulting parties involved other than the SHPO/THPO? Are there any outstanding or unresolved concerns or issues that the ACHP should know about in deciding whether to participate in consultation?

Consulting Parties: Maryland Historical Trust, National Park Service, City of Annapolis, Historic Annapolis Foundation, St. John's College

Public meeting held August 8, 2019.

14. Does your agency have a website or website link where the interested public can find out about this project and/or provide comments? Please provide relevant links:

https://www.cnrc.navy.mil/regions/ndw/installations/nsa_annapolis/om/environmental-/environmental-assessment.html

3

15. Is this undertaking considered a “major” or “covered” project listed on the Federal Infrastructure Projects Permitting Dashboard or other federal interagency project tracking system? If so, please provide the link or reference number:

No

The following are attached to this form (check all that apply):

- Section 106 consultation correspondence
- Maps, photographs, drawings, and/or plans
- Additional historic property information
- Other:

**Naval Support Activity Annapolis
Annapolis, Maryland
Seawall Repair and Replacement
Documentation per 36 CFR 800.11**

Unless otherwise noted, graphics and tables are taken from "Preliminary Final Environmental Assessment for Seawall Repair and Restoration at Naval Support Activity Annapolis (Marstel-Day, Inc. 2019).

Description of Undertaking

The Navy proposes to repair or replace portions of the seawall and shoreline at Naval Support Activity Annapolis, including the Lower Yard along the Severn River, College Creek, Spa Creek, and Santee Basin; the Upper Yard along the Severn River and College Creek; and the North Severn complex along the Severn River and Yard Patrol Basin (Attachment A). The purpose of the Undertaking is to address structural deficiencies and potential impacts from future extreme weather events, storm surge, sea level rise, and land subsidence. The Undertaking would affect approximately 19,334 linear feet of shoreline. The existing shoreline in these areas is mostly hardened, consisting of a mixture of bulkhead and riprap sections. Several of these sections are failing, with wave action occasionally overtopping the hardened structures and undercutting occurring in several areas. The deficiencies in these shoreline structures have resulted in persistent flooding issues and failure of the road and parking areas in several locations behind the seawall, particularly during extreme high tides.

The Navy has identified a variety of repair and replacement approaches that are potentially feasible. The alternative approaches deemed most feasible are based on site conditions, environmental impacts, and practicality of implementation. The project area has been divided into 15 "reaches," as identified in Table 1, below, and depicted in Attachment B. The reaches have been defined both geographically and based on the extent of damage and potential measures applicable. Construction will occur as funding becomes available based on condition, elevation, and mission criticality.

Table 1: Seawall and Bulkhead Assessment Ratings and Length

Reach No.	Reach Name	Assessment Rating	Seawall Length (feet)
1	Sherman Field Bulkhead	53/Poor	2,988
2	Columbarium Seawall	56/Fair	1,060
3	Upper Yard Riprap	65/Fair	1,253
4	College Creek Bulkhead	71/Satisfactory	835
5	Rodgers Road Bulkhead	60/Fair	780
6	McNair Road/Nimitz Library Bulkheads	90/Good	980
7	Dewey Field Bulkhead	60/Fair	2,405
8	Santee Basin	NA/Poor	760
9	Farragut Field Bulkhead	NA/Poor	1,370

10	Farragut Field Riprap	84/Good	1,877
11	Halsey Fieldhouse Quay wall	60/Fair	510
12	Halsey Fieldhouse Quay wall 2	60/Fair	460
13	Yard Patrol Basin Relieving Platform	36/Serious	2,063
14	Yard Patrol Basin Steel Sheet Pile Bulkhead	36/Serious	883
15	Yard Patrol Basin Concrete Encased Bulkhead	36/Serious	1,110

Repair and replacement techniques will consist of bulkheads, sheet pile seawalls, riprap, log toe stabilization, and living shoreline.

- Bulkheads are vertical retaining walls made of wood, steel sheet, stone, concrete, plastic, or other similar materials and are constructed parallel to the shoreline. Bulkheads provide a barrier against waves and retain the soil behind them.
- Sheet pile seawalls consist of interconnecting, very tightly spaced sheets of material (wood, stone, steel, concrete, or plastic) driven vertically into the ground with special equipment. The interlocked sheet piles form a wall for lateral earth support with reduced groundwater inflow.
- Riprap is used to protect and stabilize embankment soils from erosion from flowing water and waves. A typical riprap system consists of a filter layer of gravel or cloth designed to prevent soil movement into or through the riprap layer while allowing water to drain from the embankment, and a stone layer of appropriate gradation and thickness to resist the shearing forces of water.
- Log toe stabilization uses untreated hardwood logs installed to repair undercutting at the toe of a slope. The logs are installed to support the undercut bank and help trap soils that can otherwise be dissolved and washed away. Once stabilized, the upper bank can host vegetation regrowth.
- Living shoreline designs incorporate native tidewater vegetation, natural sand material, and a small amount of rock in a configuration strategically placed to use the natural dynamics of a particular site to stabilize eroding shorelines and enhance while maintaining vital fish and wildlife habitat.

Alternatives

Alternative 1: Under Alternative 1, the Navy would utilize hardened structures (bulkheads, sheet pile seawalls, or riprap) along all 15 reaches of shoreline to accommodate 75-year sea level rise plus 10- or 50-year design storms and wave run-up. The projected range of 75-year sea level rise comes from the 2017 National Oceanic and Atmospheric Administration's (NOAA's) Intermediate-Low (2.1 feet) and Intermediate (4.3 feet) scenarios, shown in Table 2. In addition, shoreline protection on the Lower Yard and North Severn would accommodate a 50-year design storm, and shoreline protection on the Upper Yard would accommodate a 10-year design storm, as described in Table 3. The total increase in height over existing shoreline protection would range from 4.7 to 9.7 feet on the Lower Yard and North Severn, and 2.1 to 5.1 feet on the Upper

Yard as described in Table 4. These height increases are the potential maximums to be implemented at each reach; there may be phased increases over time.

Alternative 2: Under Alternative 2, the Navy would utilize hardened structures (bulkheads, sheet pile seawalls, or riprap) along all reaches of shoreline except reach 3, in order to accommodate 50-year sea level rise plus 10- or 50-year design storms and wave run-up. Reach 3 would receive log toe stabilization to maintain its current height. The projected range of 50-year sea level rise comes from the 2017 National Oceanic and Atmospheric Administration's (NOAA's) Intermediate-Low (1.54 feet) and Intermediate (2.62 feet) scenarios, shown in Table 2. In addition, shoreline protection on the Lower Yard and North Severn would accommodate a 50-year design storm, and shoreline protection on the Upper Yard would accommodate a 10-year design storm, as described in Table 3. The total increase in height over existing shoreline protection would range from 3.02 to 8.02 feet on the Lower Yard and North Severn, and zero to 3.2 feet on the Upper Yard as described in Table 4.

Alternative 3: Under Alternative 3, the Navy would repair or replace the existing hardened structures to their existing heights along all reaches of shoreline except reach 3. Reach 3 would receive a living shoreline.

Table 2: National Oceanic and Atmospheric Administration Sea Level Rise Projections

<i>Year</i>	<i>Low</i>	<i>Intermediate Low</i>	<i>Intermediate</i>	<i>Intermediate High</i>	<i>High</i>	<i>Extreme</i>
2000	0.00	0.00	0.00	0.00	0.00	0.00
2010	0.20	0.23	0.30	0.36	0.43	0.49
2020	0.36	0.43	0.56	0.72	0.85	0.92
2030	0.52	0.66	0.92	1.18	1.44	1.57
2040	0.75	0.89	1.28	1.67	2.13	2.36
2050	0.89	1.08	1.67	2.26	2.95	3.35
2060	1.08	1.31	2.13	2.92	3.94	4.59
2070	1.28	1.54	2.62	3.71	4.99	5.97
2080	1.41	1.71	3.12	4.53	6.14	7.41
2090	1.54	1.90	3.71	5.45	7.55	9.19
2100	1.64	2.10	4.30	6.53	9.09	11.15

Area of Potential Effect

The Area of Potential Effect (APE) for all alternatives encompasses the entire United States Naval Academy (Upper and Lower Yards), those portions of the North Severn complex that would undergo ground disturbance, the entire Colonial Annapolis National Historic Landmark and Historic District, and all areas from which the proposed construction would be visible. (Attachment C)

Identification of Historic Properties and Affected Historic Properties

To identify historic properties within the APE, the Navy consulted records held by the Maryland Historical Trust and the Public Works Department of Naval Support Activity Annapolis.

Identified historic properties within the APE (Attachment D) are as follows:

- The United States Naval Academy National Historic Landmark (USNA) was designated on July 4, 1961 and was automatically placed on the NRHP in 1966. The USNA is nationally significant for its pivotal role in American naval affairs and the education of naval officers in both military and academic studies, and for exemplifying the design principles of Beaux Arts architecture and the work of New York architect Ernest Flag, who designed the plan of the main campus and its core buildings in the early twentieth century.
- The Colonial Annapolis Historic District was designated an NHL in 1965 and included in the NRHP in 1966. The NRHP district was expanded in 1984. In addition, the local Annapolis Historic District follows nearly the same boundaries as the NHL. Colonial Annapolis has national significance as the site of the Continental Congress in 1783–1784 and the Annapolis Convention in 1786, which led to the Constitutional Convention in 1787. The district is also nationally significant in the areas of architecture and urban planning as one of the first planned cities in colonial America, as a rare example of a modified baroque plan, and for its several outstanding examples of high Georgian design. As the capital of both the Colony and State of Maryland, the district also has state significance as the center of colonial and state government, politics, and commerce.
- The Chance Boatyard is a former boat-building complex that consists of nine contributing buildings and structures occupying a city block in Eastport, west Annapolis. For much of the twentieth century, workers at the Chance Boatyard built and repaired wood-hull vessels for commercial, leisure and military use. The Chance Boatyard was listed in the NRHP in 1999. It is significant for its association with the industrial, military, maritime, and transportation history of the City of Annapolis and the United States between 1913 and 1973.
- Buildings 002NS, 003NS, and 004NS are located on the North Severn complex of Naval Support Activity Annapolis and were determined eligible for the NRHP in 2011. The small, brick buildings were constructed in 1905 as a range house (002NS), black powder house (003NS) and smokeless powder house (004NS). They are significant as part of the rifle range historically used for training midshipmen at the United States Naval Academy.

Effects on Historic Properties and Application of Criteria of Adverse Effect

Alternative 1

- United States Naval Academy National Historic Landmark and National Register Historic District: Implementation of Alternative 1 would result in replacement of historic seawalls with structures that would be 2.1 to 9.7 feet higher, depending on location. The demolition would have an *adverse effect* on contributing structures, and the height increase would have an *adverse effect* on seven contributing viewsheds from the campus to College Creek and the Severn River, as noted on Attachment E. However, Alternative 1 would also have a beneficial effect on the USNA by protecting irreplaceable resources from irreparable flood damage. Still, Alternative 1 would have a net *adverse effect* on the USNA. Because the full extent of the effect cannot be determined at this time, effects would be resolved via a *Programmatic Agreement*.
- Colonial Annapolis National Historic Landmark and Annapolis National Register Historic District: Implementation of Alternative 1 would result in a negligible increase in flood height (estimated at 0.003 inches from floodwater, 0.41 inches from waves) in Colonial Annapolis due to displacement from the USNA seawalls. Most water would dissipate into the Severn River and Chesapeake Bay. The seawalls are minimally visible from Colonial Annapolis, and there are no significant viewsheds from Colonial Annapolis across the USNA toward College Creek or the Severn River. Alternative 1 would have *no adverse effect* on Colonial Annapolis.
- Chance Boatyard: The USNA seawalls are minimally visible from the Chance Boatyard, and the viewsheds from the Chance Boatyard to the USNA do not contribute to its significance. Alternative 1 would have *no adverse effect* on the Chance Boatyard.
- Buildings 002NS, 003NS, and 004NS: The USNA seawalls are minimally visible from Buildings 002NS, 003NS, and 004NS, and the viewsheds from the Buildings to the water do not contribute to their significance. Alternative 1 would have *no adverse effect* on Buildings 002NS, 003NS, and 004NS.

Alternative 2

- United States Naval Academy National Historic Landmark and National Register Historic District: Implementation of Alternative 2 would result in replacement of historic seawalls with structures that would be 0 to 8.02 feet higher, depending on location. The demolition would have an *adverse effect* on contributing structures, and the height increase would have an *adverse effect* on seven contributing viewsheds from the campus to College Creek and the Severn River. However, Alternative 2 would also have a beneficial effect on the USNA by protecting irreplaceable resources from irreparable flood damage. Still, Alternative 2 would have a net *adverse effect* on the USNA. Because the full extent of the effect cannot be determined at this time, effects would be resolved via a *Programmatic Agreement*.
- Colonial Annapolis National Historic Landmark, Annapolis National Register Historic District: Implementation of Alternative 2 would result in a negligible increase in flood height (again estimated at 0.003 inches from floodwater, 0.41 inches from waves) in

Colonial Annapolis due to displacement from the USNA seawalls. Most water would dissipate into the Severn River and Chesapeake Bay. The seawalls are minimally visible from Colonial Annapolis, and there are no significant viewsheds from Colonial Annapolis across the USNA toward College Creek or the Severn River. Alternative 2 would have *no adverse effect* on Colonial Annapolis.

- Chance Boatyard: The USNA seawalls are minimally visible from the Chance Boatyard, and the viewsheds from the Chance Boatyard to the USNA do not contribute to its significance. Alternative 2 would have *no adverse effect* on the Chance Boatyard.
- Buildings 002NS, 003NS, and 004NS: The USNA seawalls are minimally visible from Buildings 002NS, 003NS, and 004NS, and the viewsheds from the Buildings to the water do not contribute to their significance. Alternative 2 would have *no adverse effect* on Buildings 002NS, 003NS, and 004NS.

Alternative 3

- United States Naval Academy National Historic Landmark and National Register Historic District: Implementation of Alternative 3 would result in repair or replacement of historic seawalls with structures of the same height. Because some historic fabric would be replaced, Alternative 3 would have an *adverse effect* on contributing structures to the USNA. Because the full extent of the effect cannot be determined at this time, effects would be resolved via a *Programmatic Agreement*.
- Colonial Annapolis National Historic Landmark - Annapolis National Register Historic District, Chance Boatyard, and Buildings 002NS, 003NS, and 004NS: Repair or replacement of seawalls to their existing height would have *no adverse effect* on these resources.

Mitigation

The Programmatic Agreement will include a menu of agreed-upon mitigation options from which the Navy, SHPO and Consulting Parties can choose, based on the extent of effects.

Public Involvement

Per 36 CFR 800.8, the Navy is coordinating compliance with Section 106 with the requirements of the National Environmental Policy Act (NEPA). The Navy has planned public participation, analysis, and review in order to meet the purposes and requirements of both statutes. The Navy solicited public and agency comments during a public review period of the Draft EA from August 1 through 31, 2019. A public meeting was held on August 8, 2019 in Annapolis, Maryland. The Navy published a Notice of Availability of the draft EA for three consecutive days in the Annapolis Capital Gazette from August 1-3, 2019. The Navy is consulting with the Maryland Historical Trust (MHT), Advisory Council on Historic Preservation (ACHP), National Park Service (NPS), City of Annapolis Historic Preservation Division, City of Annapolis Historic Preservation Commission, Historic Annapolis Foundation, and St. John's College.

List of Attachments

Attachment A:	Location Map Showing Proposed Extent of Repairs and Replacement
Attachment B:	Location of Reaches (2 pages)
Attachment C:	Area of Potential Effect (APE)
Attachment D:	Historic Properties within the APE
Attachment E:	Affected Historic Viewsheds within the USNA
Attachment F:	Responses from Maryland Historical Trust and City of Annapolis

Response Letter from the Advisory Council on Historic Preservation (December 17, 2019)



Preserving America's Heritage

December 17, 2019

Julie Darsie
Naval District Washington
Department of the Navy
1343 Dahlgren Avenue, SE
Washington Navy Yard, DC 20374-51761

Ref: *Proposed Naval Support Activity Annapolis Seawall Repair and Restoration Project
Anne Arundel, Maryland*

Dear Ms. Darsie:

The Advisory Council on Historic Preservation (ACHP) has received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Programmatic Agreement (PA), developed in consultation with the Maryland State Historic Preservation Office (SHPO) and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the PA and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Katharine Kerr at 202 517-0216 or via e-mail at kkerr@achp.gov.

Sincerely,

Artisha Thompson
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION
401 F Street NW, Suite 308 • Washington, DC 20001-2637
Phone: 202-517-0200 • Fax: 202-517-6381 • achp@achp.gov • www.achp.gov

NOAA Fisheries Coordination under Endangered Species Act and Magnuson-Stevens Fisheries Conservation and Management Act

Letter to NOAA Fisheries (August 6, 2019)



DEPARTMENT OF THE NAVY

NAVAL SUPPORT ACTIVITY ANNAPOLIS
58 BENNION ROAD
ANNAPOLIS, MARYLAND 21402

IN REPLY REFER TO:
5090
ENV-092
August 6, 2019

Mr. Michael Pentony
Administrator of Greater Atlantic Region Fisheries Office
NOAA Fisheries
55 Great Republic Drive
Gloucester, MA 01930-2276

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR SEAWALL REPAIR AND
RESTORATION AT NAVAL SUPPORT ACTIVITY ANNAPOLIS, MARYLAND

Dear Mr. Pentony:

The Department of the Navy is preparing an Environmental Assessment (EA) in compliance with the National Environmental Policy Act of 1969 (NEPA) to evaluate the potential effects associated with the repair and restoration of seawalls and shoreline at Naval Support Activity (NSA) Annapolis, located in Annapolis, Maryland. This letter is intended to initiate coordination with your agency on this project for the consultation on potential impacts to the Atlantic and Shortnose sturgeons.

The Proposed Action being evaluated in the EA includes repairing and restoring approximately 19,334 linear feet of seawalls and shoreline. The work would occur on the shoreline 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 the North Severn area along the Severn River and Yard Patrol Basin (Figures 1-3). 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, which are described in the enclosures.

The existing shoreline in these areas is mostly hardened, consisting of a mixture of bulkhead and riprap sections. Several of these sections are failing, with wave action occasionally overtopping the hardened structures and undercutting occurring in several areas. The deficiencies in these shoreline structures have resulted in persistent flooding issues and failure of the road and parking areas in several locations behind the seawall, particularly during extreme high tide. Consequently, the Proposed Action is needed to address existing structural

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deficiencies along the NSA Annapolis seawalls and shoreline to maintain the safety and function of mission-critical areas behind the seawalls. A secondary need for the Proposed Action is to address potential impacts from future extreme weather events, storm surge, sea level rise and land subsidence.

This EA evaluates a range of techniques to repair and restore designated segments of seawall (or reaches), including hardened structures and log toe stabilization. It evaluates the potential environmental impacts associated with three action alternatives and the No Action Alternative (see Figure 1 and Table 1). Under all action alternatives, a 13.8-kilovolt marine cable that has migrated towards the shoreline over time may need to be relocated on the riverbed approximately 10 feet from the seawall. Total soil disturbance during relocation is anticipated to be less than 10 cubic yards for each reach of seawall.

Construction work for any of the alternatives would be accomplished from on land, in the water, or a combination of the two, depending on land and water constraints in the various work areas. To date, only Reach 9 (along the Lower Yard) and a portion of the North Severn seawall have undergone preliminary design. 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.

The following describes the three action alternatives for implementing the Proposed Action, as well as the No Action Alternative. Enclosure 3 contains descriptions of the proposed structure type considered in the Draft EA. Reach 9, which is the only reach in the preliminary design stage, would be a sheet pile seawall; a depiction of this hardened structure is shown in Figure 4 within Enclosure 3.

Under Alternative 1, hardened structures would be used to accommodate 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).

Under Alternative 2, hardened structures would be used to accommodate 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 account for sea level rise if needed in the future.

Under 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

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that could be modified to accommodate for sea level rise if needed in the future.

Under the 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.

The Navy has determined that the repair and restoration of the seawall and shoreline will not have a significant impact on either of the sturgeon species of concern. The potential environmental impacts of these three action alternatives and the No Action Alternative are analyzed in a Draft EA. As part of the EA process, the Navy respectfully invites your participation in the review of the Draft EA and is soliciting comments regarding the document. The Draft EA can be found online at:

https://www.cnrc.navy.mil/regions/ndw/installations/nsa_annapolis/om/environmental-/environmental-assessment.html. In addition, the Navy is hosting a public meeting on August 8, 2019, from 6:00-8:00 p.m. at the Hilton Garden Inn, 174 West Street, Annapolis, Maryland. Please provide your comments no later than 30 days from receipt of this letter. Advanced notification of significant concerns would also be greatly appreciated. Please direct all written correspondence to:

Naval Facilities Engineering Command Washington
ATTN: Ms. Jennifer Steele
1314 Harwood Street SE, Building 212
Washington Navy Yard, DC 20374

For more information, please contact Jennifer Steele at 202-685-8008 or navfacwashnepa@navy.mil.

Sincerely,



W.B. Martinko
By direction

- Enclosures:
1. Figures 1-3. NSA Annapolis Location and Proposed Seawall Reaches
 2. Table 1. Repair and Restoration Method by Reach for Each Alternative
 3. Descriptions of Repair and Restoration Methods

Copy to: Brian Hopper, Protected Resources Division, NOAA Fisheries,
Greater Atlantic Regional Fisheries Office

Enclosure 3: Descriptions of Repair and Restoration Methods

Bulkheads

Bulkheads are vertical retaining walls composed of wood, steel sheet, stone, concrete, plastic, or other similar material that are constructed parallel to the shoreline. They are designed to protect shorelines by providing a barrier to waves, to retain soil behind them, and to provide berthing for ships. Bulkheads derive their stability through mobilization of passive earth pressures between the mudline and embedded tip of the wall, and, in most cases, from a lateral anchorage system installed between mean low water and top of the wall.

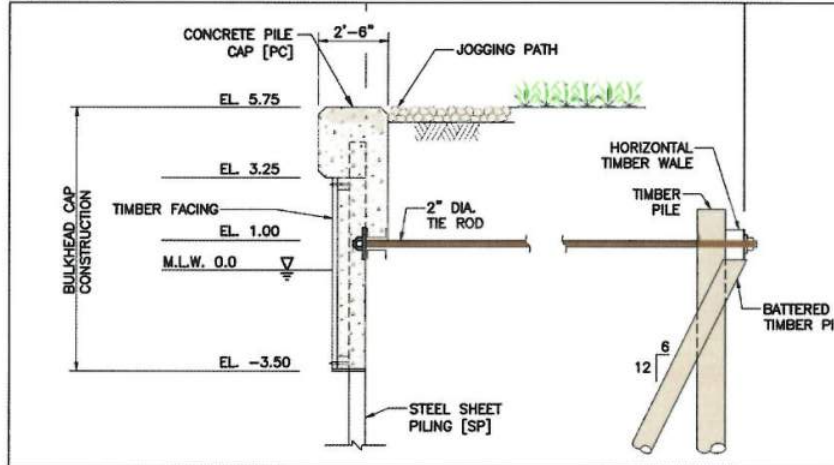
The exact method for the construction or repair of bulkheads in the project area is unknown at this time; it is likely that materials or methods would be slightly different along various reaches, as specific site conditions warrant. Methods could include mechanical impact hammers and rams and saw cutting to complete the demolition of the concrete components. Any corrosion on the bulkhead would be removed. A timber formwork (which acts as a mold) could be constructed adjacent to the existing steel bulkhead. Concrete could then be poured into the formwork resulting in a concrete encasement about six inches thick with the timber formwork kept in place to protect the concrete encasement. Excavation could occur below the existing mudline to expose the existing wall for installation of a new encasement; this area would then be backfilled upon completion. Driving of new steel sheet piles could be performed via a floating plant of barge-mounted cranes and pile-driving equipment. Partial excavations could occur to expose existing seawall wale and lateral anchorage systems. The new sheet pile bulkhead could connect to existing structures or tie-back anchorages, and grout infill could be installed between existing and new sheet pile seawalls. Reinforced concrete caps and/or integrated walls could then be installed to meet future sea level rise requirements.

Sheet Pile Seawalls

Sheet pile seawalls consist of interconnecting, very tightly spaced sheets of material (wood, stone, steel, concrete, or plastic) driven vertically into the ground with special equipment. The interlocked sheet piles form a wall for lateral earth support with reduced groundwater inflow. The wall may be cantilevered or anchored. Unlike bulkheads, seawalls are not intended for ship berthing.

Steel sheet pile seawalls generally consist of steel sheet piles, unreinforced grout infill material between existing and new seawalls, and reinforced concrete caps and wall structures. The seawall restoration could include complete or partial demolition of the existing wall concrete cap and ancillary structures to facilitate installation and connection of a new sheet pile seawall. Methods would likely be similar to those discussed under bulkheads, involving mechanical impact hammers and rams and saw cutting for partial or complete the demolition. Floating barge-mounted cranes and pile-driving equipment could be used. Reinforced concrete caps and/or integrated walls could be installed to meet future sea level rise requirements.

Figure 4. Typical Sheet Pile Seawall Cross Section Detail



Riprap

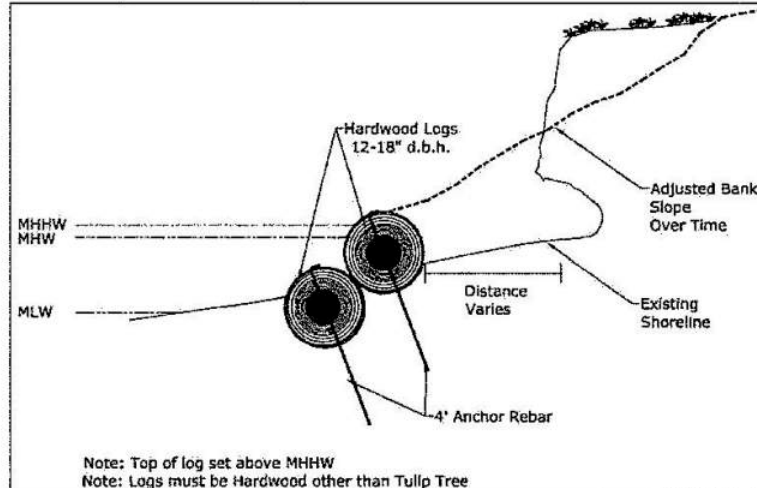
Riprap is used to protect and stabilize embankment soils from erosion from flowing water and waves. A typical riprap system consists of a filter layer of gravel or cloth designed to prevent soil movement into or through the riprap layer while allowing water to drain from the embankment, and a stone layer of appropriate gradation and thickness to resist the shearing forces of water.

Typically, to install riprap, the subgrade surface on which the rock riprap and filter is to be placed would be cut or filled and graded to the lines and grades specified in the design drawings. The filter would be placed on the surface and then the rocks are placed on the filter. Larger rocks are uniformly distributed with the smaller rocks and spalls filling the voids between the larger rock.

Log Toe Stabilization

Log toe stabilization uses untreated hardwood logs installed to repair the undercut toe-of-slope. The logs are installed to support the undercut bank and help trap soils that can otherwise be dissolved and washed away when tides saturate the toe-of-slope. Felled trees and branches are cut to fit under the banks. One or more logs are wedged beneath the undercut bank, and the outermost log is anchored with rebar. Once the toe erosion is halted, the upper banks may continue to slump until a stable angle of repose is reached, which would allow the regrowth of vegetation on the banks. It is this regrowth of vegetation that would help provide long-term stabilization of the shoreline. The logs can last up to several decades.

Figure 5. Typical Detail of Log Toe Stabilization



MHW=mean high water; MHHW=mean higher-high water; MLW=mean low water; d.b.h.=diameter at breast height.

Living Shoreline

Living shoreline designs are a more natural bank stabilization approach that uses plants, sand, and a limited amount of rock to provide shoreline protection and enhance and maintain valuable habitat. These designs incorporate a small amount of rock, natural sand material, and native tidewater vegetation in a configuration strategically placed to use the natural dynamics of a particular site. Living shorelines have proven to be an effective means of stabilizing eroding shorelines while maintaining more of the vital fish and wildlife habitat along the shoreline. In most suitable areas, living shorelines would be created using breakwaters or sills, sand material, and native vegetation. The Navy would determine the exact locations for these living shorelines and specifications based on the type of habitat to be created, and site conditions. Living shorelines cannot be used where shorelines are subject to strong, persistent wave energy; considerable amounts of slope erosion; deeper water levels; and high fetch, which is the distance traveled by wind or waves across open water. The fetch, exposure, water depth, and existing functional use of existing shoreline protection structures on Spa Creek, the Severn River, and the mouth of College Creek limit the suitability of living shorelines on Reaches 1, 2, and 5-15.

Response Letter from NOAA Fisheries (August 21, 2019)

From: Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov>
Sent: Wednesday, August 21, 2019 11:58 AM
To: Clark, Katharine E CIV USN COMNAVDIST WASH DC (US) <katharine.seguin@navy.mil>
Cc: Martinko, Wendy B CIV USN NAVFAC ATLANTIC (US) <wendy.martinko@navy.mil>; Steele, Jennifer L CIV USN COMNAVFACENGCOM DC (USA) <jennifer.l.steele1@navy.mil>
Subject: [Non-DoD Source] Re: Draft Shoreline EA - consultation

Hi Katharine,

Your email and attached plans dated August 6, 2019, regarding the Navy's plan to repair and restore the seawall at NSA Annapolis requested concurrence with an effects determination regarding ESA-listed species under our jurisdiction.

Although shortnose sturgeon and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur in the Chesapeake Bay and its adjacent tributaries and rivers, based on the activities associated with the project, the location of the project, and information you provided in your email and plans, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary. As such, no further coordination on this activity with the NMFS Protected Resources Division is necessary at this time. Should there be additional changes to the project plans or new information become available that changes the basis for this determination, further coordination should be pursued. Please contact me (410-267-5649 or brian.d.hopper@noaa.gov), should you have any questions regarding these comments.

Regards,
-Brian

--

Brian D. Hopper
Protected Resources Division
NOAA Fisheries
Greater Atlantic Regional Fisheries Office
200 Harry S Truman Parkway
Suite 460
Annapolis, MD 21401
410 267 5649
Brian.D.Hopper@noaa.gov
<http://www.greateratlantic.fisheries.noaa.gov/>

Response Letter from NOAA Fisheries (August 26, 2019)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

August 26, 2019

Jennifer Steele
Naval Facilities Engineering Command Washington
1314 Harwood Street SE
Building 212
Washington Navy Yard, DC 20374

Subject: Draft Environmental Assessment for Seawall Repair and Restoration at Naval Support Activity Annapolis, Maryland

Dear Ms. Steele:

Thank you for providing your *Draft Environmental Assessment (EA) for Seawall Repair and Restoration at Naval Support Activity Annapolis, Maryland* for our review. The EA evaluates the potential environmental impacts of repairing and restoring the seawall and shoreline along the installation perimeter including portions of the Upper Yard and Lower Yard along the Severn River, College Creek, Spa Creek, and Santee Basin; and portions of 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. The existing shoreline is mostly hardened with a mixture of bulkhead and riprap. Specific restoration and enhancement techniques could include hardened structures (bulkhead, sheet pile seawall, riprap, or a combination of these techniques), log toe stabilization, and living shoreline, where appropriate.

Magnuson Stevens Fishery Conservation and Management Act

The project area has been designated as essential fish habitat (EFH) for a number of federally managed species including bluefish (*Pomatomus saltatrix*) and summer flounder (*Paralichthys dentatus*).

As you know, the Magnuson Stevens Fishery Conservation and Management Act (MSA) requires federal agencies such as the Navy to consult with us on any action or proposed action authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH) identified under the MSA. Because the in-water work proposed by the Navy will affect EFH, this process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments, lists the required contents of EFH assessments, and generally outlines each agency's obligations in this consultation procedure.



The EFH final rule published in the Federal Register on January 17, 2002, defines an adverse effect as "any impact that reduces the quality and/or quantity of EFH". The rule further states:

Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

As you described in your draft EA, based on salinity tolerances and ecology of federally managed species that occur in the Chesapeake Bay, only some of the species with designated EFH are likely to occur in the project area.

Habitat Areas of Particular Concern (HAPC) are designated for summer flounder in the Chesapeake Bay and include all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed as well as loose aggregations, within adult and juvenile EFH. As described in your draft EA, one species of submerged aquatic vegetation (SAV), claspingleaf pondweed (*Potamogeton perfoliatus*) has been mapped in College Creek, making that an HAPC.

You describe the designated EFH in the action area in your draft EA, and indicate that you will consult with us as design plans for each reach are completed. You also indicate in your draft EA that the Navy would implement appropriate best management practices (BMPs) in accordance with regulations and ongoing consultation to minimize the effects on EFH. We agree with this approach and are providing you with our general recommendations to minimize impacts to EFH for the types of activities you describe in your draft EA for your use in developing design plans. We will continue to work with you as more information is available.

Fish and Wildlife Coordination Act

The Severn River provides habitat for a variety of NOAA trust resources. It serves as nursery and forage area for a variety of anadromous fish, and spawning of alewife (*Alosa pseudoharengus*) and blueback herring (*A. aestivalis*) is documented to occur in the Severn River. Buckel and Conover (1997) in Fahay et al. (1999) report that the diet items of juvenile bluefish include *Alosa* species such as American shad (*Alosa sapidissima*), blueback herring, and alewife. Juvenile *Alosa* species have all been identified as prey species for federally managed windowpane flounder (*Scophthalmus aquosus*), winter skate (*Leucoraja ocellata*) and summer flounder in Steimle et al. (2000).

Activities that adversely affect the spawning success and the quality of the nursery habitat of these fish will adversely affect the EFH for juvenile bluefish and summer flounder by reducing the availability of prey items. To minimize adverse effects to anadromous fish migration and spawning, in-water work, such as construction and demolition activities during anadromous fish migration and spawning periods (February 15 - June 15). Best management practices such as those briefly described in the EA should be used to

minimize the impacts of underwater sound and release of suspended sediment in the waterway.

General Recommendations

To minimize impacts to designated EFH, we offer the following general recommendations. We will provide more detailed conservation recommendations pursuant to Section 305(b)(4)(A) of the MSA during continued consultation as you develop design plans for each reach.

1. Avoid in-water work for construction and demolition during anadromous fish migration and spawning (February 15 through June 15).
2. Design reach 3 to minimize impacts to SAV found in site surveys or mapped in the previous five years. Ensure that if SAV is present in College Creek that replacement of riprap in reach 3 with log toe or living shoreline designs does not result in direct loss of SAV (e.g., by fill of SAV habitat to create a living shoreline).
3. Minimize fill of open water beyond existing hardened structures to the extent practicable.
4. Avoid the use of creosote treated timber. Do not locate creosote or pressure treated (CCA, ACQ, etc.) timber in areas containing shellfish or in sensitive habitats. 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.

If you wish to discuss this further, please e-mail Kristy.Bead@noaa.gov. We look forward to working with you as you develop design plans for each reach.

Sincerely,



Karen Greene
Mid-Atlantic Field Offices Supervisor

Literature Cited

Buckel, J.A. and D.O. Conover. 1997. Movements, feeding periods, and daily ration of piscivorous young-of-the-year bluefish, *Pomatomus saltatrix*, in the Hudson River estuary. *Fish. Bull.* (U.S.) 95(4):665-679.

Fahey, M.P., P.L. Berrien, D.L. Johnson and W.W. Morse. 1999. Essential Fish Habitat Source Document: Bluefish, *Pomatomus saltatrix* life history and habitat characteristics. U.S. Dep. Commer., NOAA Technical Memorandum NMFS-NE-144.

Steimle, F.W., R.A. Pikanowski, D.G. McMillan, C.A. Zetlin, and S.J. Wilk. 2000. Demersal fish and American lobster diets in the Lower Hudson-Raritan Estuary. NOAA Technical Memorandum NMFS-NE-161. Woods Hole, MA. 106 p.

**Email Correspondence with NOAA Fisheries for Species Consultation for Reach 9
(February 3, 2020)**

From: Brian D Hopper - NOAA Federal <brian.d.hopper@noaa.gov>
Sent: Monday, February 3, 2020 11:25 AM
To: Clark, Katharine E CIV USN COMNAVDIST WASH DC (US)
<katharine.seguin@navy.mil>
Cc: Martinko, Wendy B CIV USN NAVFAC WASHINGTON DC (USA)
<wendy.martinko@navy.mil>
Subject: [Non-DoD Source] Re: ESA informal consultation for Farragut
Field Seawall repair

Hi Katharine,

Your email and attached plans dated February 3, 2020, regarding the Navy's plan to repair the Farragut field seawall at the US Naval Academy, requested concurrence with an effects determination regarding ESA-listed species under our jurisdiction.

Although shortnose sturgeon and Atlantic sturgeon originating from five listed Distinct Population Segments (DPS) are known to occur in the Chesapeake Bay and its adjacent tributaries and rivers, based on the activities associated with the project, the location of the project, and information you provided in your email and plans, we believe that these species will not be exposed to any direct or indirect effects of the action. Therefore, we do not believe a consultation in accordance with section 7 of the Endangered Species Act (ESA) is necessary. As such, no further coordination on this activity with the NMFS Protected Resources Division is necessary at this time. Should there be additional changes to the project plans or new information becomes available that changes the basis for this determination, further coordination should be pursued. Please contact me (410-267-5649 or brian.d.hopper@noaa.gov), should you have any questions regarding these comments.

Regards,
-Brian

Brian D. Hopper
Protected Resources Division
NOAA Fisheries
Greater Atlantic Regional Fisheries Office
200 Harry S Truman Parkway
Suite 460
Annapolis, MD 21401
410 267 5649
Brian.D.Hopper@noaa.gov
<http://www.greateratlantic.fisheries.noaa.gov/>

On Mon, Feb 3, 2020 at 10:49 AM Clark, Katharine E CIV USN COMNAVDIST WASH DC (US) <katharine.seguin@navy.mil> wrote:

Brian,

The Navy is requesting an informal consultation on the repair of the Farragut field seawall at the US Naval Academy. The seawall is located at the north side of the mouth of Spa Creek where it meets the Severn River. The Navy proposes to repair 1,218 linear feet of seawall, as well as move 325 feet of marine cable at least 10 feet from its current position. The seawall repair will include an expansion less than 18 inches into the water from the current seawall. The disturbed area will be returned to pavement and grass as appropriate. Attached are the drawings associated with this work.

The Navy considers this project not likely to affect any listed species or designated critical habitat of the atlantic or shortnose sturgeons. The Navy requests your concurrence with this determination.

Please respond to this email if you have any questions or comments:
Katharine.seguin@navy.mil.

Thank you,

Katharine Seguin
NR Manager
NSA Annapolis
410-293-1027

Letter to NOAA Fisheries for Essential Fish Habitat Consultation for Reach 9 (March 11, 2020)



DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY ANNAPOLIS
58 BENNION ROAD
ANNAPOLIS, MD 21402

5090
ENV-022
March 11, 2020

Karen Greene, Mid-Atlantic Field Offices Supervisor
National Marine Fisheries Service
Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930-2276

SUBJECT: FARRAGUT FIELD SEAWALL REPAIR AND RESTORATION AT NAVAL
SUPPORT ACTIVITY ANNAPOLIS

Dear Ms. Greene,

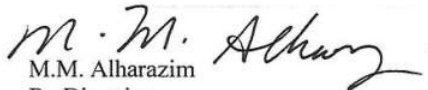
The Navy is submitting this request for concurrence of no adverse effect on Essential Fish Habitat (EFH) for the bulkhead repairs of the Farragut field seawall located at Naval Support Activity Annapolis in Annapolis, Maryland in Anne Arundel County

The Farragut field seawall is located at the north side of the mouth of Spa Creek where it meets the Severn River. The Navy proposes to repair 1,218 linear feet of seawall, as well as move 325 feet of marine cable at least 10 feet from its current position. The seawall repair will include an expansion less than 18 inches into the water from the current seawall.

In accordance with the Magnuson Stevens Fishery Conservation and Management Act, the navy requests concurrence that the proposed project will have no adverse effects on the EFH of the federally managed species known to occur in Spa Creek and the Severn River in the area of the project.

If you need further information or have any questions, please contact Ms. Katharine Seguin at Katharine.seguin@navy.mil or via phone at 410-293-1027.

Sincerely,


M.M. Alharazim
By Direction

ENCLOSURE: 1. Farragut field seawall concept plans

Email from NOAA Fisheries for Essential Fish Habitat Consultation (July 31, 2020)

From: Jonathan Watson - NOAA Affiliate <jonathan.watson@noaa.gov>
Sent: Friday, July 31, 2020 3:01 PM
To: Clark, Katharine C CIV USN COMNAVDIST WASH DC (USA) <katharine.seguin@navy.mil>
Cc: Martinko, Wendy B CIV USN NAVFAC WASHINGTON DC (USA) <wendy.martinko@navy.mil>; Johnson, Nathan R CIV USN NAVFAC WASHINGTON DC (USA) <nathan.r.johnson2@navy.mil>; Karen Greene - NOAA Federal <karen.greene@noaa.gov>; Jones, John C CIV USN NAVFAC WASHINGTON DC (USA) <john.c.jones@navy.mil>
Subject: Re: [Non-DoD Source] Re: EFH submission for Farragut Seawall

Ms. Seguin,

Thank you for re-sending your March 11, 2020 letter and associated project plans for the proposed Farragut Seawall repair. If the proposed action conforms with the recommendations in our August 26, 2019 letter, then we concur that this action will have no adverse effect on essential fish habitat (EFH). Please let me know if you have any other questions or concerns.

Thank you,

Jonathan Watson

On Thu, Jul 30, 2020 at 4:06 PM Clark, Katharine C CIV USN COMNAVDIST WASH DC (USA) <katharine.seguin@navy.mil> wrote:

Good afternoon,

Please see attached for the aforementioned submission.

This project is in fact an in-kind replacement of seawall with no significant in-water beyond existing footprint. The navy has determined that this adheres to the recommendations made in the August 2019 EFH letter.

Please let us know if you have any questions or comments.

Thank you,
Katharine Seguin

From: Jonathan Watson - NOAA Affiliate <jonathan.watson@noaa.gov>
Sent: Thursday, July 30, 2020 3:03 PM
To: Clark, Katharine C CIV USN COMNAVDIST WASH DC (USA) <katharine.seguin@navy.mil>
Cc: Martinko, Wendy B CIV USN NAVFAC WASHINGTON DC (USA) <wendy.martinko@navy.mil>; Johnson, Nathan R CIV USN NAVFAC WASHINGTON DC (USA) <nathan.r.johnson2@navy.mil>; Karen Greene - NOAA Federal <karen.greene@noaa.gov>
Subject: [Non-DoD Source] Re: EFH submission for Farragut Seawall

Ms. Seguin,

We reviewed the contents of the consultation inbox (nmfs.gar.efh.consultation@noaa.gov) and Karen Greene, the mid-atlantic EFH coordinator, reviewed her inbox and we found no record of your request for consultation in either location. It is possible that Kristy Beard did not share this request with us prior to her departure to our Office of Aquaculture and, if this is the case, we apologize for the lack of coordination within our agency.

If the proposed action involves in-kind replacement of sections of sea wall and adheres to the recommendations in our August 26, 2019, EFH letter (attached), then we have no further comment. However, if the proposed project warrants further scrutiny due to some non-conforming element (e.g., significant in-water fill beyond existing footprint), we would be happy to examine the proposed plans and offer any recommendations at our soonest convenience. Please let me know if that will be necessary, or if you have any further

questions.

Thank you,

Jonathan Watson

On Thu, Jul 30, 2020 at 11:28 AM Clark, Katharine C CIV USN COMNAVDIST WASH DC (USA) <katharine.seguin@navy.mil> wrote:

Good morning,

The Navy submitted a package for EFH/NMFS consultation for the Farragut field Seawall restoration in March of this year. Has it been processed in any way? Does your office have any comments for the Navy to address?
Please let me know.

Thanks,
Katharine Seguin

U.S. Fish and Wildlife Service Coordination under Endangered Species Act

U.S. Fish and Wildlife Service List of Threatened and Endangered Species (IPaC) (May 12, 2020)



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127



<http://www.fws.gov/chesapeakebay/>
<http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html>

In Reply Refer To:
Consultation Code: 05E2CB00-2019-SLI-1309
Event Code: 05E2CB00-2020-E-03116
Project Name: NSA Annapolis Seawall Repairs

May 12, 2020

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

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Event Code: 05E2CB00-2020-E-03116

1

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

05/12/2020

Event Code: 05E2CB00-2020-E-03116

2

Project Summary

Consultation Code: 05E2CB00-2019-SLI-1309

Event Code: 05E2CB00-2020-E-03116

Project Name: NSA Annapolis Seawall Repairs

Project Type: SHORELINE / BEACH PROTECTION / RENOURISHMENT

Project Description: The Navy proposes to repair and restore seawall and shoreline at NSA Annapolis along the Lower Yard, portions of the Upper Yard, and portions of North Severn. The repairs and restoration would address structural deficiencies and potential impacts from storm surge, sea level rise, and land subsidence due to future storm events and climate change. The proposed action would include repairs along approximately 19,334 linear feet of shoreline, divided into 15 reaches (see attached map). The existing shoreline in these areas is mostly hardened, consisting of a mixture of bulkhead and riprap sections. Several of these sections are failing, with wave action occasionally overtopping the hardened structures and undercutting occurring in several areas. Specific restoration and enhancement techniques being considered include hardened structures (bulkhead, sheet pile seawall, riprap, or a combination of these techniques), log toe stabilization, and living shoreline.

Proposed design techniques and heights for each reach are provided in the attached Table for three alternatives. Design heights were determined using a variety of design storm and sea level rise scenarios, as predicted by the 2017 National Oceanographic and Atmospheric Administration's Intermediate-Low and Intermediate Scenarios. Each of the repairs to seawall reaches may include extending base support further into the water to allow for phased elevation increases over time. The repair work would be completed either from dry land, in the water, or a combination, depending on the land and water constraints in the various work areas. BMPs such as silt fences and turbidity curtains would be utilized to minimize impacts to water quality and benthic communities from sedimentation. In addition, noise avoidance and minimization measures, such as project timing, specific equipment use, and pile type/size constraints, and noise BMPs, such as air bubble curtains, cofferdams and isolation casings, can be incorporated into project designs to avoid or minimize noise impacts to fish during repair activities. The Navy will consult with NOAA Fisheries regarding potential impacts to EFH under the propose action. No wetlands, forests, or woodlands exist along the project reaches, and no threatened or endangered species are known to

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occur within the study area. As such, impacts to terrestrial vegetation and wildlife are expected to be minimal.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.983931493858975N76.47828447013126W>



Counties: Anne Arundel, MD

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Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> Projects with a federal nexus that have tree clearing = to or > 15 acres: 1. REQUEST A SPECIES LIST 2. NEXT STEP: EVALUATE DETERMINATION KEYS 3. SELECT EVALUATE under the Northern Long-Eared Bat (NLEB) Consultation and 4(d) Rule Consistency key Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

ESTUARINE AND MARINE DEEPWATER

- [E1UBLx](#)
- [E1UBL](#)

U.S. Fish and Wildlife Service Verification Letter under Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions (May 12, 2020)**United States Department of the Interior**

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307

Phone: (410) 573-4599 Fax: (410) 266-9127

<http://www.fws.gov/chesapeakebay/>

<http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html>



In Reply Refer To:
Consultation Code: 05E2CB00-2019-TA-1309
Event Code: 05E2CB00-2020-E-03117
Project Name: NSA Annapolis Seawall Repairs

May 12, 2020

Subject: Verification letter for the 'NSA Annapolis Seawall Repairs' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Jennifer Steele:

The U.S. Fish and Wildlife Service (Service) received on May 12, 2020 your effects determination for the 'NSA Annapolis Seawall Repairs' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"⁽¹⁾ prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

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If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

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Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

NSA Annapolis Seawall Repairs

2. Description

The following description was provided for the project 'NSA Annapolis Seawall Repairs':

The Navy proposes to repair and restore seawall and shoreline at NSA Annapolis along the Lower Yard, portions of the Upper Yard, and portions of North Severn. The repairs and restoration would address structural deficiencies and potential impacts from storm surge, sea level rise, and land subsidence due to future storm events and climate change. The proposed action would include repairs along approximately 19,334 linear feet of shoreline, divided into 15 reaches (see attached map). The existing shoreline in these areas is mostly hardened, consisting of a mixture of bulkhead and riprap sections. Several of these sections are failing, with wave action occasionally overtopping the hardened structures and undercutting occurring in several areas. Specific restoration and enhancement techniques being considered include hardened structures (bulkhead, sheet pile seawall, riprap, or a combination of these techniques), log toe stabilization, and living shoreline.

Proposed design techniques and heights for each reach are provided in the attached Table for three alternatives. Design heights were determined using a variety of design storm and sea level rise scenarios, as predicted by the 2017 National Oceanographic and Atmospheric Administration's Intermediate-Low and Intermediate Scenarios. Each of the repairs to seawall reaches may include extending base support further into the water to allow for phased elevation increases over time. The repair work would be completed either from dry land, in the water, or a combination, depending on the land and water constraints in the various work areas. BMPs such as silt fences and turbidity curtains would be utilized to minimize impacts to water quality and benthic communities from sedimentation. In addition, noise avoidance and minimization measures, such as project timing, specific equipment use, and pile type/size constraints, and noise BMPs, such as air bubble curtains, cofferdams and isolation casings, can be incorporated into project designs to avoid or minimize noise impacts to fish during repair activities. The Navy will consult with NOAA Fisheries regarding potential impacts to EFH under the propose action. No wetlands, forests, or woodlands exist along the project reaches, and no threatened or endangered species are known to occur within the study area. As such, impacts to terrestrial vegetation and wildlife are expected to be minimal.

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Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.983931493858975N76.47828447013126W>



Determination Key Result

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

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Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?
Yes
2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")
No
3. Will your activity purposefully **Take** northern long-eared bats?
No
4. Is the project action area located wholly outside the White-nose Syndrome Zone?
Automatically answered
No
5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/midwest/angered/mammals/nleb/nhisites.html.

Yes

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6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

No

7. Will the action involve Tree Removal?

No

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Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

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10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

Federal Consistency Determination under the Coastal Zone Management Act

Federal Consistency Determination Letter (August 6, 2019)



DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY ANNAPOLIS
58 BENNING ROAD
ANNAPOLIS, MD 21402

5090
ENV-053
August 6, 2019

Denise Keehner
Federal Consistency Coordinator
Maryland Department of the Environment
Wetlands and Waterways Program
1800 Washington Boulevard, Suite 430
Baltimore, Maryland 21230-1708

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR SEAWALL REPAIR AND RESTORATION
AT NAVAL SUPPORT ACTIVITY ANNAPOLIS, ANNAPOLIS, MARYLAND -
COASTAL CONSISTENCY DETERMINATION CONSULTATION

Dear Ms. Keehner:

The U.S. Department of the Navy is preparing an Environmental Assessment (EA) for the repair and restoration of approximately 19,334 linear feet of seawalls and shoreline at Naval Support Activity (NSA) Annapolis, Maryland. This letter is intended to initiate early consultation in accordance with the Federal Coastal Zone Management Act of 1972 (CZMA), as amended, and the 2013 CZMA Memorandum of Understanding (MOU) between the State of Maryland and the United States Department of Defense, Naval Facilities Engineering Command (NAVFAC) Washington.

Under the Proposed Action, the Navy would repair and restore the seawall and shoreline 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 North Severn along the Severn River and Yard Patrol Basin. The repairs and restoration would address structural deficiencies of the existing seawalls and shoreline, with the secondary benefit of addressing 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 seawalls and shoreline. The existing shoreline in these areas is mostly hardened, consisting of a mixture of bulkhead and riprap sections. The sections of shoreline included in the Proposed Action have been divided into 15 "reaches," further described in enclosure (1).

As part of the Proposed Action, under all alternatives, a 13.8-kilovolt marine cable that has migrated towards the shoreline over time may need to be relocated on the riverbed approximately 10 feet

5090
ENV-053
August 6, 2019

from the seawall. Total soil disturbance during relocation is anticipated to be less than 10 cubic yards for each reach of seawall.

As required by the 2013 MOU, enclosures (1) through (3) provide the proposed project description and location, descriptions of alternatives, public and agency participation, and the basis for this Federal Consistency Determination as relevant to the enforceable coastal policies. The Navy finds these actions to be consistent, to the maximum extent practicable, with the requirements of the CZMA and will presume concurrence if a response is not received within 60 days.

Please direct all written correspondence to:

Jennifer Steele
NEPA Program Manager
NAVFAC Washington, EV2
1314 Harwood Street SE, Bldg 212
Washington Navy Yard, DC 20374

For more information, please contact Jennifer Steele at 202-685-8008 or navfacwashnepa@navy.mil.

Sincerely,


W. B. Martinko
By direction

Enclosures: 1. Proposed Project Description
2. Site Location
3. Basis of Determination

Copies to:

Joe Abe, Maryland Department of Natural Resources, Coastal Policy
Coordination Section Chief
Lisa Hoerger, Department of Natural Resources, Regulations
Coordinator
Rick Ayella, Maryland Department of the Environment, Tidal
Wetlands Division
Amanda Sigillito, Maryland Department of the Environment, Nontidal
Wetlands and Waterways Division
Marian Honecny, Maryland Department of Natural Resources
Supervisor of Urban Programs & FCA Coordinator
Elizabeth J. Cole, Maryland Historical Trust, Administrator,
Review & Compliance
Catherine McCall, Maryland Department of Natural Resources,
Coastal & Marine Assessment

ENCLOSURE 1: PROPOSED PROJECT DESCRIPTION**a Project Location**

Naval Support Activity (NSA) Annapolis is located in Anne Arundel County, Maryland, along the Severn River and Chesapeake Bay in Annapolis, approximately 30 miles southeast of Baltimore and 33 miles east of Washington, DC. This EA focuses on the following three areas of NSA Annapolis: North Severn, Upper Yard, and Lower Yard. The Upper Yard and Lower Yard are located along the southern shore of the Severn River, and are separated by College Creek (see Figure 1). The U.S. Naval Academy (USNA) campus is located within these areas. North Severn is located on the northern shore of the Severn River at the confluence with the Chesapeake Bay.

b Project Description**Proposed Action**

NSA Annapolis, a command of the U.S. Navy, proposes to repair and restore seawall and shoreline along the installation perimeter to include portions of the Upper Yard and Lower Yard along the Severn River, College Creek, Spa Creek, and Santee Basin; and portions of 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, only one reach—Reach 9 along the Lower Yard—has undergone preliminary design. 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.

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 seawalls. A secondary need for the Proposed Action is to address the potential impacts from 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 (totally 9,174 linear feet) are exhibiting advanced

deterioration and overstressing, with localized or widespread failures possible (see Figures 2 and 3).

Flooding events have increased over the past 20 years; NSA Annapolis experiences 41 flooding events annually. Hurricane Isabel in 2003 caused an immense amount of water and storm damage at the USNA (see Photograph 1). Climate change could exacerbate current conditions and increase inundation over time, which could lead to loss of land or damage mission-critical facilities.

Alternative 1 Description

Under Alternative 1, the Proposed Action would be implemented on the shoreline 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 North Severn along the Severn River and Yard Patrol Basin. Repairs would occur along approximately 19,334 linear feet of shoreline. Alternative 1 would employ hardened structures along Reaches 1 through 15 (see Figures 2 and 3). The repair and restoration of each reach would be completed as described in Table 1.

Each reach would be designed to accommodate for 10- or 50-year design storm and the 75-year sea level rise scenarios as predicted by the 2017 National Oceanic and Atmospheric Administration's (NOAA's) Intermediate-Low and Intermediate Scenarios. Shore protection on the Lower Yard and North Severn would be designed to the 50-year design storm and the 75-year sea level rise projection. Shore protection on the Upper Yard (i.e., Sherman Field, College Creek) would be designed to the 10-year storm and the 75-year sea level rise projection.

Repairs to the seawalls may include extending base support further into the water and allow for phased elevation increase over time. The hardened structures would include concrete bulkhead, sheet pile seawall, riprap, or a combination of these techniques. The work for the hardened structure repair, restoration, and replacement would be completed either from dry land, in the water, or a combination depending on the land and water constraints in the various work areas.

Specific details for each reach are not entirely known at this time since design work has not yet commenced for all of the seawalls. Some preliminary designs have information on the methods and the amount of disturbance to be expected with the repairs and restorations to seawalls. These are considered general estimates for the basis of the analysis but may not be applied to each reach that would undergo repair and restoration, as listed below.

Bulkheads

Bulkheads are vertical retaining walls composed of wood, steel sheet, stone, concrete, plastic, or other similar material that

are constructed parallel to the shoreline. They are designed to protect shorelines by providing a barrier to waves, to retain soil behind them, and to provide berthing for ships. Bulkheads derive their stability through mobilization of passive earth pressures between the mudline and embedded tip of the wall, and, in most cases, from a lateral anchorage system installed between mean low water and top of the wall.

The exact method for the construction or repair of bulkheads in the project area is unknown at this time; it is likely that materials or methods would be slightly different along various reaches, as specific site conditions warrant. Methods could include mechanical impact hammers and rams and saw cutting to complete the demolition of the concrete components. Any corrosion on the bulkhead would be removed. A timber formwork (which acts as a mold) could be constructed adjacent to the existing steel bulkhead. Concrete could then be poured into the formwork resulting in a concrete encasement about six inches thick with the timber formwork kept in place to protect the concrete encasement. Excavation could occur below the existing mudline to expose the existing wall for installation of a new encasement; this area would then be backfilled upon completion (NAVFAC, 2019b). Driving of new steel sheet piles could be performed via a floating plant of barge-mounted cranes and pile-driving equipment. Partial excavations could occur to expose existing seawall wale and lateral anchorage systems. The new sheet pile bulkhead could connect to existing structures or tie-back anchorages, and grout infill could be installed between existing and new sheet pile seawalls. Reinforced concrete caps and/or integrated walls could then be installed to meet future sea level rise requirements.

Sheet Pile Seawalls

Sheet pile seawalls consist of interconnecting, very tightly spaced sheets of material (wood, stone, steel, concrete, or plastic) driven vertically into the ground with special equipment. The interlocked sheet piles form a wall for lateral earth support with reduced groundwater inflow. The wall may be cantilevered or anchored. Unlike bulkheads, seawalls are not intended for ship berthing.

Steel sheet pile seawalls generally consist of steel sheet piles, unreinforced grout infill material between existing and new seawalls, and reinforced concrete caps and wall structures. The seawall restoration could include complete or partial demolition of the existing wall concrete cap and ancillary structures to facilitate installation and connection of a new sheet pile seawall. Methods would likely be similar to those discussed under

bulkheads, involving mechanical impact hammers and rams and saw cutting for partial or complete demolition. Floating barge-mounted cranes and pile-driving equipment could be used. Reinforced concrete caps and/or integrated walls could be installed to meet future sea level rise requirements.

Riprap

Riprap is used to protect and stabilize embankment soils from erosion from flowing water and waves. A typical riprap system consists of a filter layer of gravel or cloth designed to prevent soil movement into or through the riprap layer while allowing water to drain from the embankment, and a stone layer of appropriate gradation and thickness to resist the shearing forces of water.

Typically, to install riprap, the subgrade surface on which the rock riprap and filter is to be placed would be cut or filled and graded to the lines and grades specified in the design drawings. The filter would be placed on the surface and then the rocks are placed on the filter. Larger rocks are uniformly distributed with the smaller rocks and spalls filling the voids between the larger rock.

Disturbances within the water would be expected to be approximately 18 inches away from the outboard-most extent of the existing wall alignments during the installation of the new sheet piles. Other construction methods could have different distances. No dredging is anticipated unless desired design basis barges are determined to require additional clearances, which would be determined with input from the U.S. Naval Academy on the desired design vessels, and the results of a hydrographic survey of the existing channel bottom. The total soil disturbance during relocation of the cable is anticipated to be less than 10 cubic yards for each reach of seawall. Disturbances on land would be anticipated to be limited to the extent necessary to safely excavate and expose existing seawall wale and anchorage systems to facilitate connections to the newly installed components. Equipment and laydown needs may require limited use of barricaded areas, which would be explored more as design phases progress.

Fill material would only be anticipated to occur in the narrow gaps between existing seawall alignment and the new seawall alignment. Armor stone may be designated for installation along the toe of the seawall to protect against scour from vessel activities.

No forests or woodlands exist along the project reaches; the land abutting all reaches is composed of roads, walkways, parking areas for vehicles and boats, and maintained lawn with some landscaped trees. Reaches 1, 3, and 4 have maintained grass with landscaped and urban

trees and shrubs along the existing seawall. Therefore, no trees would be impacted under Alternative 1.

Alternative 2 Description

Under Alternative 2, hardened structures would be repaired or replaced along Reaches 1 through 15. Each reach would consist of a hardened structure, except for Reach 3, which would consist of log toe stabilization (see Table 1). Reach 3 would be built to the current height, with the option to modify the height in the future to accommodate for sea level rise. Each of the repairs to the seawalls may include extending base support further into the water.

The reaches would be designed to accommodate for 10- or 50-year design storm and the 50-year sea level rise scenarios as predicted by the 2017 NOAA Intermediate-Low and Intermediate Scenarios. Shore protection on the Lower Yard and North Severn would be designed to the 50-year design storm and the 50-year sea level rise projection. Shore protection on the Upper Yard would be designed to the 10-year storm and the 50-year sea level rise projection.

The hardened structures would include concrete bulkhead, sheet pile seawall, riprap, or a combination of these techniques. The work for the hardened structure repair, restoration, and replacement would be accomplished from dry land, in the water, or a combination depending on the land and water constraints in the various work areas. The preliminary design information for these hardened structures are described under Alternative 1.

The log toe stabilization method along Reach 3 includes the placement of untreated hardwood logs installed to repair the undercut toe-of-slope. The logs are installed to support the undercut bank and help trap soils that can otherwise be dissolved and washed away when tides saturate the toe-of-slope. Felled trees and branches are cut to fit under the banks. One or more logs are wedged beneath the undercut bank, and the outermost log is anchored with rebar. Once the toe erosion is halted, the upper banks may continue to slump until a stable angle of repose is reached, which would allow the regrowth of vegetation on the banks. It is this regrowth of vegetation that would help provide long-term stabilization of the shoreline. The logs can last up to several decades.

No forests or woodlands exist along the project reaches; the land abutting all reaches is composed of roads, walkways, parking areas for vehicles and boats, and maintained lawn with some landscaped trees. Reaches 1, 3, and 4 have maintained grass with landscaped and urban trees and shrubs along the existing seawall. Therefore, no trees would be impacted under Alternative 2.

Alternative 3 Description

Under Alternative 3, the existing hardened structures would be repaired or replaced to the existing height, without accommodating for future sea level rise (see Table 1). All reaches would be repaired or replaced with hardened structures (except for Reach 3). Hardened structures include bulkhead, sheet pile seawall, riprap, or a combination of these techniques. Therefore, the reaches could be repaired with the same materials of which they are currently made, or they could be replaced with another type of hardened structure material. The preliminary design information for these hardened structures are described under Alternative 1.

Under Alternative 3, the Upper Yard riprap at Reach 3 would be replaced by a living shoreline that could be modified in the future to accommodate increased sea levels. Living shoreline designs are a more natural bank stabilization approach that uses plants, sand, and a limited amount of rock to provide shoreline protection and enhance and maintain valuable habitat. These designs incorporate a small amount of rock, natural sand material, and native tidewater vegetation in a configuration strategically placed to use the natural dynamics of a particular site. In most suitable areas, living shorelines would be created using breakwaters or sills, sand material, and native vegetation. The Navy would determine the exact locations for these living shorelines and specifications based on the type of habitat to be created, and site conditions. Living shorelines cannot be used where shorelines are subject to strong, persistent wave energy; considerable amounts of slope erosion; deeper water levels; and high fetch, which is the distance traveled by wind or waves across open water. Because of these factors and the existing functional use of present shoreline protection structures on Spa Creek, the Severn River, and the mouth of College Creek, the suitability of living shorelines is limited to Reach 3.

No forests or woodlands exist along the project reaches; the land abutting all reaches is composed of roads, walkways, parking areas for vehicles and boats, and maintained lawn with some landscaped trees. Reaches 1, 3, and 4 have maintained grass with landscaped and urban trees and shrubs along the existing seawall. Therefore, no trees would be impacted under Alternative 3.

c Public Participation

The Navy published a Notice of Availability for the Draft EA for three consecutive days in a local newspaper. The notice describes the Proposed Action, solicits public comments on the Draft EA, provides dates of the public comment period, and announces the web site (https://www.cnrc.navy.mil/regions/ndw/installations/nsa_annapolis/om/environmental-/environmental-assessment.html) where a copy of the EA is available for review. The Navy will hold a public meeting to

describe the environmental impacts of the Proposed Action and alternatives and to receive comments on the Draft EA.

d Other Consultations

The Navy will coordinate or consult with the U.S. Army Corps of Engineers, the Maryland State Historic Preservation Office, the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration Fisheries, Maryland Department of Natural Resources, and Maryland Department of Planning (Maryland State Clearinghouse), regarding the Proposed Action.

ENCLOSURE 3: BASIS OF DETERMINATION FOR PROPOSED ACTION**a General Policies****i Core Policies**

The proposed repairs would not create or alter point source emissions; this action would not affect the existing Title V air permit. Although there would be temporary, minor noise impacts during construction activities, these impacts would not significantly affect noise-sensitive receptors. The navigability of rivers would not be affected. A soil erosion- and sediment-control plan would be implemented to minimize soil erosion. Ornamental vegetation occurs along some reaches. Any landscaping removed would be replaced following completion of construction activities.

The Proposed Action would not affect State wild lands, parks, forests, reserves, scenic preserves, parkways, or recreational areas. The Proposed Action would not affect water appropriation or use or the natural character of the waterways. Hazardous substances would not be stored, treated, dumped, or discharged at the site.

ii Water Quality

Under the Proposed Action, demolition and construction would temporarily occur in the Severn River watershed, including the Severn River, College Creek, Spa Creek, Santee Basin, and Yard Patrol Basin.

Seawall designs for Reach 9, a sheet pile seawall, are in the preliminary phase; however, disturbances within the water are expected to be approximately 18 inches away from the outboard-most extent of the existing wall alignments during the installation of the new sheet piles. Other construction methods could have different distances. Soil that is excavated from behind the existing bulkhead, to the extent that it is suitable per the project earthwork specifications, would be used as backfill for the pavement restoration.

A soil erosion and sediment control plan and a stormwater management plan would be prepared when proposed earth disturbance is more than 5,000 square feet or 100 cubic yards. These plans would be developed in accordance with Maryland soil erosion and sediment control guidelines. Best management practices (BMPs) specific to each construction site would be identified in these plans. Permits under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act from the U.S. Army Corps of Engineers would likely be required. In addition, a joint federal and state permit for the Alteration of Any Tidal Wetland in Maryland would likely be required.

The repair and restoration of the shoreline would result in long-term benefits for water quality by reducing the amount of sediments entering the watershed due to fewer storm surge and flooding events.

iii Flood Hazards

Most 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. Short-term impacts would be minimized through the use of stormwater management plans, erosion and sediment control plans, and associated BMPs. Permits from U.S. Army Corps of Engineers for Section 404 and Section 10 and MDE would likely be required.

In the 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. NSA Annapolis is in close coordination with the City of Annapolis on proposed seawall repair and restoration efforts, including specific design heights (Alternative 1 and Alternative 2). Given that the seawalls are currently within a floodplain, impacts to the floodplain are unavoidable under either action alternative. NSA Annapolis would comply with EO 11988 and the DOD memorandum *Floodplain Management on Department of Defense Installations* (February 11, 2014) to minimize the impacts.

Long-term impacts on flood hazards would be beneficial because shoreline erosion and sedimentation caused by flooding would be reduced; higher seawall design heights for the reaches under Alternatives 1 and 2 would accommodate future storms and sea level rise.

b Coastal Resources

i Tidal Wetlands

Estuarine and marine deepwater tidal wetlands have been mapped for Carr Creek, College Creek, Mill Creek, Spa Creek, and the Severn River. Work would occur within these tidal wetlands. The existing project area consists of hardened seawalls; therefore, the immediate project area does not have habitat for spawning or nursery grounds for fisheries. Indirect impacts would be minimized through the implementation of a joint federal and state permit for the Alteration of Any Tidal Wetland in Maryland. This permit requires the implementation of BMPs to mitigate adverse effects. In the long term, there would be a reduction in the disturbance of estuarine and marine deepwater wetlands associated with sedimentation during flood and stormwater runoff events with the repair of the seawalls, resulting in long-term beneficial effects.

Submerged aquatic vegetation is not present along the project reaches. Submerged aquatic vegetation is present in the upper portions of College Creek and Spa Creek, but these communities would not likely be affected during construction of the Proposed Action.

By repairing and restoring portions of the NSA Annapolis seawalls and shoreline that have been damaged over time, the Proposed Action would address potential impacts from future storm events and climate change, which results in storm surge, sea level rise, and land subsidence. The reaches under Alternative 1 would be designed to accommodate for 10- or 50-year design storm and the 75-year sea level rise scenarios as predicted by NOAA's Intermediate-Low and Intermediate Scenarios. The reaches under Alternative 2 would be designed to accommodate for 10- or 50-year design storm and the 50-year sea level rise scenarios as predicted by the 2017 NOAA Intermediate Low and Intermediate Scenarios.

The Proposed Action is within the boundaries of the installation and would not affect marine commerce; recreation or aesthetic enjoyment; local, regional, or state economic conditions; navigational safety; disposal of sanitary waste; access to beaches and waters of the state; historic waterfowl staging areas; and colonial bird-nesting sites.

ii Non-tidal Wetlands

There are no non-tidal wetlands within the project area.

iii Forests

There are no forests within the project area.

iv Historic and Archaeological Sites

No archaeological sites would be affected by ground disturbance from the Proposed Action.

The USNA was designated a National Historic Landmark in 1961 and a National Register Historic District in 1966. Both district designations share the same boundary and encompass most of the USNA property. A variety of landscape features contribute to the district's historical significance, including the historic seawalls. The seawalls are also visible from the National Historic Landmark Colonial Annapolis Historic District. Demolition, as well as construction or repairs not done according to the Secretary of the Interior's Standards for Rehabilitation would be considered an adverse effect to the contributing walls. According to the Standards, the historic character must be retained and preserved. The Standards also state that if replacement of a feature is necessary based on the severity of deterioration, the new feature shall match the old, where possible. Increasing the height or the materials of the walls would be considered an adverse effect.

Increasing the height of the perimeter bulkhead would be an adverse effect to the views significant to the both Historic Districts. However, the increased height on the perimeter bulkhead or the introduction of structures that would protect against storm surge and flooding would also have long-term, beneficial effects on the

preservation of the USNA Historic District and its contributing buildings and landscape features.

The Navy will coordinate with the Maryland State Historic Preservation Office regarding the Proposed Action.

v Living Aquatic Resources

No threatened or endangered species are known to occur within the project area.

Essential Fish Habitat (EFH) is in the Severn River, College Creek, and Spa Creek for several species of fish. All EFH in the vicinity of the project area is for highly mobile species and life stages. Juvenile and adult fish could avoid the project area during construction. The Navy commits to implementing appropriate avoidance and minimization measures and BMPs in accordance with regulations and ongoing consultations. The types of BMPs and avoidance and minimization measures that would be beneficial in reducing the impact on fish in the vicinity include, but are not limited to, the use of a "soft start" or system of warning strikes; portable noise barriers, impact cushions, or noise bellow systems to minimize the noise impacts on fish within the EFH; silt fences and other stormwater management measures to reduce sedimentation released during construction activities on land; or turbidity curtains to limit sediment disturbance and minimize the effects of turbidity on EFH.

In the long term, the repair and restoration of the seawalls would reduce erosion and flooding of the NSA Annapolis shoreline, improving water quality and benefiting terrestrial and aquatic species and EFH.

The Navy will coordinate with the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration Fisheries, and Maryland Department of Natural Resources regarding the Proposed Action.

c Coastal Resources

i Mineral Extraction

The proposed action does not involve mineral extraction activities.

ii Electrical Generation and Transmission

The proposed action does not involve electrical generation or transmission.

iii Tidal Shore Erosion Control

The existing shoreline in the project area consists of hardened materials including a mixture of bulkhead and riprap sections. Several of these sections are failing, with wave action occasionally overtopping the hardened structures and undercutting occurring in several areas. The deficiencies in these shoreline structures have

resulted in persistent flooding issues and failure of the road and parking areas in several locations behind the seawall, particularly during extreme high tides, as shown in the photos in enclosure 2.

The materials used to replace the existing hardened structures would be similar to the existing materials and would include bulkheads, sheet pile seawalls, and riprap. Junk material would not be used. Log toe stabilization or a living shoreline could be used for Reach 3, if Alternative 2 or 3 were chosen.

Structures would not be constructed within navigation channels or interfere with existing navigation.

iv Oil and Natural Gas Facilities

The proposed action does not involve oil and natural gas facilities.

v Dredging and Disposal of Dredged Material

No dredging is anticipated unless barges are determined to require additional clearances, which will be determined from the project design and the results of a hydrographic survey of the existing channel bottom.

Submerged aquatic vegetation is not present along the project reaches. Submerged aquatic vegetation is present in the upper portions of College Creek and Spa Creek, but these communities would not likely be affected during construction of the Proposed Action.

vi Navigation

Structures would not be constructed within navigation channels or interfere with existing navigation. Construction barges could be used to remove deteriorated seawall components and to deliver materials to the reaches that are under construction. These barges would stop at the installation and would not hinder existing navigation.

vii Transportation

The proposed action does not involve transportation facilities.

viii Agriculture

The proposed action does not involve agricultural land management activities or agricultural operations.

ix Development

The proposed action is not a development project.

x Sewage Treatment

The proposed action does not involve sewage treatment.

Federal Consistency Determination Response (August 19, 2019)



Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

August 19, 2019

Jessica Steele
NEPA Program Manager
NAVFAC Washington, EV2
1314 Harwood Street, SE, Bldg. 212
Washington Navy Yard, DC 20374

Ms. Steele,

I am responding to your request for a Federal Consistency determination, pursuant to Section 307 of the Federal Coastal Zone Management Act of 1972, as amended (CZMA), for the proposed Seawall repair and restoration at the Naval Support Activity Annapolis, Maryland, Anne Arundel County. The proposed project would replace, repair and maintain the existing, failing seawall and shoreline entailing approximately 19,334 linear feet of the Lower Yard along the Severn River, College Creek, Spa Creek and the Santee Basin; portions of the North Severn along the Severn River and Yard Patrol Basin. A combination of a hardened shoreline repair and installation of a living shoreline where appropriate will be completed as described in Alternatives 1-3. The project is expected to be completed over the next ten to twenty years as funding becomes available.

The project meets the applicable coastal zone policies to the maximum extent practicable and is consistent with the Maryland Coastal Zone Management Program, as required by Section 307 of the CZMA. Please note that this determination does not obviate the applicant's responsibility to obtain any other State or Federal approvals that may be necessary for the project.

If you have any questions, please contact me at 410-537-3638 or by email at denise.keehner@maryland.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Denise M. Keehner".

Denise M Keehner, Manager
Wetlands and Waterways Program
Water and Science Administration

cc: Joseph Abe, DNR (joseph.abe@maryland.gov)
Lisa Hoerger, CAC (lisa.hoerger@maryland.gov)

**Response from Maryland Critical Area Commission for the Chesapeake & Atlantic Coastal Bays
(September 17, 2019)**


From: Lisa Hoerger -DNR- <lisa.hoerger@maryland.gov>
Sent: Tuesday, September 17, 2019 5:58 PM
To: Denise Keehner -MDE- <denise.keehner@maryland.gov>
Cc: Heather Nelson -MDE- <hnelson@maryland.gov>; Joseph Abe -DNR- <joseph.abe@maryland.gov>; NAVFAC Wash NEPA <NAVFACWashNEPA@navy.mil>
Subject: [Non-DoD Source] Environmental Assessment for Seawall Repair and Restoration at Naval Support Activity Annapolis, Annapolis, Maryland

Denise,

Concerning the above-referenced project, this office does not review shoreline erosion control projects proposed on Federal lands and therefore has no comment on the request for concurrence.

Please contact me if you have any questions.

Lisa

 <p>CHANGING Maryland <i>for the Better</i></p> <p>dnr.maryland.gov/criticalarea</p>	<p>Lisa Hoerger Critical Area Commission for the Chesapeake & Atlantic Coastal Bays 1804 West Street, Suite 100 Annapolis, MD 410-260-3478 (office) lisa.hoerger@maryland.gov</p>
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Federal Consistency Determination Letter for Reach 9 (February 5, 2020)



DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY ANNAPOLIS
58 BENNION ROAD
ANNAPOLIS, MD 21402

5090
ENV-006
February 5, 2020

Ms. Denise Keehner
Federal Consistency Coordinator
Wetlands and Waterways Program
Maryland Department of the Environment
1800 Washington Boulevard, Suite 430
Baltimore, Maryland 21230

SUBJECT: FARRAGUT FIELD SEAWALL RESTORATION COASTAL CONSISTENCY
DETERMINATION CONSULTATION

Dear Ms. Keehner:

In accordance with the Federal Coastal Zone Management Act of 1972 (CZMA), as amended, and the 2013 CZMA Memorandum of Understanding (MOU) between the state of Maryland and the United States Department of Defense, Naval Facilities Engineering Command (NAVFAC) Washington requests concurrence with the repair of the Farragut field seawall at Naval Support Activity Annapolis.

The Farragut field seawall is located at the north side of the mouth of Spa Creek where it meets the Severn River. The Navy proposes to repair 1,218 linear feet of seawall, as well as move 325 feet of marine cable at least 10 feet from its current position. The seawall repair will include an expansion less than 18 inches into the water from the current seawall. The project will remove 4 trees in the area which will be replaced at a 1:1 ratio on site. The disturbed area will be returned to pavement and grass as appropriate. Enclosure 2 describes the current site conditions.

The Navy finds these actions to be consistent, to the maximum extent practicable, with the requirements of the CZMA and will presume concurrence if a response is not received within 60 days.

Please direct all written correspondence to:

ATTN:
Katharine Seguin
Natural Resources Program Manager
Naval Support Activity Annapolis
181 Wainwright Road
Annapolis, MD 21402

5090
ENV-006
February 5, 2020

For more information about the Federal CCD, please contact Katharine Seguin at 410-293-1027 or katharine.seguin@navy.mil.

Sincerely,



W. B. Martinko
By direction

Enclosures: 1. Farragut field seawall stormwater management (SWM) concept plans
2. Farragut Field SWM waiver narrative

State of Maryland Department of the Environment, Water and Science Administration General Tidal Wetlands License

State Wetland Authorization Letter (December 15, 2020)



Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Ben Crumbles, Secretary
Horacio Tablada, Deputy Secretary

December 15, 2020

U.S. Dept of the Navy - Naval Support Activity Annapolis - Environmental Division
181 Wainwright Rd
Naval Academy, MD 21402
@navy.mil

Re: Agency Interest Number: 167387
Tracking Number: 202060697
Tidal Authorization Number: 20-GL-0445

Dear U.S. Dept of the Navy:

Your application to alter tidal wetlands has been evaluated by the Tidal Wetlands Division. Your State wetlands license or permit authorizing work in tidal wetlands is attached. Please take a moment to read and review your authorization to ensure that you understand the limits of the authorized work and all of the general and special conditions.

Your project qualifies for federal approval under the Maryland State Programmatic General Permit (MDSPGP); however your project requires a separate review by the U.S. Army Corps of Engineers and issuance of the required federal permit. The federal permit is not attached. You should not begin any work until you have obtained all necessary State, local, and federal authorizations.

This State authorization is a final agency decision; there is no further opportunity for administrative review. Any person with standing, who is either the applicant or who participated in the public participation process through the submission of written or oral comments, may petition for judicial review in the circuit court in the county where the authorized activity will occur. The petition for judicial review must be filed with the court within 30 days of receipt of this decision. Please contact Heather Hepburn at heather.hepburn1@maryland.gov or 410-537-3789 with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Danielle Spendiff".

Danielle Spendiff, Chief
Western Region
Tidal Wetlands Division



STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER AND SCIENCE ADMINISTRATION
GENERAL TIDAL WETLANDS LICENSE



LICENSE NUMBER: **20-GL-0445**
 EFFECTIVE DATE: **December 16, 2020**
 EXPIRATION DATE: **December 15, 2023**
 LICENSEE: **U.S. Dept of the Navy - Naval Support Activity Annapolis -
 Environmental Division**
 ADDRESS: **181 Wainwright Rd
 Naval Academy, Maryland 21402**
 PROJECT LOCATION: **U.S. Naval Academy near Brownson Rd/Turner Joy Rd intersection
 Annapolis, MD 21401
 Severn River in Anne Arundel**

PURSUANT TO THE AUTHORITY OF THE BOARD OF PUBLIC WORKS, TITLE 16 OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND, AND CODE OF MARYLAND REGULATIONS 26.24 AND 23.02.04, **U.S. DEPT OF THE NAVY - NAVAL SUPPORT ACTIVITY ANNAPOLIS - ENVIRONMENTAL DIVISION** ("LICENSEE") IS AUTHORIZED BY THE WATER AND SCIENCE ADMINISTRATION ("ADMINISTRATION") TO CONDUCT THE FOLLOWING REGULATED ACTIVITY IN STATE TIDAL WETLANDS, IN ACCORDANCE WITH THE CONDITIONS OF THIS LICENSE AND THE ATTACHED PLANS DATED **August 10, 2020**, PREPARED BY **Whitman, Requart & Associates, LLP**, AND APPROVED BY THE ADMINISTRATION'S TIDAL WETLANDS DIVISION ON **December 15, 2020**, AND INCORPORATED HEREIN:

1. Construct and backfill 1,218 linear feet of replacement bulkhead within a maximum of 4 inches channelward of a deteriorated bulkhead;
2. Construct a 1,218 foot long relief platform within a maximum of 4 feet channelward of a deteriorated bulkhead; and
3. Reposition and re-anchor an existing marine cable within a maximum of 10 feet channelward of the southeast corner of the bulkhead near Farragut Field.

SPECIAL CONDITIONS

- A. The Licensee shall provide the Maryland Department of the Environment's Tidal Wetlands Division with a copy of the Programmatic Agreement executed between the Maryland Historical Trust and the Licensee resulting from consultation with the Maryland Historical Trust pursuant to Section 106 of the National Historic Preservation Act, prior to commencement of any activity authorized within this License.
- B. The Licensee shall comply with the historic preservation requirements as stipulated in their Programmatic Agreement in accordance with Section 106 of the National Historic Preservation Act.


- C. The Licensee shall complete construction of the bulkhead prior to filling behind the bulkhead. The bulkhead shall be designed and constructed to prevent the loss of fill material to waters of the State of Maryland. Only clean fill, which is free of organic, toxic, contaminated, or deleterious materials, shall be used.
- D. The Licensee shall not stockpile any material in State or private tidal wetlands.
- E. The Licensee shall not perform any construction from November 15th through March 1st of any year to protect wintering waterfowl. The proposed project site is located in a Historic Waterfowl Concentration Area.

GENERAL CONDITIONS

- A. The Maryland Department of the Environment has determined that the proposed activities comply with, and will be conducted in a manner consistent with the State's Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.
- B. The Licensee shall comply with all Critical Area requirements and obtain all necessary authorizations from local jurisdiction. This License does not constitute authorization for disturbance in the 100-foot Critical Area Buffer. "Disturbance" in the Buffer means clearing, grading, construction activities, or removal of any size of tree or vegetation. Any anticipated Buffer disturbance requires prior written approval, before commencement of land disturbing activity, from local jurisdiction in the form of a Buffer Management Plan.
- C. If the authorized work is not performed by the property owner, all work performed under this Tidal Wetlands License shall be conducted by a marine contractor licensed by the Marine Contractors Licensing Board (MCLB) in accordance with Title 17 of the Environment Article of Annotated Code of Maryland. A list of licensed marine contractors may be obtained by contacting the MCLB at 410-537- 3249, by e-mail at MDE.MCLB@maryland.gov or by accessing the Maryland Department of the Environment, Environmental Boards webpage.
- D. The Licensee certifies real property interest in the contiguous upland.
- E. This License does not relieve the Licensee from the responsibility of obtaining all necessary federal, State and local government authorizations.
- F. This License does not authorize any existing structures depicted on the plan sheets that are not specifically described in the description of work.
- G. The Licensee acknowledges that this authorization is based on current water depths that are existing and indicated on the attached plan sheet. This License proposes no dredging and this license provides no justification or assurances for future dredging. All dredging projects will be evaluated on the biological and physical characteristics of the site at the time an application is made.
- H. The Licensee shall obtain an approved sediment and erosion control plan from the local soil conservation district when the area disturbed is greater than 5000 square feet or 100 cubic yards of fill.

- I. The Licensee shall ensure that a copy of this License, including the approved plans, is available at the site until the authorized work is complete.
- J. The Licensee shall make every reasonable effort to design and construct the structure or perform the activity authorized in this License in a manner which minimizes adverse impacts on natural resource values, including water quality, plants, wildlife, plant and wildlife habitat, and on historic property values.
- K. The Secretary of the Environment may suspend or revoke a License if the Secretary finds that the Licensee has not complied with any condition or limitation in the License or has exceeded the scope of the authorized activities.
- L. The Licensee shall indemnify, defend and hold harmless the State of Maryland, its officials, officers, and employees from and against any and all liability, suits, claims and actions of whatever kind, caused by or arising from the work authorized by the License.
- M. The Licensee acknowledges that this License does not transfer any property interest in State tidal wetlands. This License allows the Licensee to use State tidal wetlands only for the structure or activity authorized herein and in no way limits the use of waters of the State by the public.
- N. This License is valid only for use by the Licensee. Permission for transfer of the License shall be obtained from the Water and Science Administration, Tidal Wetland Division. The terms and conditions of this License shall be binding on any assignee or successor in interest of the License.
- O. The Licensee shall allow representatives of the Maryland Department of the Environment to inspect the authorized activities.
- P. The Licensee shall notify the Maryland Department of the Environment, Water and Science Administration, Compliance Program at least 10 day before starting the authorized activities at (410) 537-3510.
- Q. The Licensee shall complete construction of the activity authorized under this License by the expiration date, otherwise a new General License shall be obtained.
- R. Upon completion of the authorized activities, the Licensee shall notify the Maryland Department of the Environment, Water and Science Administration, Compliance Program at (410) 537-3510.

By authority of the Secretary of the Environment:




Heather Nelson, Acting Program Manager
Wetlands and Waterways Program

12/16/2020

Date

Tidal Wetland Reviewer: 

Supervisor Concurrence: 

Tracking Number: 202060697

Agency Interest Number: 167387

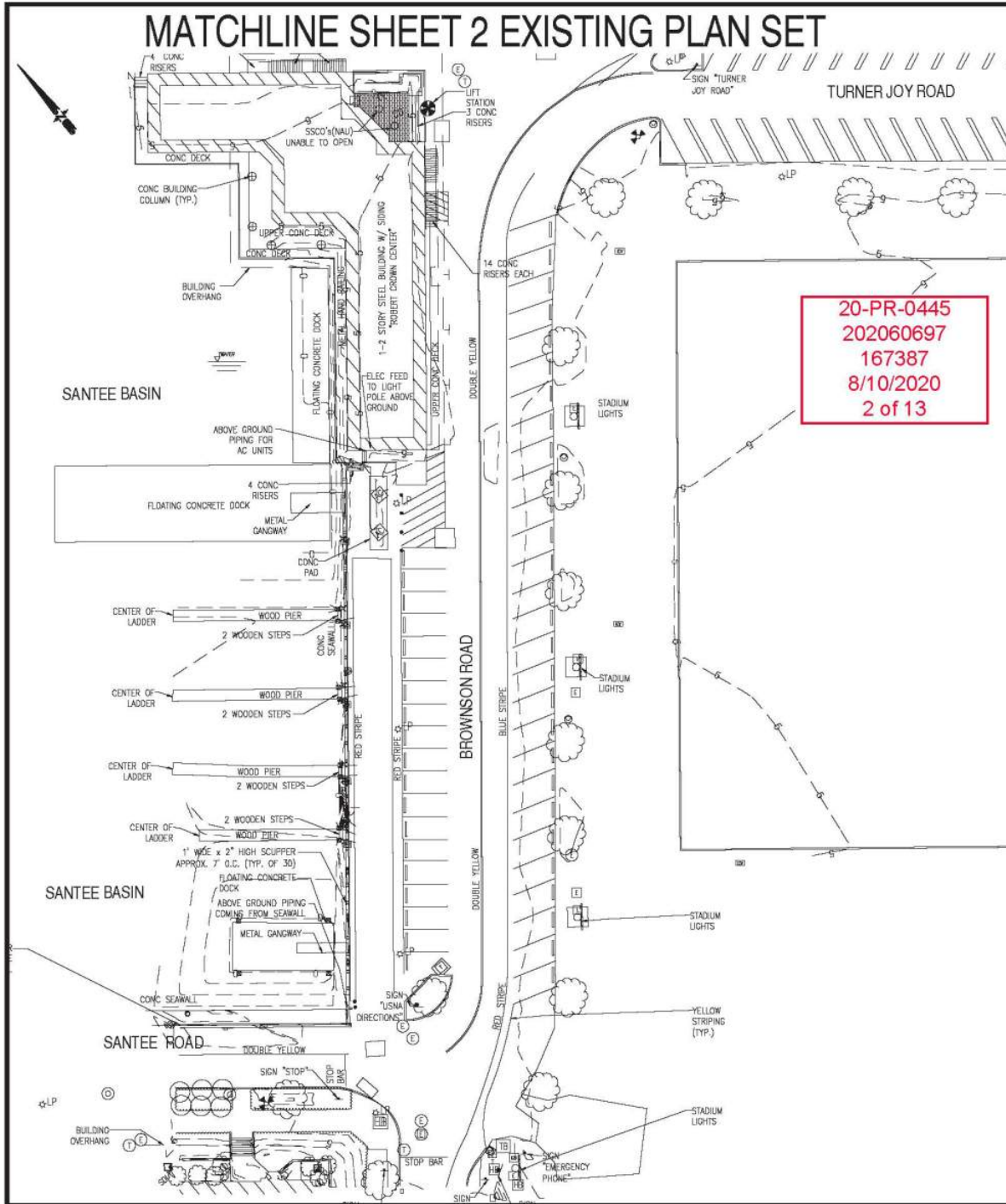
Enclosure: Plans dated August 10, 2020

cc: WSA Inspection & Compliance Program

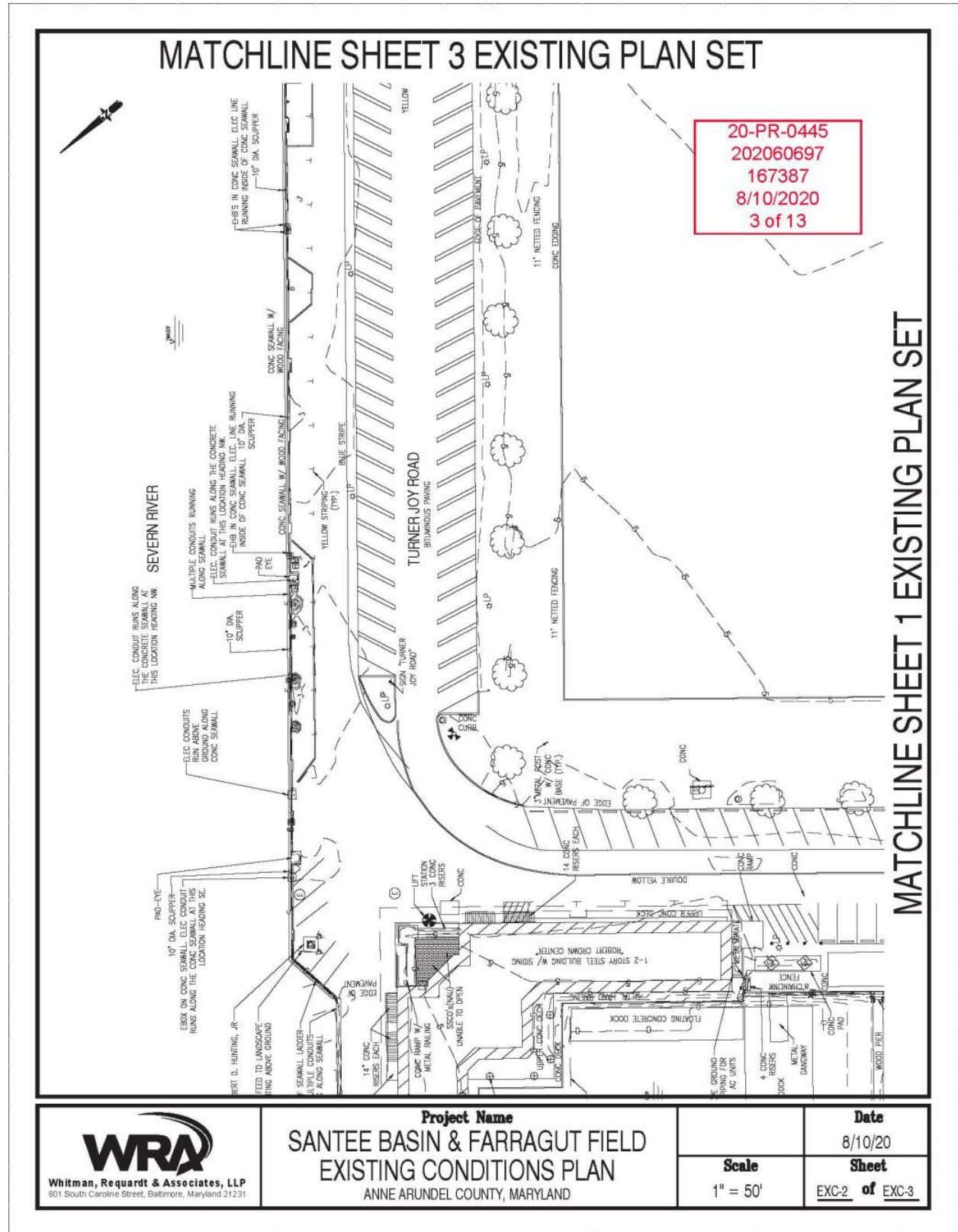
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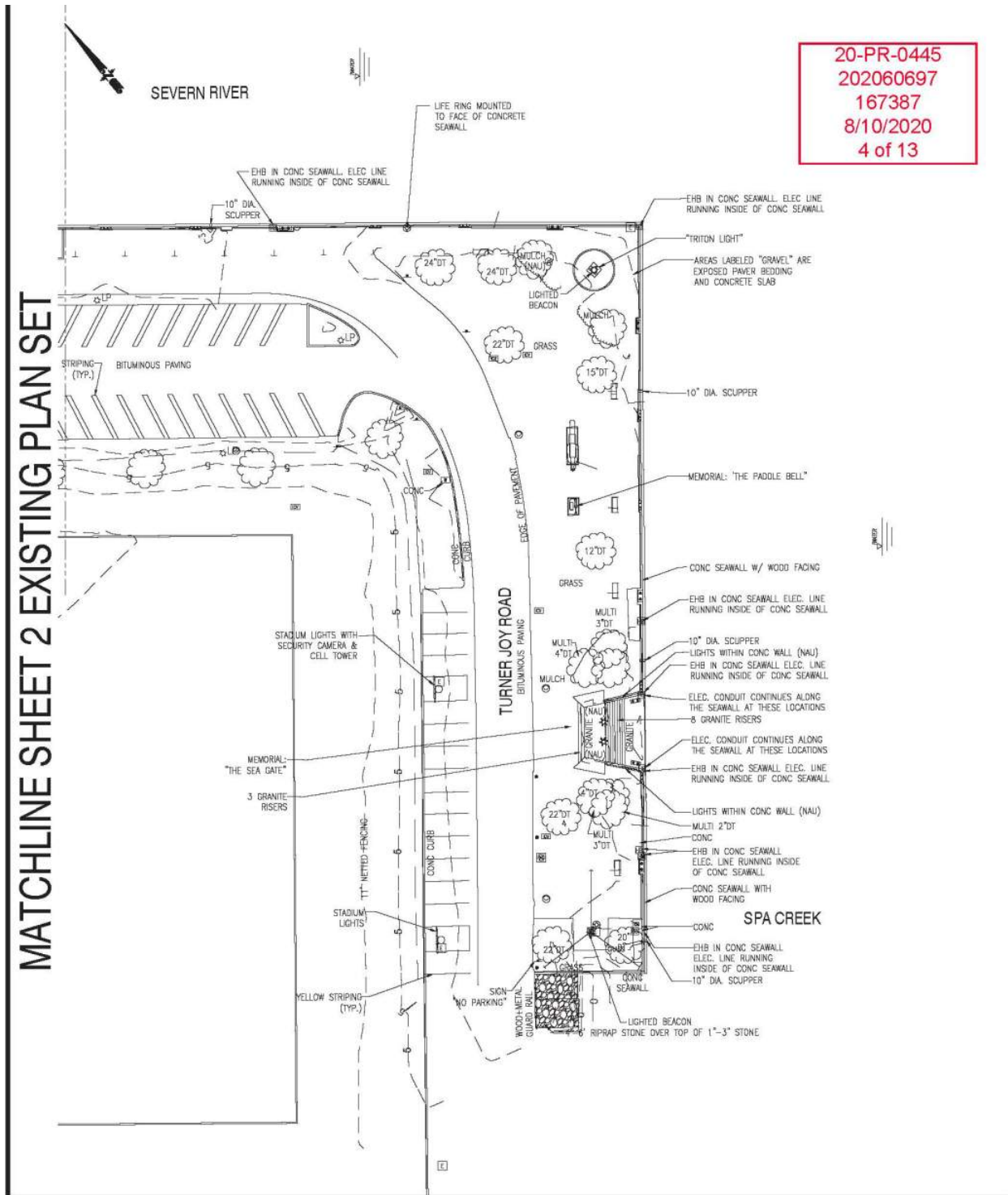
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 Whitman, Reardon & Associates, LLP <small>801 South Caroline Street, Baltimore, Maryland 21201</small>	Project Name Santee Basin & Farragut Field EXISTING CONDITIONS PLAN <small>ANNE ARUNDEL COUNTY, MARYLAND</small>	Date 8/10/20
	Scale 1" = 50'	Sheet EXC-1 of EXC-3





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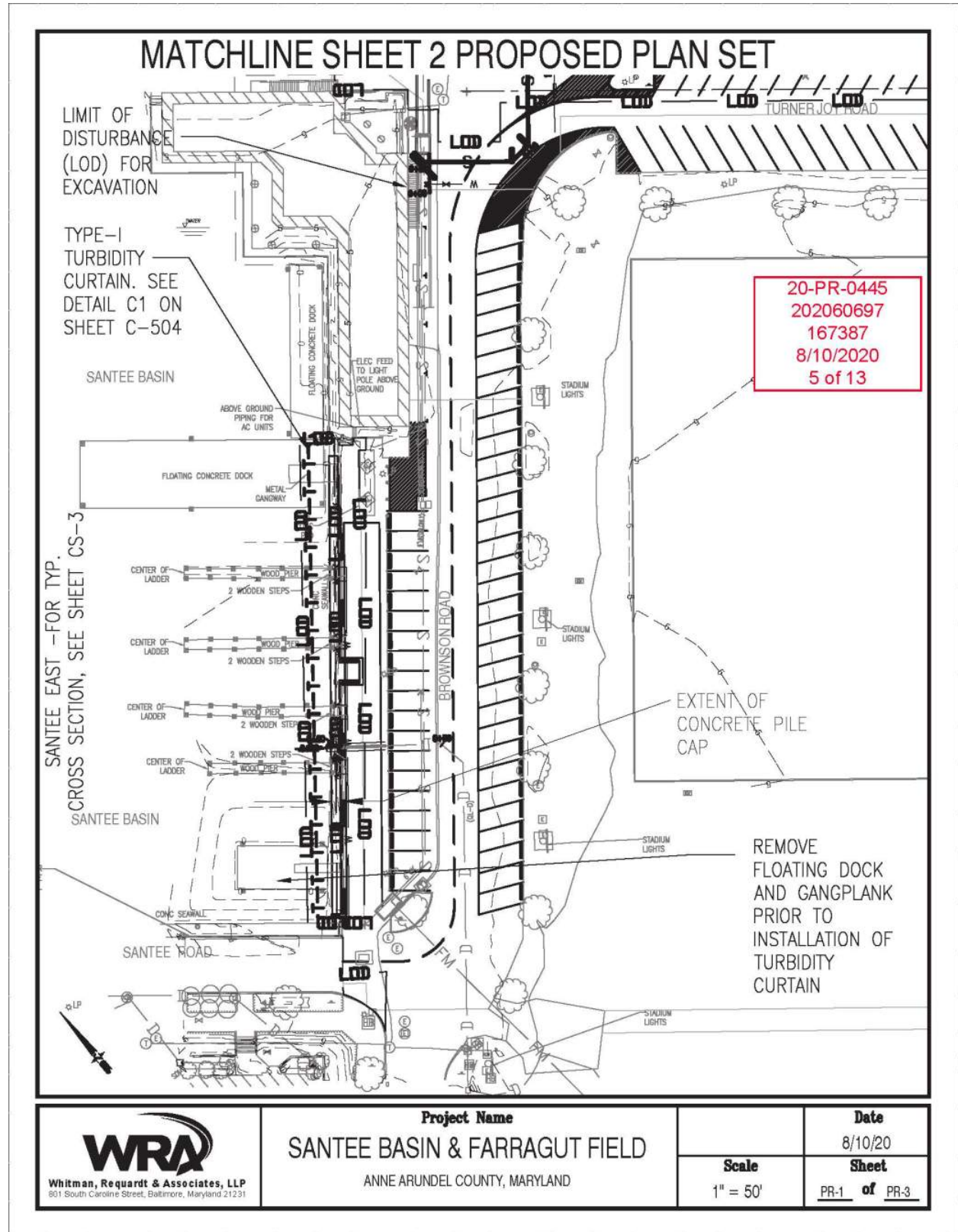
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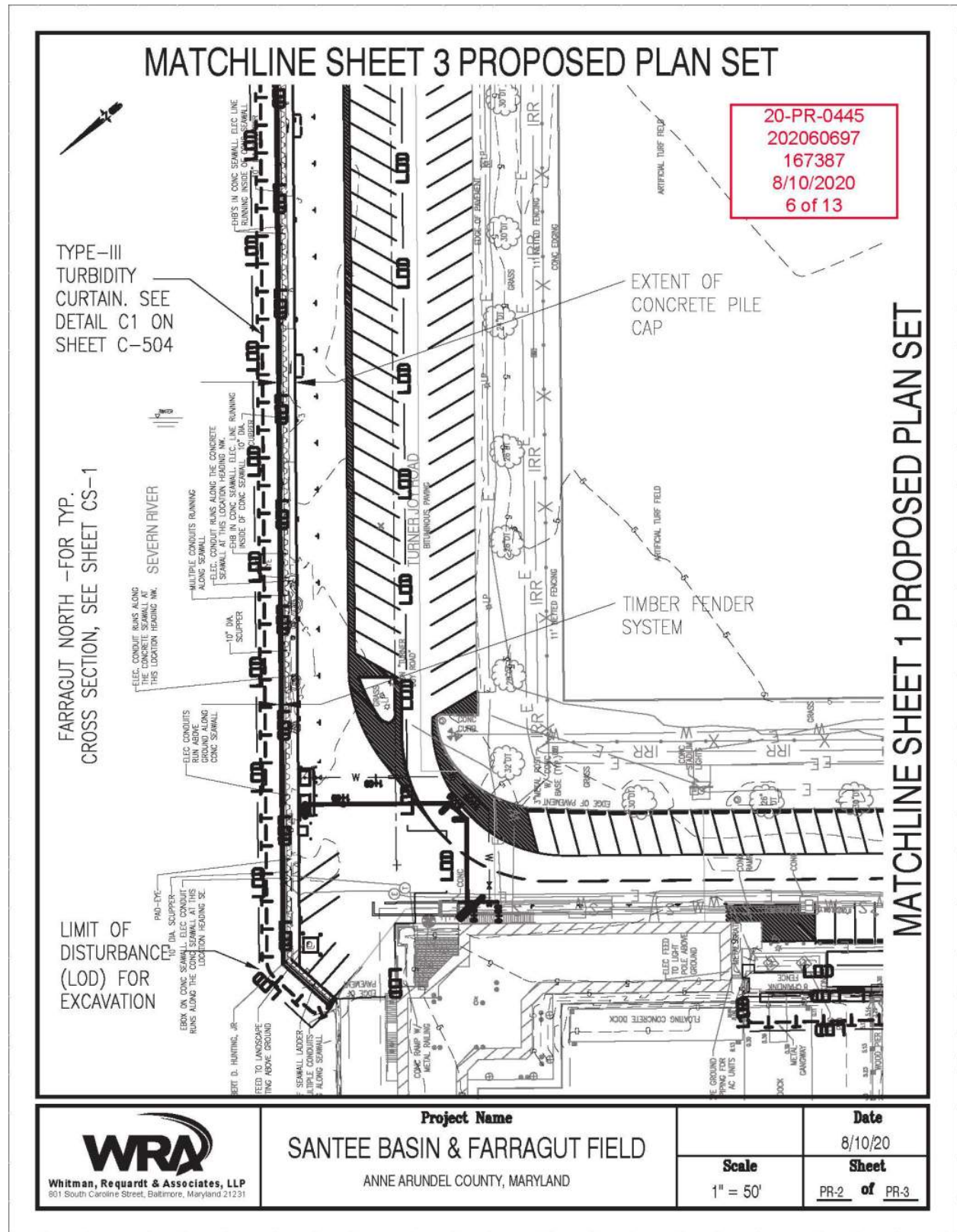
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 SANTEE BASIN & FARRAGUT FIELD
 EXISTING CONDITIONS PLAN
 ANNE ARUNDEL COUNTY, MARYLAND

Scale
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Date
 8/10/20

Sheet
 EXC-3 of EXC-3



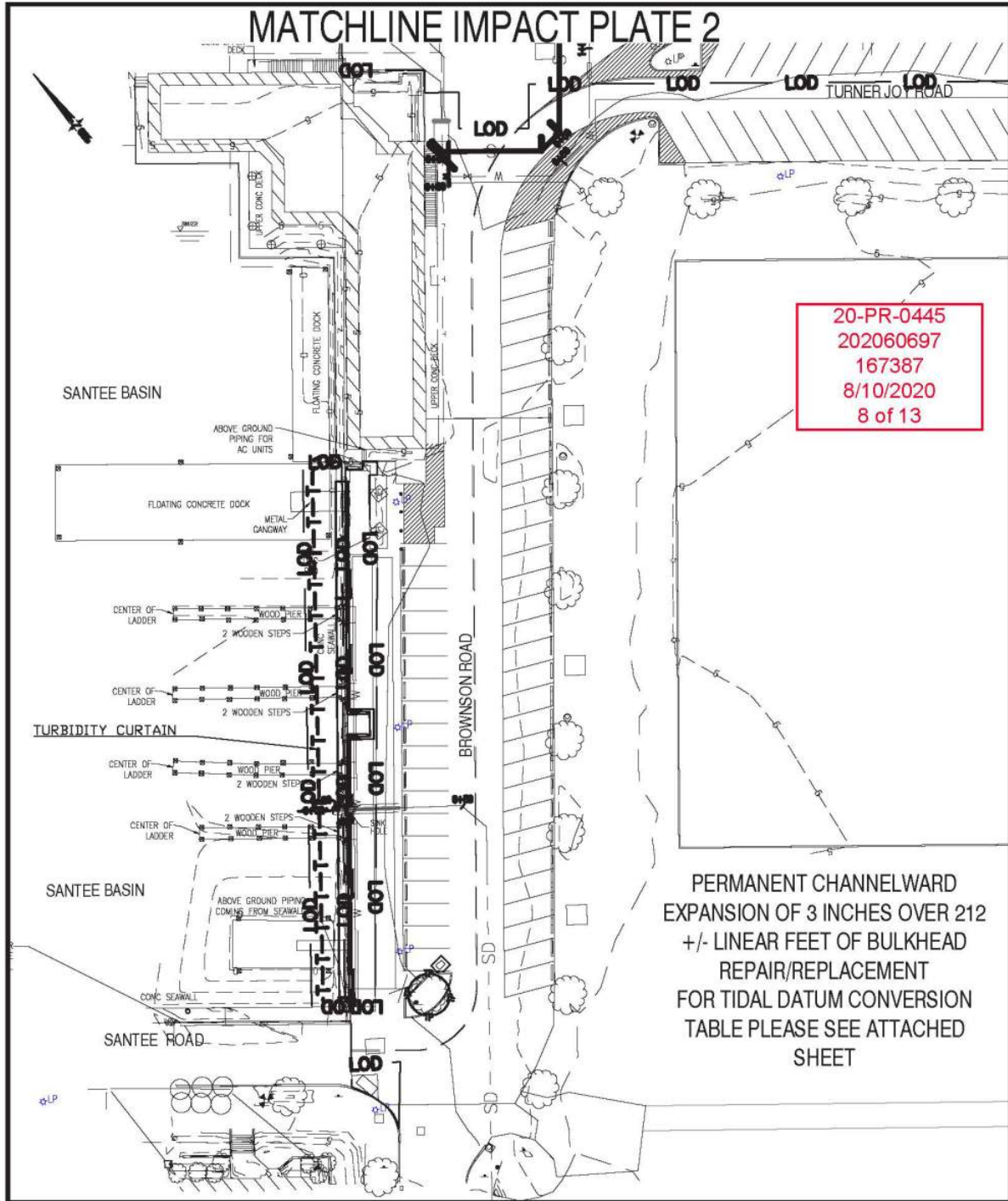


WRA
Whitman, Reardon & Associates, LLP
801 South Caroline Street, Baltimore, Maryland 21231

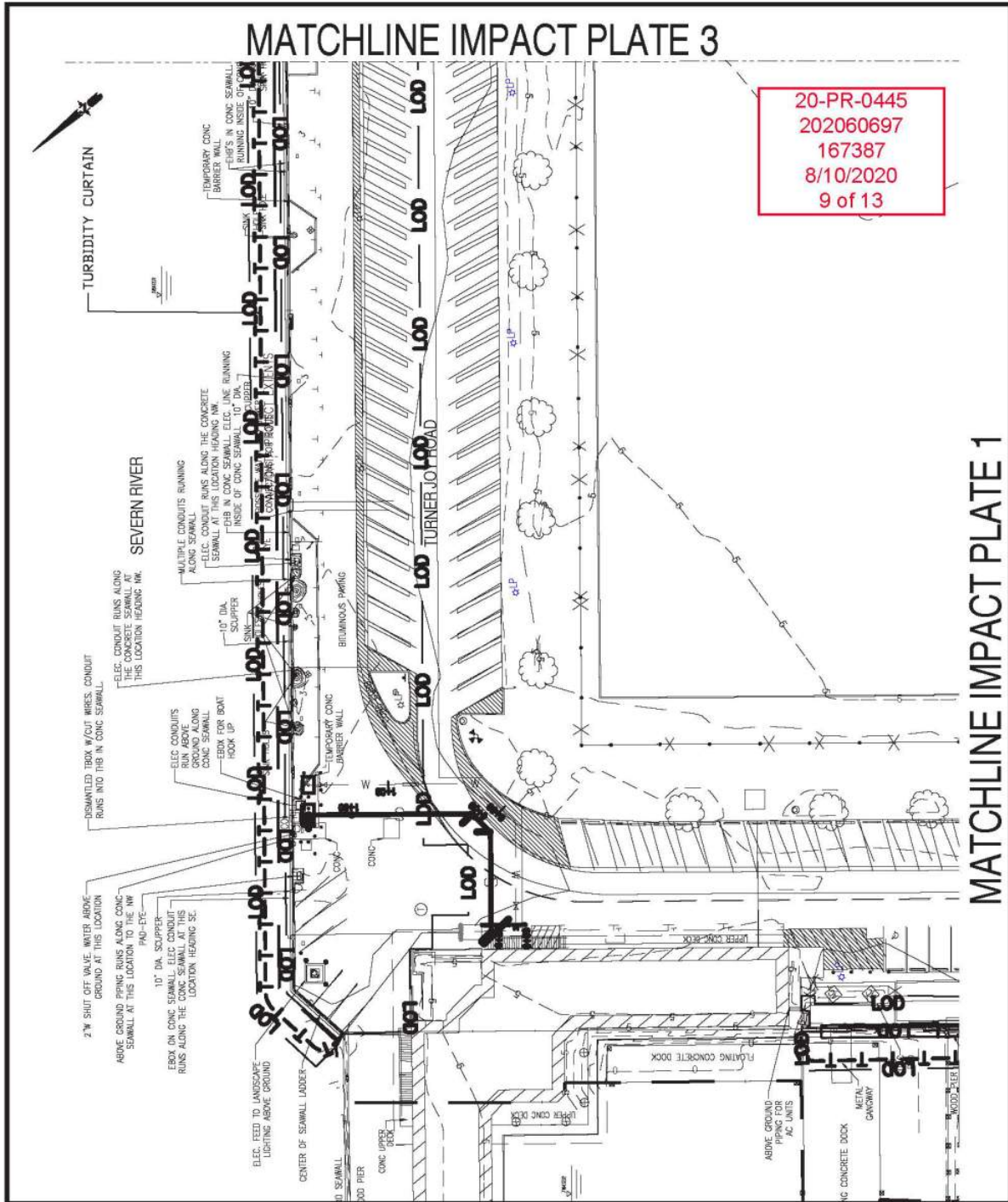
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ANNE ARUNDEL COUNTY, MARYLAND

Scale
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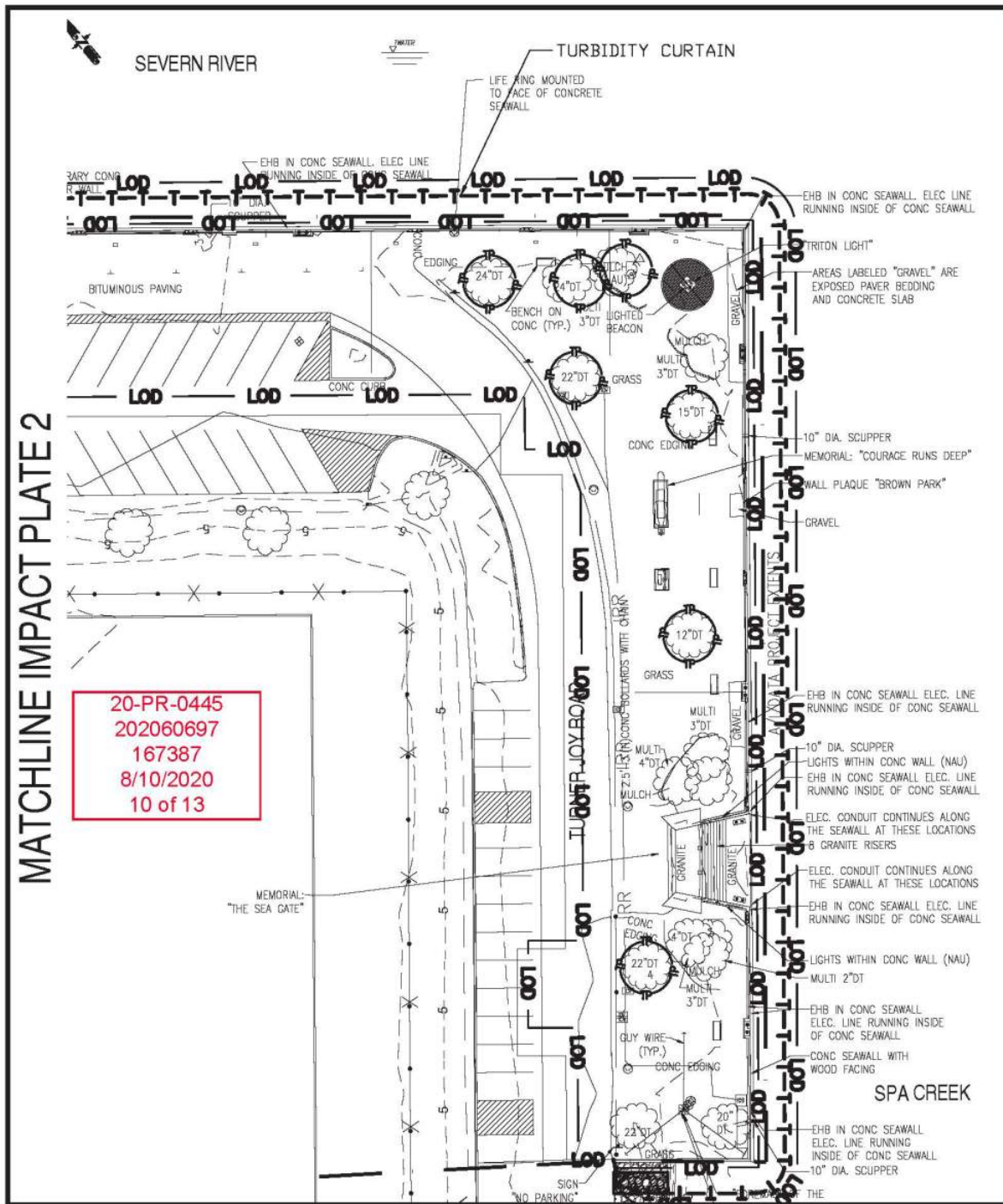
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MATCHLINE IMPACT PLATE 1

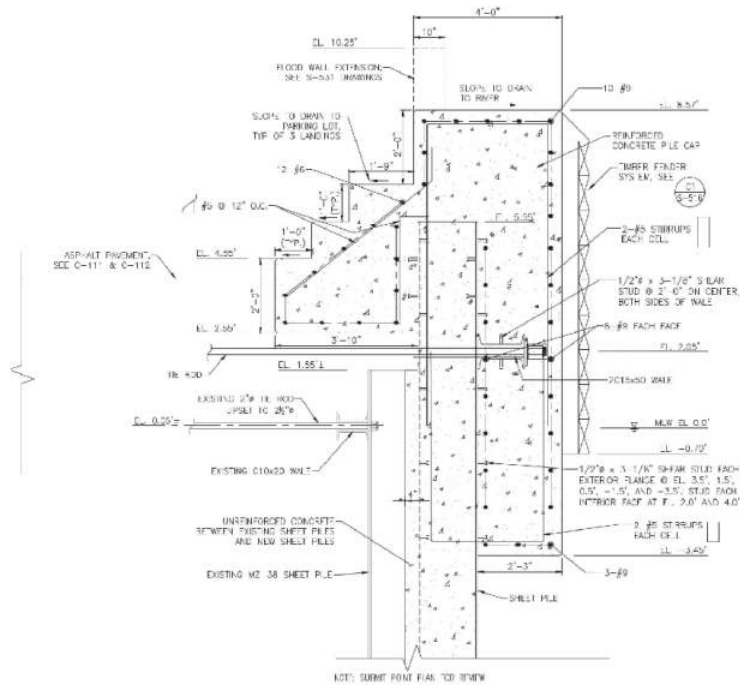
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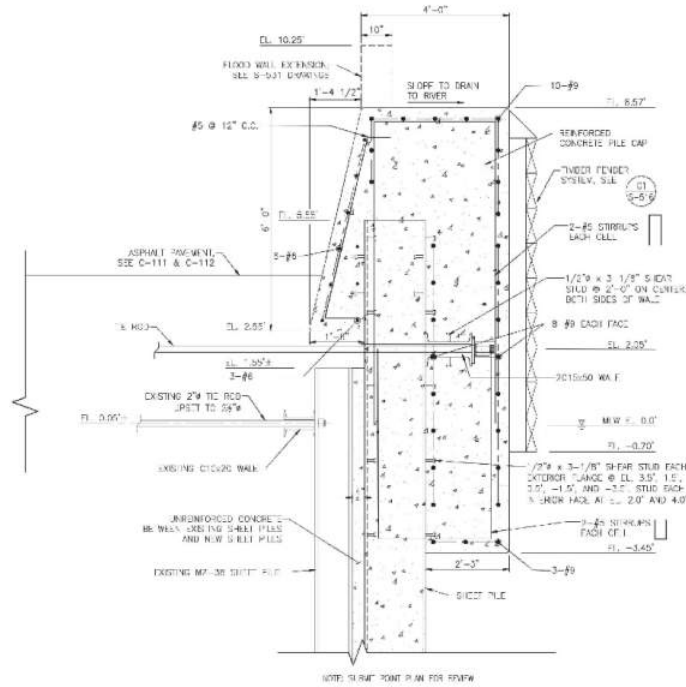


B1 FARRAGUT FIELD BULKHEAD - TYPICAL SECTION - NORTH WALL
 5-110, 5-111, 5-112 & 5-113

FARRAGUT NORTH -FOR TYP.
 CROSS SECTION, SEE SHEET PR-2 & PR-3

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		Scale 1" = 4'-0"

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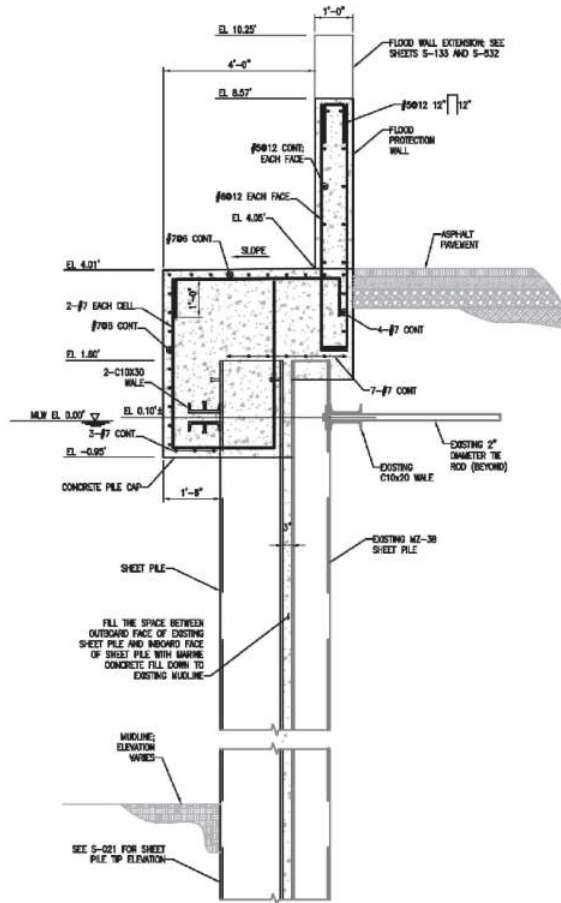


B3 FARRAGUT FIELD BULKHEAD - TYPICAL SECTION - EAST WALL
 S-110, S-111, S-112 & S-113

FARRAGUT EAST -FOR TYP.
 CROSS SECTION, SEE SHEET PR-3

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	CROSS SECTIONS ANNE ARUNDEL COUNTY, MARYLAND	Scale 1" = 4'-0"

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SANTEE EAST – FOR TYP.
 CROSS SECTION, SEE SHEET PR-1

 Whitman, Requardt & Associates, LLP 801 South Caroline Street, Baltimore, Maryland 21201	Project Name SANTEE BASIN & FARRAGUT FIELD CROSS SECTIONS ANNE ARUNDEL COUNTY, MARYLAND		Date 8/7/20
	Scale 1" = 4'-0"		Sheet CS-3 of CS-3

Appendix B
Air Conformity Applicability Analysis
and Record of Non-Applicability

Abbreviations and Acronyms

Acronym	Definition
CFR	Code of Federal Regulations
NAAQS	National Ambient Air Quality Standards
NO _x	nitrogen oxides
NSA	Naval Support Activity
PM _{2.5}	fine particulate matter less than or equal to 2.5 microns in diameter
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

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Air Quality Applicability Analysis

Introduction

The Clean Air Act requires federal actions in air pollutant nonattainment or maintenance areas to conform to the applicable State Implementation Plan. A State Implementation Plan is designed to achieve or maintain an attainment designation of air pollutants, as defined by the National Ambient Air Quality Standards (NAAQS). The regulations governing this requirement are found in 40 Code of Federal Regulations (CFR) part 93, also known as the General Conformity Rule. The threshold (*de minimis*) emission rates have been established for actions with the potential to have significant air quality impacts. A federal agency must determine if a project/action in a nonattainment area or maintenance area exceeds the *de minimis* rates, which would require a general conformity determination prepared to address significant impacts.

The Navy is considering alternatives to repair and restore portions of the Naval Support Activity (NSA) Annapolis shoreline and seawalls that have been damaged or made vulnerable by degradation over time. NSA Annapolis is in Anne Arundel County, which is within the Metropolitan Baltimore Intrastate Air Quality Control Region (40 CFR 81.28). Anne Arundel County is designated as a nonattainment area for 8-hour ozone, with a classification of moderate for the 2008 standard and marginal for the 2015 standard (USEPA, 2019). A portion of the county, which includes NSA Annapolis, is also in nonattainment for sulfur dioxide under the 2010 standard. Anne Arundel County was formerly classified as a maintenance area for the 1997 standard for particulate matter less than or equal to 2.5 microns (PM_{2.5}), but this standard was revoked in 2016. It is unclassified or in attainment for all other criteria pollutants. Potential emission from all criteria pollutants are presented in this appendix; however, the *de minimis* thresholds for the ozone precursor pollutants nitrogen oxides (NO_x) and volatile organic compounds (VOC) and sulfur dioxide apply to the conformity applicability analysis. Because this region is also within the Ozone Transport Region that was established by the 1990 Clean Air Act Amendments, the *de minimis* threshold for VOCs is further reduced.

Project Description

The Navy proposes to repair and restore approximately 19,334 linear feet of shoreline and seawalls at NSA Annapolis, Maryland. The shoreline and seawall repair and restoration would occur on the shoreline of the Lower Yard along the Severn River, College Creek, and Santee Basin; portions of the Upper Yard along the Severn River and College Creek; and portions of the North Severn area along the Severn River and Yard Patrol Basin. The repairs and restoration would address existing structural deficiencies and potential impacts from future extreme weather events, storm surge, sea level rise, and land subsidence. The project area is divided into 15 “reaches,” which are presented in more detail in Chapter 2 of the Navy’s Environmental Assessment addressing this project.

The Navy is considering three action alternatives and the No Action Alternative:

- Alternative 1: Hardened structures would be used account 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). Alternative 1 is the Navy’s Preferred Alternative.
- Alternative 2: Hardened structures would be used to account 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 account 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 account for future sea level rise. Reach 3 would use living shoreline techniques that could be modified to account for sea level rise if needed in the future.
- No Action Alternative: No seawall repair or restoration would be undertaken. Localized maintenance activities would be accomplished intermittently as necessary. Sections of the existing shoreline and seawall would continue to deteriorate over time and could eventually fail.

Under Alternatives 1, 2, and 3, hardened structures would include concrete bulkhead, sheet pile seawall, riprap, or a combination of these techniques. The work for the hardened structural repair, restoration, and replacement would be accomplished either from dry land, in the water, or a combination depending on the land and water constraints in the various work areas.

Reach 9 is the only project segment that has a general timeframe. It is anticipated that construction on Reach 9 would likely begin in the next few years and last approximately three and a half years. Construction on other reaches would occur as funding becomes available, and these reaches would be prioritized for repair based on condition, elevation, and mission criticality. The timeframe for construction of all reaches would be ten to twenty years.

Air Quality

Air quality is defined as the ambient air concentrations of specific criteria pollutants determined by the U.S. Environmental Protection Agency (USEPA) to be of concern to the health and welfare of the public. These criteria pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter less than or equal to 10 microns, PM_{2.5}, and lead. USEPA has established two types of NAAQS for these criteria air pollutants. Primary ambient air quality standards are designed to protect public health with an adequate margin of safety. Secondary ambient air quality standards are designed to protect public welfare-related values including property, materials, and plant and animal life. The maximum primary and secondary standards (concentrations) of criteria pollutants, which are listed in 40 CFR part 50, apply throughout the United States.

Federal Requirements

Section 176(c) of the Clean Air Act, as amended, requires federal agencies to ensure that actions undertaken in nonattainment or maintenance areas are consistent with the Clean Air Act and with federally enforceable air quality management plans. The Clean Air Act places responsibility on individual states to achieve and maintain the NAAQS through USEPA-approved State Implementation Plans.

Under the General Conformity Rule (40 CFR part 93, subpart B), emissions of criteria pollutants and their precursors that are associated with an action in a nonattainment area for a given pollutant must be below *de minimis* emission rates for that pollutant to be exempt from a formal conformity determination. The *de minimis* rates for the NAAQS pollutants of concern are listed in Table B-1. Actions that contribute less than these amounts and have no other conformity requirements are exempt from the General Conformity Rule. Actions that exceed the pollutant *de minimis* rates in any given year must undergo a detailed analysis, and a formal conformity determination is required. Finally, mitigation would be required if the detailed analysis indicates an exceedance of the *de minimis* levels for any of the pollutants of concern.

Table B-1 Criteria Pollutant *de minimis* Emission Rates Applicable to the Proposed Action

Pollutant	Attainment Status	Criteria Pollutant (tpy)	Precursor (tpy)
NO _x	Moderate ozone nonattainment	—	100
VOC	Moderate ozone nonattainment, inside an ozone transport region	—	50
Sulfur dioxide	Nonattainment	100	—

Sources: 40 CFR 93.153; USEPA, 2019.

Key: NO_x = nitrogen oxides; VOC = volatile organic compound; tpy = tons per year.

Methodology

In accordance with 40 CFR part 93, subpart B, the incremental increase in emissions above the existing conditions has been considered and includes reasonably foreseeable direct and indirect emissions. The total estimated emissions from the Proposed Action have been evaluated to assess if any of the applicable *de minimis* rates would be exceeded.

The design of each reach is not yet known. Portions of structures or the entirety of structures could be removed or demolished. The Navy may construct concrete bulkhead, sheet pile seawall, riprap, or a combination of these techniques. The Navy may also use on-land or in-water construction methods, depending on the structure(s) design and the site conditions that would facilitate construction. Therefore, considering the variability of possible construction methods and materials, emissions resulting from the Proposed Action were estimated based on the maximum expected number, type, and duration of construction operations to complete the Proposed Action.

For the purposes of this analysis, all construction activities are calculated as if occurring within one calendar year; this approach presents a maximum impact.

Once construction is complete, long-term emissions may be generated from routine maintenance and repair of seawall components from hand-held equipment. As these kinds of emissions would be similar to what is already occurring for minor maintenance and repairs of the existing seawall, these emissions are assumed to be negligible and were not estimated.

Construction Emissions

Emissions resulting from the Proposed Action were estimated based on the expected number, type, and duration of construction operations to complete the Proposed Action. Construction emissions would result from the operation of heavy equipment, delivery trucks, and construction workers. The project would require a mix of construction equipment that would vary as the construction activity progresses. To estimate emissions, methodologies were used based on the kind of equipment (which all have varying rates of criteria pollutant emissions, referred to as emissions factors), and either the average hours to complete the work or the average distance traveled.

Nonroad Emissions from Construction Equipment

Nonroad emissions are those from the construction equipment operating immediately at the project site (such as backhoes, forklifts, impact hammers, pile drivers, saws, diesel generators, and cranes). Conservative construction equipment assumptions were developed based on review of other projects. Emissions factors for nonroad equipment (fleet year 2020) were estimated using composite emissions factors. Table B-2 and Table B-3 contain the emissions factors and operating hours assumptions and the total estimated emissions for nonroad construction equipment, respectively.

Alternatives 1, 2, and 3 are assumed to require similar nonroad equipment and operating hours for the purposes of estimating air emissions. The maximum anticipated seawall heights decrease from Alternatives 1 to 2 and Alternatives 2 to 3, so Alternatives 2 and 3 could result in slightly lower emissions than Alternative 1.

Table B-2 Nonroad Construction Equipment Emissions Factors and Operating Hours Assumptions

<i>Equipment Description</i>	<i>Total Operating Hours</i>	<i>NO_x (lb/hr)</i>	<i>ROG (lb/hr)</i>	<i>CO (lb/hr)</i>	<i>SO_x (lb/hr)</i>	<i>PM (lb/hr)</i>
Tractors/Loaders/Backhoes Composite	1,100	0.274	0.044	0.362	0.0008	0.013
Rough Terrain Forklifts Composite	1,100	0.349	0.053	0.446	0.0008	0.020
Other Construction Equipment Composite (Impact Hammer, Pile Driver)	2,200	0.352	0.056	0.351	0.0013	0.014
Concrete/Industrial Saws Composite	1,100	0.341	0.048	0.378	0.0007	0.020
Generator Sets Composite	1,100	0.323	0.040	0.273	0.0007	0.015
Cranes Composite	1,100	0.661	0.090	0.392	0.0014	0.026

Source: SCAQMD, 2018.

Key: NO_x = nitrogen oxides; ROG = reactive organic gases (= volatile organic compounds); CO = carbon monoxide; SO_x = sulfur oxides; PM = particulate matter; lb = pounds; hr = hour.

Note: Particulate matter is estimated to be 10 microns with 92 percent of that fraction being less than 2.5 microns in diameter.

Table B-3 Total Estimated Emissions from Nonroad Construction Equipment

<i>Equipment</i>	<i>NO_x</i>	<i>VOC</i>	<i>CO</i>	<i>SO₂</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Total Nonroad Construction Emissions (tons)	1.47	0.21	1.42	0.004	0.07	0.06

Source: SCAQMD, 2018.

Key: NO_x = nitrogen oxides; VOC = volatile organic compounds; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = suspended particulate matter less than or equal to 10 microns in diameter; PM_{2.5} = fine particulate matter less than or equal to 2.5 microns in diameter.

Notes:

Emissions (tons) = emissions factor (pounds/hour) × total hours operated × 1 ton/2,000 pounds, *for each kind of equipment*. Example: Nonroad NO_x emissions = {[1,100 hr × (0.274 + 0.349 + 0.341 + 0.323 + 0.661 lb/hr)] + (2,200 hr × 0.352 lb/hr)} × 1 ton/2,000 pounds = 1.47 tons NO_x.

For PM_{2.5}, the emissions factor was multiplied by 0.92 to obtain the PM_{2.5} fraction of total particulate matter.

Onroad Emissions from Construction Equipment

Onroad emissions are those that come to and leave the site via the road network on a more frequent basis (including diesel-powered heavy delivery trucks and gasoline-powered passenger trucks from construction workers).

For this Proposed Action, the Navy anticipates that a mix of onroad trucks and barges would be used to remove deteriorated seawall components and other construction waste and deliver construction materials to the various reaches that are under construction. However, because this project is in the early planning stages, the Navy does not know what this ratio of truck-to-barge traffic would be. Furthermore, the Navy has only preliminary notions about the kind of work that may be required for each reach, including what kind and how much of the components would be removed and replaced, and the amount of additional materials needed to increase the height of the seawall along individual reaches under each alternative. This analysis puts forth the maximum impact that could occur for the purposes of estimating air emissions, which assumes that all bulkhead and seawall reaches would be 100 percent demolished and replaced essentially in-kind, and riprap reaches would need a 10 percent replacement of stones to achieve appropriate placement and distribution. Alternative 1 and Alternative 2 (except Reach 3 under Alternative 2) are assumed to include concrete seawall to provide the increased design height. The amount of construction materials being transported makes up the primary difference among the three action alternatives. Because the mix of trucks and barges is unknown, this analysis assumes that onroad trucks would transport 100 percent of the waste from and materials to the site. Actual emissions would be expected to be much lower than those presented in Table B-5 as barges can carry 1,450 to 1,500 tons of cargo per load, and a truck can carry approximately 25 tons of cargo. Therefore, the use of barges for the delivery of materials would reduce the onroad truck emissions because fewer trips would be needed over the ten- to twenty-year construction period for the Proposed Action.

Emissions factors for onroad equipment (2020 fleet year) were estimated using composite emissions factors. Table B-4 and Table B-5 show the emissions factors and vehicle miles traveled assumptions and the total estimated emissions for onroad construction equipment, respectively.

Fugitive Dust Emissions

Fugitive dust occurs directly from vehicles disturbing and suspending particulate matter while operating on unpaved surfaces, or from soil stockpiles on an active construction site; it also occurs indirectly from dust and dirt being brought onto paved surfaces from nonroad construction operations, and then disturbed and suspended as onroad vehicles drive over it. A conservative empirical estimate for fugitive dust was used for this analysis; actual fugitive dust emissions would likely be lower as they are directly proportional to the amount of activity that is being worked. Higher activity days have greater potential for generating fugitive dust than lower activity days that do not involve equipment actively disturbing the site. Most of the work associated with this project would be in-water and generate minimal fugitive dust. Therefore, this analysis assumes that an area of approximately 0.3 acres would be entirely exposed for the duration of one month per reach at a time as initial work is conducted along shorelines. Fugitive dust controls would be implemented; this analysis assumes an 80 percent fugitive dust control efficiency. Alternatives 1, 2, and 3 are assumed to generate similar fugitive dust emissions. The maximum anticipated seawall heights decrease from Alternatives 1 to 2 and Alternatives 2 to 3, so Alternatives 2 and 3 could result in slightly lower emissions because of less intense construction. See estimates and notes in Table B-6.

Table B-4 Onroad Construction Equipment Emissions Factors and Vehicle Miles Traveled Assumptions

<i>Equipment Description</i>	<i>VMT</i>	<i>NO_x</i> <i>(lb/mi)</i>	<i>ROG</i> <i>(lb/mi)</i>	<i>CO</i> <i>(lb/mi)</i>	<i>SO_x</i> <i>(lb/mi)</i>	<i>PM₁₀</i> <i>(lb/mi)</i>	<i>PM_{2.5}</i> <i>(lb/mi)</i>
Alternative 1 Demolition & Construction Waste Removal, and Construction Materials Delivery: Heavy-Duty Diesel Truck (33,001+ lb) ¹	1,199,650	0.0127	0.0011	0.0053	0.00004	0.0006	0.0005
Alternative 2 Demolition & Construction Waste Removal, and Construction Materials Delivery: Heavy-Duty Diesel Truck (33,001+ lb) ²	1,008,850	0.0127	0.0011	0.0053	0.00004	0.0006	0.0005
Alternative 3 Demolition & Construction Waste Removal, and Construction Materials Delivery: Heavy-Duty Diesel Truck (33,001+ lb) ³	606,000	0.0127	0.0011	0.0053	0.00004	0.0006	0.0005
All Alternatives: Passenger Vehicles, Gasoline ⁴	362,880	0.0004	0.0005	0.0044	0.00001	0.0001	0.0001

Sources: SCAQMD, 2008a, 2008b.

Key: NO_x = nitrogen oxides; ROG = reactive organic gases (=volatile organic compounds); CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 2.5 microns in diameter; VMT = vehicle miles traveled; lb = pounds; hr = hour.

Notes: Assumed 20 years of construction for worst-case air impacts, or 4,032 days.

¹ VMT = 6 trucks per day × 50 miles per day × 4,032 days of construction.

² VMT = 5 trucks per day × 50 miles per day × 4,032 days of construction.

³ VMT = 3 trucks per day × 50 miles per day × 4,032 days of construction.

⁴ VMT = 3 workers per day × 30 miles per day × 4,032 days of construction.

Table B-5 Total Estimated Emissions for Each Alternative from Onroad Construction Equipment

<i>Equipment</i>	<i>NO_x</i>	<i>VOC</i>	<i>CO</i>	<i>SO₂</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Alternative 1 Total Onroad Construction Emissions (tons)	7.69	0.75	3.98	0.03	0.38	0.32
Alternative 2 Total Onroad Construction Emissions (tons)	6.48	0.65	3.47	0.02	0.32	0.27
Alternative 3 Total Onroad Construction Emissions (tons)	3.92	0.42	2.40	0.01	0.20	0.17

Sources: SCAQMD, 2008a, 2008b.

Key: NO_x = nitrogen oxides; VOC = volatile organic compounds; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = suspended particulate matter less than or equal to 10 microns in diameter. PM_{2.5} = fine particulate matter less than or equal to 2.5 microns in diameter.

Notes: Emissions (tons) = emissions factor (pounds/hour) × total vehicle miles traveled × 1 ton/2,000 pounds, for each kind of equipment. Example: Alternative 1 Onroad NO_x emissions = [(1,199,650 mi × 0.0127 lb/mi) + (362,880 mi × 0.0004 lb/mi)] × 1 ton/2,000 pounds = 7.69 tons NO_x.

Table B-6 Emissions from Fugitive Dust Emissions during Construction

Calculation	PM₁₀	PM_{2.5}
Emissions factor (tons particulate matter/acre/month)	1.2	1.2
Fractional contents of particulate matter by size ¹	59.4%	21.2%
Estimated Total Fugitive Dust Emissions (tons) ²	0.64	0.14

Sources: USEPA, 1996; SCAQMD, 2006.

Key: PM₁₀ = suspended particulate matter less than or equal to 10 microns in diameter; PM_{2.5} = fine particulate matter less than or equal to 2.5 microns in diameter.

Notes:

¹ PM₁₀ is assumed to be 59.4 percent of total particulate emissions, and PM_{2.5} is assumed to be 21.2 percent of PM₁₀.

² Emissions PM₁₀ (tons) = 1.2 tons/acre/month × 0.594 × 0.3 acres × 1 month per reach × 15 reaches × (1 - 0.8);
Emissions PM_{2.5} (tons) = PM₁₀ emissions in tons × 0.212.

Results and Conclusion

Total estimated emissions for the proposed seawall repair and restoration are shown in Table B-7. The total short-term construction emissions and long-term emissions from increased personnel and emergency generators represent minor, temporary increases in regional air emissions. These emissions would last only for the duration of construction, which would be approximately five years. Annual emissions would be well below applicable *de minimis* thresholds for the criteria pollutants for which the project area is designated as being in nonattainment. No significant impacts on air quality would occur.

Table B-7 Summary of Total Criteria Pollutant Emissions, All Alternatives

Activity	NO_x	VOC	CO	SO₂	PM₁₀	PM_{2.5}
Applicable <i>de minimis</i> thresholds	100	50	—	100	—	—
Alternative 1 (total tons)	9.16	0.97	5.39	0.03	1.09	0.52
Construction Phase: Nonroad (tons)	1.47	0.21	1.42	0.004	0.07	0.06
Construction Phase: Onroad (tons)	7.69	0.75	3.98	0.026	0.38	0.32
Construction Phase: Fugitive Dust (tons)	—	—	—	—	0.64	0.14
Alternative 2 (total tons)	7.95	0.86	4.89	0.03	1.03	0.47
Construction Phase: Nonroad (tons)	1.47	0.21	1.42	0.004	0.07	0.06
Construction Phase: Onroad (tons)	6.48	0.65	3.47	0.02	0.32	0.27
Construction Phase: Fugitive Dust (tons)	—	—	—	—	0.64	0.14
Alternative 3 (total tons)	5.39	0.64	3.82	0.02	0.91	0.37
Construction Phase: Nonroad (tons)	1.47	0.21	1.42	0.004	0.07	0.06
Construction Phase: Onroad (tons)	3.92	0.42	2.40	0.01	0.20	0.17
Construction Phase: Fugitive Dust (tons)	—	—	—	—	0.64	0.14

Key: VOC = volatile organic compound; CO = carbon monoxide; NO_x = nitrogen oxides; SO₂ = sulfur dioxide; PM₁₀ = suspended particulate matter less than or equal to 10 microns in diameter; PM_{2.5} = fine particulate matter less than or equal to 2.5 microns in diameter.

Note: Emissions may not total precisely due to rounding.

References

- SCAQMD. (2006). *Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds*.
- SCAQMD. (2008a, April 23). *On-Road Vehicles (Scenario Years 2007-2026) (xls file)*. Retrieved from Off-Road - Model Mobile Source Emission Factors: EMFAC 2007 (v2.3) Emission Factors: [http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/emfac-2007-\(v2-3\)-emission-factors-\(on-road\)](http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/emfac-2007-(v2-3)-emission-factors-(on-road))
- SCAQMD. (2008b, April 23). *Heavy-Heavy-Duty On-road Vehicles (Scenario Years 2007 – 2026) (xls file)*. Retrieved from Off-Road - Model Mobile Source Emission Factors: [http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/emfac-2007-\(v2-3\)-emission-factors-\(on-road\)](http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/emfac-2007-(v2-3)-emission-factors-(on-road))
- SCAQMD. (2018). *Off-road Mobile Source Emission Factors (Scenario Years 2007 – 2025) (xls file)*. Retrieved from Off-Road - Model Mobile Source Emission Factors: <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/off-road-mobile-source-emission-factors>
- USEPA. (1996). Chapter 13.2.3 Heavy Construction Operations. In *AP-42, Volume I*. USEPA, Office of Air and Radiation.
- USEPA. (2014). *2014 National Emissions Inventory (NEI) Data*. Retrieved June 22, 2018, from Air Emissions Inventories: <https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data>
- USEPA. (2019, January 31). *Maryland Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants*. Retrieved February 19, 2019, from Green Book: https://www3.epa.gov/airquality/greenbook/anayo_md.html

General Conformity Rule—Record of Non-Applicability (RONA) for Clean Air Act Conformity

Environmental Assessment for Seawall Repair and Restoration at Naval Support Activity Annapolis

Proposed Action

Action Proponent:	Naval Support Activity (NSA) Annapolis
Proposed Action Name:	Environmental Assessment for Seawall Repair and Restoration at NSA Annapolis
Location:	Anne Arundel County, Maryland
Project Construction Period:	10 to 20 years, likely beginning in the next few years
Proposed Action Point of Contact:	Ms. Jennifer Steele NAVFAC Washington 1314 Harwood Street SE Washington Navy Yard, DC 20374 navfacwashnepa@navy.mil
Proposed Action Summary:	The Proposed Action is to repair or restore approximately 19,334 linear feet of shoreline and seawalls along portions of the Lower Yard along the Severn River, College Creek, and Santee Basin; portions of the Upper Yard along the Severn River and College Creek; and portions of the North Severn area along the Severn River and Yard Patrol Basin at NSA Annapolis.

The Clean Air Act requires federal actions in air pollutant nonattainment or maintenance areas to conform to the applicable State Implementation Plan. The State Implementation Plan is designed to achieve or maintain an attainment designation of air pollutants as defined by the National Ambient Air Quality Standards. The regulations governing this requirement are found in 40 Code of Federal Regulations (CFR) part 93, also known as the “General Conformity Rule,” which applies to federal actions occurring in regions designated as nonattainment or areas subject to maintenance plans. The threshold (*de minimis*) emission rates have been established for actions with the potential to have significant air quality impacts. A project/action in an area designated as nonattainment and exceeding the *de minimis* rates must have a general conformity determination prepared to address significant impacts.

NSA Annapolis is in Anne Arundel County, which is within the Metropolitan Baltimore Intrastate Air Quality Control Region (40 CFR 81.28). This area of Anne Arundel County is designated as being in moderate nonattainment for the 2008 standard and marginal nonattainment for the 2015 standard for 8-hour ozone and in nonattainment for the 2010 standard for sulfur dioxide. It is unclassified or in attainment for all other criteria pollutants, including the 1997 standard for particulate matter less than or equal 2.5 microns for which Anne Arundel County had been designated as a maintenance area when the standard was revoked in 2016. Thus, the *de minimis* thresholds for ozone precursors (nitrogen oxides [NO_x] and volatile organic compounds [VOCs]) and sulfur dioxide apply to the conformity

applicability analysis. Because this region is also with the Ozone Transport Region, established by the 1990 Clean Air Act Amendments, the *de minimis* threshold for VOCs is further reduced.

Air Emissions Summary

Based on the maximum total project emission estimates identified in the table below, a general conformity determination is not required because the total maximum direct and indirect emissions for any of the alternatives for the Proposed Action are well below the *de minimis* thresholds. Actual construction emissions would be considerably smaller on a calendar year basis, varying with construction intensity and the specific design of each reach.

Supporting documentation and emissions estimates can be found in the Environmental Assessment in Section 3.1, Air Quality, and Appendix B, Air Quality Conformity Applicability Analysis.

Summary of Total Criteria Pollutant Emissions, All Alternatives, Compared to Applicable *de minimis* Thresholds

<i>Activity</i>	<i>NO_x</i>	<i>VOC</i>	<i>SO₂</i>
<i>de minimis</i> Thresholds (annual)	100	50	100
Alternative 1 (total tons, over 10–20 years)	9.16	0.97	0.03
Exceeds <i>de minimis</i> ?	no	no	no
Alternative 2 (total tons, over 10–20 years)	7.95	0.86	0.03
Exceeds <i>de minimis</i> ?	no	no	no
Alternative 3 (total tons, over 10–20 years)	5.39	0.64	0.02
Exceeds <i>de minimis</i> ?	no	no	no

Key: NO_x = nitrogen oxides; VOC = volatile organic compound; SO₂ = sulfur dioxide.

Date RONA Prepared: May 2020

RONA Prepared by: Naval Facilities Engineering Command Washington

RONA Approval

ALHARAZIM.MADI

NA.M.1362686136

Digitally signed by
ALHARAZIM.MADINA.M.1362686136
Date: 2020.05.27 00:14:16 -04'00'

05/27/2020

Signature

Date

Appendix C Noise Calculations

Distance Calculations for Construction Noise

$$dB1 - 10 \times a \times \text{Log}_{10} \left(\frac{R2}{R1} \right) = dB2$$

Where:

dB1 = noise level at construction site

dB2 = noise level at receptor (in dBA, or A-weighted decibels)

a = conventional drop-off rate coefficient

a = 2.0 for point source, no ground or atmospheric absorption

R1 = distance from referenced noise level

R2 = distance from receptor

{Log₁₀ is base 10 logarithm}

Specific Calculations for Construction Noise

Construction site 100 feet from receptor; noise level is 74 dBA at construction site.

$$74 - 10 \times 2 \times \text{Log}_{10} \left(\frac{100}{50} \right) = 67.98 \text{ dBA}$$

Construction site is 100 feet from receptor; noise level is 101 dBA at construction site.

$$101 - 10 \times 2 \times \text{Log}_{10} \left(\frac{100}{50} \right) = 55.94 \text{ dBA}$$

Construction site is 400 feet from receptor; noise level is 74 dBA at construction site.

$$74 - 10 \times 2 \times \text{Log}_{10} \left(\frac{400}{50} \right) = 55.94 \text{ dBA}$$

Construction site is 400 feet from receptor; noise level is 101 dBA at construction site.

$$101 - 10 \times 2 \times \text{Log}_{10} \left(\frac{400}{50} \right) = 82.94 \text{ dBA}$$

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Appendix D

Programmatic Agreement

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Agreement Number: N61152-20210304-5504

**PROGRAMMATIC AGREEMENT
AMONG
NAVAL DISTRICT WASHINGTON AND
THE MARYLAND STATE HISTORIC PRESERVATION OFFICER
REGARDING
SEAWALL REPAIR AND ENHANCEMENT AT
NAVAL SUPPORT ACTIVITY ANNAPOLIS,
ANNAPOLIS, MARYLAND**

WHEREAS, this Programmatic Agreement (PA) is made as of this 7 day of April 2021 by and among Naval District Washington (the Navy) and the Maryland State Historic Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act (NHPA), 54 United States Code (USC) §306108, and its implementing regulations at 36 Code of Federal Regulations (CFR) §800; and

WHEREAS, the Navy proposes to repair and enhance fifteen (15) reaches of the seawall and shoreline along 19,334 linear feet of the Naval Support Activity Annapolis, Maryland installation perimeter to include portions of the Upper Yard and Lower Yard along the Severn River, College Creek, Spa Creek, and Santee Basin; and portions of North Severn along the Severn River and Yard Patrol Basin, as shown in Attachment A (Undertaking); and

WHEREAS, the repairs and enhancements would address structural deficiencies on the existing seawall and potential impacts from future extreme weather events, storm surge, sea level rise, and land subsidence, and would include hardened structures, log toe stabilization, and living shoreline as well as height increases of up to 9.7 feet; and

WHEREAS, pursuant to 36 CFR §800.4(a), the Navy has defined the Undertaking's Area of Potential Effect (APE) for direct effects on the built environment as the Upper and Lower Yards of the United States Naval Academy and those portions of the North Severn Complex that would undergo ground disturbance, and the APE for visual effects on the built environment as that part of the City of Annapolis that is north of Spa Creek and east of 6th and Randall Streets, and all areas from which the Undertaking would be visible, as shown in Attachment B; and

WHEREAS, the Navy has determined that the APE for direct effects on the built environment includes the United States Naval Academy Historic District (AA-359), which is a National Historic Landmark (NHL) and is listed in the National Register of Historic Places (NRHP), and North Severn Buildings 002NS, 003NS, and 004NS, which are eligible for the NRHP, and the APE for visual effects on the built environment includes the Colonial Annapolis Historic District (AA-137), which is an NHL and is listed in the NRHP, and the Chance Boatyard, which is listed in the NRHP, all of which are shown in Attachment C; and

WHEREAS, the Navy has defined the Undertaking's APE for archaeological resources as areas of ground disturbance associated with the Undertaking plus areas to be used in support of construction activities, including transportation routes and laydown areas, and the Navy has determined that the archaeological APE contains no previously identified archaeological resources; and

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Seawall Repair and Enhancement
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WHEREAS, as required under 54 USC §306107 (commonly known as Section 110(f) of the NHPA) and its implementing regulations (specifically 36 CFR §800.6 and §800.10), prior to the approval of any Federal undertaking that may directly and adversely affect any NHL, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to the NHL. In accordance with the code and its implementing regulations, the Navy has notified the National Park Service Northeast Region NHL Program (NPS) (as the Secretary of the Interior's designee) of this consultation regarding the NHL property and has invited the NPS to participate in the creation of this PA and to consult on the resolution of any adverse effects to the NHL as a Concurring Party; and the NPS has elected to participate in the consultation but not to sign this PA; and

WHEREAS, the Navy has determined that the Undertaking has the potential to have adverse effects on the United States Naval Academy NHL and has consulted with the SHPO pursuant to 36 CFR §800.5(a), of the regulations implementing Section 106 of the NHPA; and

WHEREAS, the potential adverse effects include, but are not limited to, destruction or alteration of the physical fabric of the seawalls, which contribute to the United States Naval Academy NHL, and intrusion into view sheds that contribute to the United States Naval Academy NHL, shown in Attachment D; and

WHEREAS, in accordance with 36 CFR §800.6(a), the Navy has notified the ACHP of its potential adverse effect determination with specified documentation, and the ACHP has chosen not to participate in the consultation; and

WHEREAS, the Navy determined that the development of a PA, in accordance with 36 CFR §800.14(b), was warranted for this complex Undertaking in order to allow for a phased approach to assess effects and to resolve and mitigate identified adverse effects in conjunction with the design and construction of the Undertaking; and

WHEREAS, pursuant to 36 CFR §800.2(a), the Navy has determined that there are no properties of traditional, religious or cultural significance to any Native American tribes present within the APE; and

WHEREAS, the Navy has identified and consulted with the following parties: the City of Annapolis (City), the Annapolis Historic Preservation Commission, Historic Annapolis, and St. John's College regarding the effects of the Undertaking on historic properties, and has invited them to participate in this consultation as Consulting Parties, and only the City responded to the consultation and elected to participate; and

WHEREAS, the purpose and need for this Undertaking is also subject to the National Environmental Policy Act (NEPA) and subject of an Environmental Assessment (EA); and

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Seawall Repair and Enhancement
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WHEREAS, the Navy, in accordance with 36 CFR §800.2(d), used the agency's procedures for public involvement under NEPA to inform the public of the Undertaking and solicit their views on its effect on historic properties for Section 106; and

WHEREAS, the Navy and SHPO (Signatories) agree to execute this PA in counterparts with a separate signature page for each Signatory. The exchange of copies of this PA and of signature pages by facsimile or by electronic transmission shall constitute effective execution and delivery of this PA to the parties and may be used in lieu of the original PA for all purposes. Signatures of the parties transmitted by facsimile or electronic transmission shall be deemed to be their original signatures for all purposes;

NOW, THEREFORE, the Signatories agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

The Navy shall ensure that the following measures are carried out:

I. Design Review Process

As designs for the Undertaking develop, the Navy shall continue to consult with the Signatories and Consulting Parties (Parties) in the manner outlined in this section in order to avoid and minimize the adverse effect on historic properties.

- A. The Navy shall provide the Parties with hard and/or electronic copies of the concept designs for each reach of the seawall. This packet will include site plans, elevations, renderings, view shed analyses, overland construction access routes, laydown areas, and measures considered to avoid and minimize adverse effects. The Navy shall offer to host a site visit and/or review meeting with the Parties within 30 calendar days of sending each submission. The Parties may decline the site visit/review meeting. Written comments shall be provided to the Navy by the Parties within 30 calendar days of the site visit/meeting, should there be one. The Navy shall take the written comments into account and incorporate them into the undertaking to the maximum extent possible. The Navy shall provide a comments response matrix to the Parties within 14 calendar days of receipt of the last comments for each submission.
- B. Should there be significant changes to the massing, size, scale, or height of an individual reach of seawall after the Parties have provided comments on the concept designs, the revised design drawings shall be provided to the Parties for comment. The Parties shall have an additional 30 days to comment on revised designs.

II. Historic Materials

During construction planning, the Navy shall consider physical effects, including moving,

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Seawall Repair and Enhancement
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removal and obstruction, on character defining features of the seawalls (such as cleats and materials) and on contributing features of the historic landscape (such as benches and monuments). The Navy shall minimize physical effects to the extent possible and shall include minimization measures in materials for the design review process described in Stipulation I.

III. Public Interpretation

- A. The Navy or its representative shall develop the digital framework for a web-based, interactive story map and shall include information about the history, architecture and significance of United States Naval Academy campus. The digital map program will be scalable to accommodate future public outreach material. Information in the initial iteration of the story map, to be prepared under this PA, shall include text about founding and early history of the United States Naval Academy, a map layer showing the nineteenth century campus, points for buildings on the nineteenth century campus, a map layer for Ernest Flagg's master plan for the campus, and points for view sheds in Flagg's plan.
- B. The Navy shall provide the proposed text, images, and layout to the SHPO within twelve (12) months of the initiation of construction of the first reach. The SHPO shall review the materials and provide comment within sixty (60) calendar days after receipt. If the SHPO does not provide comments within 60 days, the Navy may proceed with the text and images as proposed. If the SHPO does provide timely comments, the Navy shall revise the text and images in accordance with those comments, resubmit them for additional comments within 60 calendar days of receipt of the revisions, and repeat the process until agreement is reached.
- C. The Navy shall post a link to the story map on the United States Naval Academy public facing web page.
- D. The Navy shall complete the interpretive program within twenty-four (24) months of the initiation of construction of the first reach. The Navy shall provide a link to the final version of the story maps to the SHPO.

IV. Unexpected or Unanticipated Discovery of Historic Properties

If historic properties are discovered or unanticipated effects on historic properties are found during implementation of the Undertaking, the Navy shall ensure that reasonable efforts are made to avoid, minimize, or mitigate adverse effects to such properties, and shall consult with the SHPO and other relevant Signatories and Consulting Parties to resolve any adverse effects pursuant to 36 CFR §800.13(b).

V. Dispute Resolution Process

- A. Should either Signatory object at any time to any actions described in this PA or the manner in which the terms of this PA are implemented, that Signatory shall consult with

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the other Signatory to resolve the objection.

B. If the Navy determines that such objection cannot be resolved, the Navy shall:

1. Forward all documentation relevant to the dispute, including the proposed resolution, to the ACHP. The ACHP shall provide the Navy with its advice on the resolution of the objection within thirty (30) calendar days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the Navy shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP or SHPO, and provide each with a copy of this written response. The Navy shall then proceed according to their final decision.
2. If the ACHP does not provide its advice regarding the dispute within the thirty (30) calendar day time period, the Navy may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the Navy shall prepare a written response to the SHPO that takes into account any timely comments regarding the dispute from the SHPO, and provide the ACHP with a copy of such written response.

C. The Navy's responsibilities to carry out all other actions subject to the terms of this PA that are not the subject of the dispute remain unchanged.

D. Should any member of the public raise a timely and substantive objection pertaining to the manner in which the terms of this PA are carried out, at any time during its implementation, the Navy shall take the objection into account by consulting with the objector and the SHPO to respond to the objection. When the Navy responds to an objection, it shall notify the SHPO of the objection and the manner in which it was addressed. The Navy may request the assistance of the SHPO to respond to an objection.

VI. Amendment

- A. Either Signatory may propose an amendment. The amendment process starts when a Signatory notifies the other in writing requesting an amendment. The notification will include the proposed amendment and its reasons. The Signatories shall consult to consider any proposed amendment.
- B. An amendment will take effect once the ACHP has received signatures from the Signatories.
- C. If an amendment cannot be agreed upon, the dispute resolution process set forth in Stipulation V. will be followed.

VII. Annual Reporting:

Each year, following the execution of this PA until it expires, is terminated, or the undertaking

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and mitigation are accomplished, the Navy shall provide the SHPO a summary report detailing work carried out pursuant to its terms. Such report shall include any proposed scheduling changes, any problems encountered, and any disputes or objections received.

VIII. Termination Process

- A. If either Signatory determines that its terms under this PA will not or cannot be carried out, that Party shall immediately consult with the other Signatory to attempt to develop an amendment per Stipulation VI. If within thirty (30) calendar days (or another time period agreed to by the Signatories) an amendment cannot be reached, any Signatory may terminate the PA upon written notification to the other Signatories.
- B. Once the PA is terminated, and prior to work continuing on the undertaking, the Navy must either (a) execute a Memorandum of Agreement pursuant to 36 CFR §800.6(c) or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR §800.7(c). The Navy shall notify the Signatories as to the course of action it will pursue.

IX. Anti-Deficiency Act

The Anti-Deficiency Act, 31 USC §1341, prohibits federal agencies from incurring an obligation of funds in advance of or in excess of available appropriations. The Navy will make reasonable and good faith efforts to secure the necessary funds to implement this PA in its entirety. If compliance with the Anti-Deficiency Act alters or impairs the Navy's ability to implement the stipulations of this agreement, the Navy shall consult in accordance with the amendment and terminations procedures found at Stipulations V. and VIII. of this agreement.

X. Term of this PA

This PA will become effective upon the last date of signature and will remain in effect for five years unless extended by the signatories in accordance with Stipulation V. If the terms of this PA are not implemented prior to its expiration, and if the Navy chooses to continue with the Undertaking, the Navy will re-initiate consultation in accordance with 36 CFR §800.

Execution and implementation of the terms of this PA will serve as evidence of the fact that the Navy has afforded the ACHP an opportunity to comment on this Undertaking, and that the Navy has taken into account the effects of the Undertaking on historic properties.

List of Attachments

- Attachment A: Shoreline Reaches Included in Undertaking
- Attachment B: Area of Potential Effect for Built Environment
- Attachment C: Historic Resources within Area of Potential Effect
- Attachment D: Reaches, Maximum Changes in Height, and Historic Resources

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**PROGRAMMATIC AGREEMENT
AMONG
NAVAL DISTRICT WASHINGTON AND
THE MARYLAND STATE HISTORIC PRESERVATION OFFICER
REGARDING
SEAWALL REPAIR AND ENHANCEMENT AT
NAVAL SUPPORT ACTIVITY ANNAPOLIS,
ANNAPOLIS, MARYLAND**



C. A. LAHTI
Rear Admiral, U.S. Navy
Commandant
Naval District Washington

01 Apr 2021
Date

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THE MARYLAND STATE HISTORIC PRESERVATION OFFICER
REGARDING
SEAWALL REPAIR AND ENHANCEMENT AT
NAVAL SUPPORT ACTIVITY ANNAPOLIS,
ANNAPOLIS, MARYLAND**



ELIZABETH HUGHES
State Historic Preservation Officer
Director, Maryland Historical Trust

April 7, 2021

Date

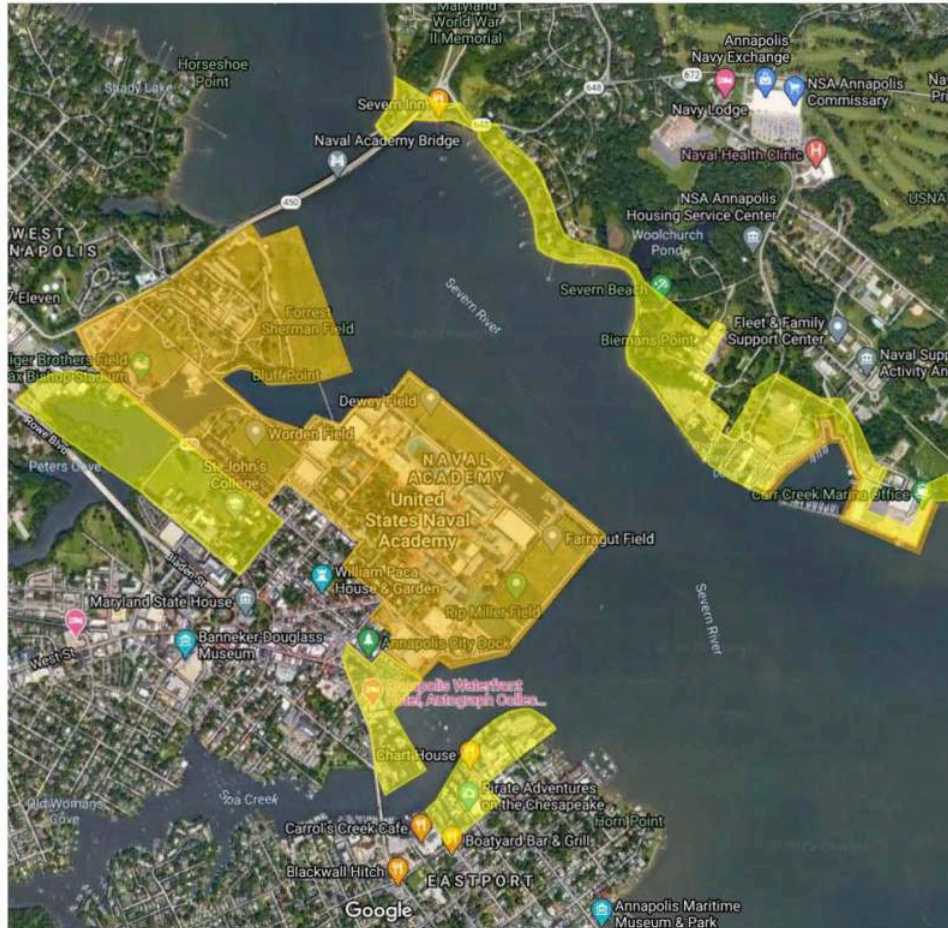
Attachment A: Shoreline Reaches Included in Undertaking
 Page 1 of 2





Attachment A: Shoreline Reaches Included in Undertaking
Page 2 of 2

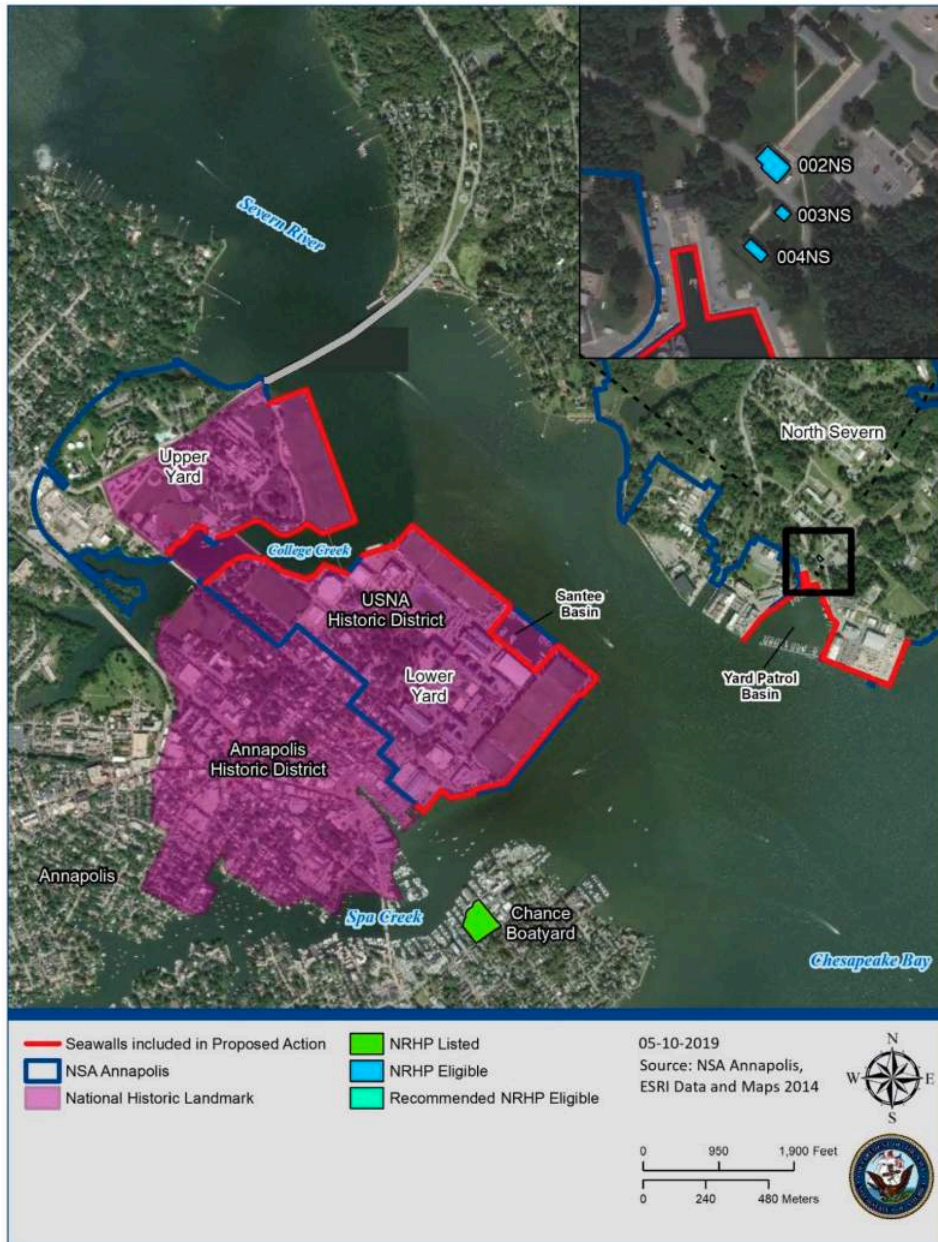


Attachment B: Area of Potential Effect for Built Environment



- Direct Effects on Built Environment: 
- Visual Effects on Built Environment: 

Attachment C: Historic Resources within Area of Potential Effect



Taken from: Environmental Assessment for Seawall Repair and Restoration at Naval Support Activity Annapolis

Attachment D: Reaches, Maximum Changes in Height, and Effects on Historic Resources

Reach	Current Height in feet	Maximum Height in feet	Contributing Resources Affected
1	3-4	6.1	Seawall View from Hospital to Severn River View from Cemetery to Lower Yard and Severn River
2	1-2	6.1	Seawall View from Cemetery to Lower Yard and Severn River
3	1-2	6.1	Seawall View from Halligan Hall to Lower Yard
4	3-4	9.7	Seawall
5	3-4	9.7	Seawall View from Worden Field to College Creek
6	1-2	9.7	Seawall
7	5	9.7	Seawall View from Chapel to Severn River View from Gate 3 to Severn River View from Dewey Field to Severn River
8	3-4	9.7	Seawall
9	5	9.7	Seawall View from Lower Yard to Greenbury Point
10	3-5	9.7	Seawall View from Lower Yard to Greenbury Point
11	5	9.7	Seawall
12	5	9.7	Seawall
13	0	9.7	None
14	0	9.7	None
15	0	9.7	None

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