

STATEMENT OF FINDINGS  
FOR  
EXECUTIVE ORDER 11990 (PROTECTION OF WETLANDS)  
  
Long Bridge Project Environmental Impact Statement

Potomac River  
May 2020

**Recommended:**

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# Long Bridge Project EIS

## *Statement of Findings for Wetlands*

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### Table of Contents

<b>1.0</b>	<b>Introduction .....</b>	<b>1</b>
<b>2.0</b>	<b>Proposed Action.....</b>	<b>1</b>
<b>3.0</b>	<b>Site Description .....</b>	<b>3</b>
3.1	Evaluation of Wetland Functions and Values .....	5
3.2	Impacts to Riverine Wetlands.....	7
3.3	Impacts to Submerged Aquatic Vegetation.....	7
<b>4.0</b>	<b>Justification for Use of Wetlands .....</b>	<b>7</b>
<b>5.0</b>	<b>Mitigative Action.....</b>	<b>8</b>
<b>6.0</b>	<b>Compliance .....</b>	<b>10</b>
<b>7.0</b>	<b>Conclusion .....</b>	<b>12</b>
<b>8.0</b>	<b>References .....</b>	<b>13</b>

### List of Figures

<b>Figure 1  </b>	<b>Long Bridge Project Area.....</b>	<b>2</b>
<b>Figure 2  </b>	<b>Watercourse and Riverine Wetland Impact Areas .....</b>	<b>4</b>
<b>Figure 3  </b>	<b>SAV Impact Areas .....</b>	<b>6</b>
<b>Figure 4  </b>	<b>Wetland Mitigation Area at Kenilworth Park &amp; Aquatic Gardens .....</b>	<b>10</b>
<b>Figure 5  </b>	<b>Wetland Mitigation Area Relative to the Long Bridge Project Area .....</b>	<b>11</b>

## 1.0 Introduction

Pursuant to the National Environmental Policy Act of 1969 (NEPA), the Federal Railroad Administration, jointly with the District Department of Transportation (DDOT) and the Virginia Department of Rail and Public Transportation (DRPT), and in cooperation with the National Park Service (NPS), are evaluating proposed improvements to the Long Bridge Corridor and related railroad infrastructure (the Long Bridge Project). The purpose of the Project is to provide additional long-term railroad capacity and to improve the reliability of railroad service through the Long Bridge Corridor. Currently, there is insufficient capacity, resiliency, and redundancy to accommodate the projected demand in future railroad services. The Project is needed to address these issues and to ensure the Long Bridge Corridor continues to serve as a critical link connecting the local, regional, and national transportation network. NPS administers Federal park property in the Project Area (see **Figure 1**), including the George Washington Memorial Parkway (GWMP), National Mall and Memorial Parks (including East and West Potomac Parks), Captain John Smith Chesapeake National Historic Trail, the Star-Spangled Banner National Historic Trail, Potomac Heritage National Scenic Trail, the Washington-Rochambeau Revolutionary Route National Historic Trail, and the Potomac River bottom.

Executive Order (EO) 11990: Protection of Wetlands, requires the NPS and other Federal agencies to evaluate the likely impacts of actions in wetlands. NPS Director's Order #77-1: Wetland Protection and Procedural Manual #77-1: Wetland Protection, provides NPS policies and procedures for complying with EO 11990. This Statement of Findings was prepared per the Director's Order for the proposed Long Bridge Project and documents compliance with the Procedural Manual. A Statement of Findings has been completed because some of the proposed construction and the proposed action would take place in the Potomac River, resulting in submerged aquatic riverine wetland impacts on NPS administered property. The Statement of Findings will be published with the combined Final Environmental Impact Statement (EIS)/Record of Decision (ROD).<sup>1</sup>

## 2.0 Proposed Action

The Proposed Action (referred to as “the Project” in the EIS) consists of potential improvements to Long Bridge Corridor and related railroad infrastructure located between RO Interlocking in Arlington, Virginia, and L’Enfant (LE) Interlocking near 10th Street SW in the District of Columbia (District).<sup>2</sup> The Proposed Action would construct a new two-track railroad bridge over the Potomac River and the GWMP between the existing railroad bridge and the Metrorail Bridge and would expand the Long Bridge Corridor from two to four tracks. In doing so, the Project would provide additional long-term railroad capacity and improve reliability of railroad service through the Long Bridge Corridor.

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<sup>1</sup> EO 11988: Floodplain Management requires the NPS and other Federal agencies to evaluate the likely impacts of actions in floodplains. NPS Procedural Manual #77-2 provides procedures to comply with this executive order. While the Proposed Action is located in the 100-year and 500-year floodplain, it does not fall into any of the action classes which require a Statement of Findings.

<sup>2</sup> An interlocking is a segment of railroad infrastructure comprised of track, turnouts, and signals linked (interlocked) in a way that allows trains to safely move from one track to another, or across tracks, preventing conflicting train movements. Note that the proper name of RO Interlocking is “RO.” It is not an acronym.

**Figure 1 | Long Bridge Project Area**



The proposed alignment would tie into RO Interlocking in Arlington, Virginia by adding two new tracks west of the existing tracks. Moving north along the Corridor, the two new tracks and two existing tracks would continue adjacent to Long Bridge Park and then cross over the GWMP on two railroad bridges. The Proposed Action would construct a new railroad bridge west of the existing railroad bridge over the GWMP carrying the two new tracks. The current two-track bridge would remain. After crossing the GWMP roadway, the new track would be carried on a short section of embankment supported by retaining walls.

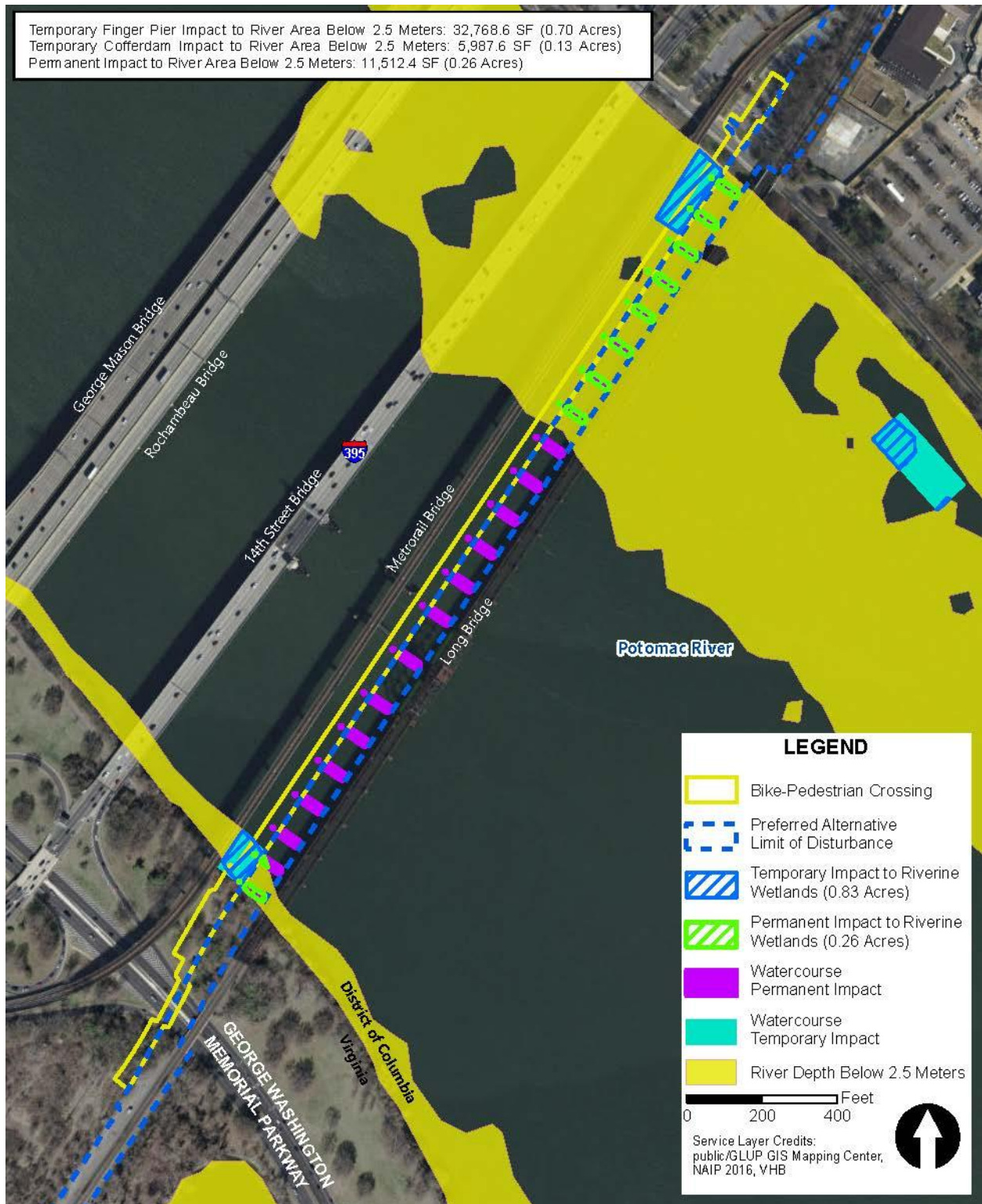
The new two-track railroad bridge over the Potomac River would require construction of 22 new bridge piers in the river, which would align with the existing bridge piers for navigational consistency. After crossing the Potomac River, the new two-track railroad bridge would extend over Ohio Drive in West Potomac Park. The two new tracks would continue off the bridge on an embankment through Parking Lot C. The two tracks would then span the Washington Metropolitan Area Transit Authority (WMATA) Metrorail Yellow Line tunnel portal, located at the northern end of the surface parking lot, on a new, two-track, single-span bridge. Meanwhile, the Proposed Action would realign the existing two tracks to minimize or avoid impacts to other structures further north within the Corridor. The Proposed Action would require retaining walls on both sides of each two-track alignment to retain embankment fills and minimize right-of-way impacts.

To mitigate impacts to resources protected by Section 4(f) of the U.S. Department of Transportation Act of 1966 (Section 4(f)), DRPT would construct a bike-pedestrian crossing that connects Long Bridge Park, the GWMP/Mount Vernon Trail (MVT), and West Potomac Park. This connection would cross the Potomac River on an independent bridge on the upstream side of the new railroad bridge. The southern end of the bike-pedestrian crossing would connect to a path at the northern end of the Long Bridge Aquatic and Fitness Center and Park Expansion in Long Bridge Park. The bike-pedestrian path would cross over the GWMP, MVT, and the Potomac River on a 2,300-foot-long bridge consisting of prefabricated truss spans. The northern end of the bike-pedestrian path would connect to Ohio Drive SW in West Potomac Park.

### 3.0 Site Description

The bed of the Potomac River and Washington Channel/Tidal Basin are administered by NPS. There are portions of the Potomac River watercourse that would be impacted by the Project which are considered riverine wetlands according to the Federal Geographic Data Committee (FGDC) Wetlands Classification Standard. The FGDC Wetlands Classification Standard defines riverine wetlands as areas within a waterway of a depth of 2.5 meters (8.2 feet) or less at low water. To identify riverine wetlands, NOAA bathymetric data were used to determine approximate water depths within the Potomac River. **Figure 2** depicts the extent of riverine wetlands within the Potomac River in the vicinity of the Project Area.

**Figure 2 | Watercourse and Riverine Wetland Impact Areas**



Data available through DOEE and the Virginia Institute of Marine Science (VIMS) (2013–2017) was used to identify documented locations of submerged aquatic vegetation (SAV) within the Local Study Area. SAV are vascular plants that grow completely underwater or up to the water surface in tidal and nontidal waterways. Most recent available data (2017) obtained from VIMS show that SAV beds are present in Roaches Run and along the north shoreline of the Potomac River immediately upstream from Long Bridge (**Figure 3**).<sup>3</sup>

### 3.1 Evaluation of Wetland Functions and Values

The riverine wetlands within the Project Area primarily function to provide freshwater habitat for fish and other wildlife. Unconsolidated bottom habitat typically supports organisms such as clams, worms, crustaceans, and other benthic invertebrates; however, the upper Potomac River is not considered a shellfish harvesting area by the Maryland Department of the Environment (MDE 2020). Shallow sections of the Potomac River can also serve as habitat for benthic microalgae when water depths permit light penetration to the bottom substrate (VIMS 2020). Algae and other bottom-dwelling organisms can provide functions such as trophic support for tidal riverine food webs in healthy ecosystems. However, overall functional capacity for benthic habitat and food web support within the Washington D.C. segment of the Potomac River is likely to be diminished significantly by water column turbidity (Bricker et al. 2014) and accumulation of metals and other toxicants in the substrate (Harris et al. 2018).

Riverine habitats within the Chesapeake Bay watershed also have the potential support wildlife support functions such as spawning, foraging, or nursery grounds for rare species, most notably the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and shortnose sturgeon (*Acipenser brevirostrum*). Both of these listed species have been documented to occur in the Potomac River, which has been designated as critical habitat for the Atlantic sturgeon. However, based on mark/recapture data and extensive surveys throughout the Potomac River, sturgeon are not likely to use the Project Area for foraging, reproduction, or nursery grounds, and shallow water sections of the Washington D.C. segment of the river (e.g., wetlands as defined in this document) in general do not represent a viable habitat for these protected species (Niklitschek and Secor 2005, Kynard et al. 2009).

Other important functions associated with riverine wetland systems, such as flood-flow desynchronization (storage of flood waters), sediment/toxicant retention, nutrient removal/retention/transformation, production export, and shoreline stabilization (Brinson 1993) are not provided by the riverine wetlands within the Project Area. The Potomac River does have recreational value for certain water-based activities, such as canoeing and kayaking, and contributes to the visual and aesthetic qualities of the area.

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<sup>3</sup> Virginia Institute of Marine Science (VIMS). 2017. Chesapeake Bay SAV Coverage. <http://web.vims.edu/bio/sav/maps.html>. Accessed May 7, 2020.

**LEGEND**

- Alternative A Permanent Limit of Disturbance
- Alternative A Temporary Limit of Disturbance
- Bike-Pedestrian Crossing
- Permanent Impact to SAV
- Temporary Impact to SAV
- Shading Impact to SAV
- Local Study Area for Natural Ecological Systems and RTE Species

0 50 100 Feet

Service Layer Credits:  
public/GLUP GIS Mapping Center,  
NAIP 2016, VHB

### 3.2 Impacts to Riverine Wetlands

The Proposed Action would impact submerged aquatic riverine wetlands due to the construction and placement of piers in the Potomac River. Nine and one-half piers for the railroad bridge and ten piers for the Bike-Pedestrian Crossing would be constructed within riverine wetlands, permanently impacting 0.26 acres. Construction of these piers using cofferdams and the placement of a temporary finger pier would temporarily impact an additional 0.83 acres of riverine wetlands, for a total impact (permanent and temporary) of 1.09 acres (**Figure 2**). Riverine wetland impacts are based on preliminary design and may vary slightly from the final design; the impacts will be well defined at the permitting stage.

### 3.3 Impacts to Submerged Aquatic Vegetation

Construction of the Proposed Action would result in one pier for the railroad bridge and one Bike-Pedestrian Crossing pier encroaching into a SAV bed found along the northern shore of the Potomac River. This would result in permanent impacts to SAV in the amount of 1,750 square feet associated with installing a 70-foot by 25-foot cofferdam for construction of the railroad pier structure and 28 square feet for a single, concrete circular bridge support for the Bike-Pedestrian Crossing with a diameter of 6 feet (**Figure 3**). The total impact to SAV would be 1,778 square feet. Permanent impacts to SAV may occur over time via shading at this location caused by the new deck of both crossings in the amount of 1,917 square feet, and permanent indirect impacts could occur to downstream SAV beds in the Potomac River within the Local Study Area due to scour and deposition from installing the crossing piers.

## 4.0 Justification for Use of Wetlands

FRA and DDOT conducted a screening process to identify and evaluate alternatives that meet the Purpose and Need of the Proposed Action, which is detailed in **Chapter 3, Alternatives**, and **Appendix B1** of the **Draft EIS, Alternatives Development Report**. At the onset of the process, FRA and DDOT identified a broad and reasonable range of concepts, in addition to a No Action Alternative, to address the Proposed Action's Purpose and Need. DDOT and FRA examined the results of pre-NEPA Phase I and II Studies; considered input from the agency and public outreach process; and coordinated with railroad stakeholders CSXT, Amtrak, and VRE. FRA and DDOT developed 18 preliminary action concepts and the No Action Alternative for consideration. During the alternatives analysis process, FRA and DDOT considered opportunities to avoid or minimize impacts to resources, including properties administered by NPS.

After two levels of screening, FRA and DDOT identified three alternatives for analysis in the EIS; the No Action Alternative, Action Alternative A (Preferred Alternative), and Action Alternative B. Due to land use and corridor constraints, construction of the Proposed Action is not possible without loss of riverine wetlands while meeting the Purpose and Need.

The No Action Alternative would not expand the existing railroad right-of-way from two to four tracks and would not construct a new crossing of the GWMP and Potomac River. Therefore, it would not impact riverine wetlands on property administered by NPS. However, it would also not meet the Proposed Action's Purpose and Need because the Long Bridge Corridor must provide more than two tracks to meet future railroad capacity and redundancy needs.

Concepts using a tunnel underneath the Potomac River would not meet the Purpose and Need because:

- The resiliency and redundancy criterion based on the Purpose and Need required that all tracks be usable by both passenger and freight trains. Therefore, any concepts that cannot accommodate both passenger and freight trains (such as a passenger railroad-only tunnel) do not meet Purpose and Need because they do not enable redundancy.
- A tunnel could not maintain interoperability between passenger and freight trains while also maintaining network connectivity. Based on previous studies, a tunnel under the Potomac River and Washington Channel would need to be at least 80 feet deep to avoid existing infrastructure (for example, Metrorail). Given the grade requirements for freight trains (1.25 percent) and the need for the tunnel to connect to VRE Crystal City Station, VRE L'Enfant Station, and the Virginia Avenue Tunnel, the distance of an 80-foot-deep tunnel would require grades that would prevent freight trains from using the tunnel. It would be therefore impossible for both freight and passenger trains to use the newly built tunnel infrastructure.

Concepts using a new corridor rather than or in addition to the existing Long Bridge Corridor would not meet the Purpose and Need of the Proposed Action, and would likely result in severe social, economic, and environmental impacts. A new corridor would fail to serve as a critical link connecting the local, regional, and national transportation network because it would not facilitate connections to existing area railroad stations, employment and residential nodes, freight railroad infrastructure, and other modes of transportation. **Appendix B1** of the **DEIS, Alternatives Development Report** provides additional explanation for why the No Action Alternative, tunnel concepts, and new corridors would not meet Purpose and Need.

Conceptual engineering for each of the Action Alternatives minimized impacts to NPS-administered property by staying within the existing railroad corridor right-of-way to the extent practicable. The Preferred Alternative has fewer impacts to riverine wetlands within NPS-administered property, as the removal and replacement of the existing Long Bridge structure that spans the Potomac River under Action Alternative B would result in additional temporary impacts to riverine wetlands.

## 5.0 Mitigative Action

Wetland mitigation includes avoidance, minimization, and compensation. As described in **Section 4.0 Justification for Use of Wetlands**, avoidance was not possible given the transportation right-of-way and other land use constraints. Minimization was employed by selecting the Preferred Alternative, which has a lesser impact to riverine wetlands within the Potomac River than Action Alternative B. The Project would also employ general mitigative measures, including the application of best management practices and use of standard erosion and sediment control measures throughout the construction process.

In accordance with Procedural Manual #77-1, NPS requires a minimum of 1:1 mitigation ratio for the replacement of lost wetland acres. Because the impacted wetlands are classified as riverine, it is inherently difficult to restore the functions and values for these types of wetlands. The difficulty lies in restoring lost wetland with relatively valuable functions on the bottom of the Potomac River over a relatively small area when compared to the total area comprised of these types of wetland, and the fact that it's in a riverine system creates a situation where the potential for success is low. As a result, it was determined that in lieu of a typical 1:1 mitigation ratio for the restoration of lost wetland functions and values, NPS would employ a 10:1 mitigation ratio (requiring 10.90 acres minimum) aimed at improving the overall functionality and values of near-by wetlands through the removal of invasive plant species.

NPS has identified available wetlands at Kenilworth Park & Aquatic Gardens for removal of invasive plants (**Figures 4 and 5**). The proponent will treat and/or remove invasive species twice a year for the duration of the bridge construction project (a minimum of 5 years). The specific process and terms for this treatment and removal mitigation project will be set forth in the applicable NPS permit authorization granted to DRPT.

For permanent impacts to SAV, DRPT will develop appropriate mitigation strategies in coordination with NPS and other regulatory agencies. Potential strategies include transplanting, re-establishment of vegetation in the impact zone, in-kind mitigation at an agreed-upon ratio, or credits.

## 6.0 Compliance

This document is required in order to comply with EO 11990. NPS Director's Order #77-1 and NPS Procedural Manual #77-1 provide policies and procedures to comply with EO 11990. Compliance with other agency regulations will be completed (if appropriate for this project) separately from this document; however, the mitigation measures set forth herein may be relied upon in fulfilling compliance with other applicable regulatory requirements. Separate compliance with other applicable laws and regulations pertaining to wetland impacts are as follows:

### *Coastal Zone Management Act of 1972*

The Virginia Department of Environmental Quality (VDEQ) administers the Coastal Zone Management Program (CZMP) in the Commonwealth of Virginia. The project has demonstrated consistency with the Coastal Zone Management Act (CZMA). On September 30, 2029, VDEQ concurred with FRA's determination that the project would be consistent with Virginia's CZMP.

### *Clean Water Act Sections 401 and 404*

A Joint Permit Application (JPA) will be developed for both permanent and temporary project-related wetland and waters of the United States impacts in compliance with Section 401 and 404 of the Clean Water Act. DRPT will initiate the permitting with USACE; VDEQ, which administers the permitting program in the Commonwealth of Virginia; and DOEE, which administers the permitting program in the District. A preliminary jurisdictional determination (JD) was issued by USACE on March 19, 2019 and would be finalized prior to JPA issuance. The JPA would be initiated during the final design phase of the Project.

VDEQ is responsible for review of projects that result in a significant discharge into state waters, which include wetlands. Before USACE can grant a 404 permit, VDEQ must certify that the activity does not violate state water quality standards (the 401 certification). DOEE is similarly responsible for the 401 certification in the District.

## Kenilworth Wetlands



**Figure 5 | Wetland Mitigation Area Relative to the Long Bridge Project Area**



### *Rivers and Harbors Act Sections 9 & 10*

The U.S. Coast Guard (USCG) controls navigation for marine operations via Section 9 of the Rivers and Harbors Act. Preliminary public notice to advise mariners of the proposed Project was published in September 2019. DRPT will submit a formal Bridge Permit during the final design phase.

Section 10 of the Rivers and Harbors Act is administered by the USACE and regulates construction, filling, dredging, or excavation in navigable waters of the United States. Section 10 will be addressed through the issuance of the JD and JPA.

### *National Environmental Policy Act*

The Draft EIS, this Statement of Findings for Executive Orders 11990, and the Final EIS/ROD will complete the requirements of NEPA for this Project.

## **7.0 Conclusion**

Increasing the capacity, resilience, and redundancy of the Long Bridge Corridor is needed to ensure the corridor continues to serve as a critical railroad link connecting the local, regional, and national transportation network. As part of the Proposed Action, the Preferred Alternative and Bike-Pedestrian Crossing would impact riverine wetlands on property administered by NPS. The Project would have negligible impacts to the base flood elevation or boundary given the expanse of the current flood zone. The Preferred Alternative and Bike-Pedestrian Crossing would permanently impact 0.26 acres and temporarily impact an additional 0.83 acres of riverine wetlands due to the construction and placement of piers in the Potomac River. 1,778 square feet of SAV in the Potomac River would be permanently impacted by the Preferred Alternative and Bike-Pedestrian Crossing as well.

A total area of 1.09 acres of riverine wetlands impact would be compensated at a 10:1 ratio with funding for 10.90 acres of invasive plant species removal in wetlands at Kenilworth Park & Aquatic Gardens.

A total area of 1,778 square feet of SAV is impacted by the Project. DRPT will develop appropriate mitigation strategies for SAV in coordination with NPS and other regulatory agencies. Potential strategies include transplanting, re-establishment of vegetation in the impact zone, in-kind mitigation at an agreed-upon ratio, or credits.

Compensation for and restoration of riverine wetland and SAV areas impacted by the Project will be funded in accordance with the specific terms set forth in the applicable NPS permit authorization granted to DRPT.

NPS finds that this proposed action is consistent with the policies and procedures of NPS Director's Order #77-1: Wetland Protection.

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